Policy Analysis
No. 455 October 15, 2002

International Banking Regulation
Where's the Market Discipline in Basel II?

by L. Jacobo Rodríguez

Executive Summary

In 1988 the Basel Committee on Banking Supervision completed the Basel Capital Accord, which set risk-weighted minimum capital standards for internationally active banks. The accord, which has been adopted by more than 100 countries, seeks to strengthen the banking system and level the playing field. It is not clear, however, that it achieves either of those goals or that the latter goal is even desirable.

Indeed, there is broad agreement among regulators, market participants, and academics that the accord's risk classification scheme has made the international financial system *less* stable, not more, while failing to level the playing field. The accord has encouraged banks to assume greater economic risk without a commensurate increase in capital. It has also encouraged banks to make short-term loans to other banks, which contributed to the Asian crisis in 1997–98.

The Basel Committee has attempted to fine-tune the accord over the years. Since 1999, the committee has been working on a major revision of the accord in an effort to "align capital regulatory requirements more closely with the underlying risks." The result, Basel II, is a work in progress that is expected to be finalized by the end of 2003 and fully implemented by the end of 2006.

Basel II is based on three mutually reinforcing pillars: capital requirements, supervisory review, and market discipline. Risk-based capital requirements are the major focus of the accord. The accord will allow some banks to use their internal risk-management models to determine capital costs, but that option could turn into a regulatory nightmare, even in industrialized countries. Worse yet, the accord's overly prescriptive and complex approach could end up stifling market-based innovation in risk management practices.

Consequently, a system that relies more on competition among different national regulatory regimes is preferable to the current approach. At the national level, the trend should be toward regulatory simplicity. If there are to be minimum capital standards, necessitated by government-sponsored deposit insurance systems, a simple capital leverage rule with no risk weights would suffice, especially if there is an emphasis on market discipline through a subordinated-debt requirement and disclosure. Countries without a public deposit insurance system should move toward a system of financial laissez-faire.

L. Jacobo Rodríguez is a financial services analyst at the Cato Institute.

The implementation of the Basel Accord turned the committee into a standard-setting regulatory agency.

Introduction

In July 1988 the central bank governors of the G-10 industrialized countries[1] approved the Basel Capital Accord, which sets risk-weighted minimum capital standards for internationally active banks. The Basel Accord, the first attempt at worldwide regulation of the banking industry, marked the culmination of a series of efforts that began at the end of 1974,[2] when the central bank governors and other banking regulatory authorities of the G-10 countries established the Committee on Banking Regulations and Supervisory Practices (the Basel Committee) under the auspices of the Bank for International Settlements.[3] Initially, the committee was to be primarily a supervisory body whose mission was to "close gaps in international supervisory coverage in pursuit of two basic principles: that no foreign banking establishment should escape supervision; and that supervision should be adequate."[4] However, the implementation of the Basel Accord turned the committee into a standard-setting regulatory agency.

The Basel Accord of 1988 has two fundamental objectives: To strengthen the soundness and stability of the international banking system and to obtain "a high degree of consistency in its application to banks in different countries with a view to diminishing an existing source of competitive inequality among international banks."[5] To that end, the accord requires that banks meet a minimum capital ratio that must be equal to at least 8 percent of total risk-weighted assets. It is not clear that the harmonization of capital-adequacy regulations among countries achieves either one of the Basel Accord's objectives, or that the second objective—reducing "competitive inequality" in this way—is a desirable one.

Indeed, the Basel Accord has been widely criticized for its failure to achieve its stated objectives, as well as for its use of risk weights and "buckets," or classifications of banks' different exposures. Other criticisms include the fact that the accord applies only to banks, but not to other providers of financial services and that it sets capital standards only for credit risk (i.e., the risk of counterparty failure), but not for other types of risk. The Basel Committee has tried to address some of those criticisms over the years, modifying the accord several times during the 1990s.[6]

The Basel Committee issued a first consultative paper, "A New Capital Adequacy Framework," in June 1999, and a second consultative paper, "The New Basel Capital Accord," in January 2001. The second proposal, commonly referred to as "Basel II," is intended to replace the 1988 accord. The Basel Committee intended to finalize the new accord before the end of 2001 and to fully implement it by 2004. However, because of the overwhelming number of responses received and the committee's desire to work out the details of some of the more complex issues of the new accord, the committee announced in July 2002 that a new consultative period would take place in the second quarter of 2003, with the goal of finalizing the new accord by the end of 2003 and fully implementing it by the end of 2006.[7]

Basel II is certainly more complex and detailed than the current accord, but that does not necessarily make it better. In addition to minimum capital standards, Basel II adds two more pillars—supervisory review and market discipline—to create a three-pronged structure. With regard to capital standards, the new proposal, at least in its current form, gives some banks more latitude in deciding how much capital to hold to cover unexpected losses, but that option is likely to turn into a regulatory nightmare, even in industrialized countries.[8] In addition, the new proposal still maintains the 1988 accord's flawed approach to measuring risk, leaves the definition of regulatory capital unchanged, adds a new capital charge for so-called operational risk and, most important, does not rely enough on market discipline.

As a result, it is not clear that the new framework will guarantee the safety and soundness of the international banking sys-

tem or protect taxpayers from the moral hazard created by implicit or explicit government deposit insurance.[9] In addition, its complexity is likely to make compliance costs for banks prohibitively high. Indeed, the Credit Suisse Group estimates compliance costs at an average of $15 million per bank for about 30,000 banks worldwide.[10] Therefore, other arrangements such as a national treatment for banking regulation, a market-based regulatory system that relies on a subordinated-debt requirement for banks, or free banking are worth considering to determine if those alternatives would make the banking system sounder by providing the right mix of regulation, supervision, and market discipline, so that banks have the proper incentives not to take excessive risks at the expense of taxpayers.

Are Banks Special?

Traditionally, banks and other providers of financial services have been subject to greater government regulation than most other sectors of the economy. Emory University economist George J. Benston identifies five main reasons why banks have been regulated: To provide revenues and other benefits to the government; to deal with alleged negative externalities that arise from the banks' activities; to protect consumers; to appeal to popularly elected legislators; and to protect the regulated institutions from competition.[11] Today, most regulation falls under the rationale of either consumer protection or safety and soundness considerations.

Why have banks become a prime target of government regulation? Historically, for the same reason that Willie Sutton robbed banks: "That's where the money is."[12] But there has also been a long tradition among economists that goes back to at least Adam Smith, who maintained that banks are different from other firms by the very nature of their activities—and because of that, some kind of regulation and supervision is justified. Indeed, in two often-quoted passages of *An Inquiry into the Nature and Causes of the Wealth of Nations*, the Scottish economist supported that view, even if regulatory oversight of banks is an infringement on the system of natural liberty that he defended:

> Over and above the expences which are common to every branch of trade; such as the expence of houserent, the wages of servants, clerks, accountants, &c.; the expences peculiar to a bank consist chiefly in two articles: First, in the expence of keeping at all times in its coffers, for answering occasional demands of the holders of its notes, a large sum of money, of which it loses interest: And, secondly, in the expence of replenishing those coffers as fast as they are emptied by answering such occasional demands.[13]

Smith elaborated,

> To restrain private people, it may be said, from receiving in payment the promissory notes of a banker, for any sum whether great or small, when they themselves are willing to receive them; or, to restrain a banker from issuing such notes, when all his neighbours are willing to accept them, is a manifest violation of that natural liberty which it is the proper business of law, not to infringe, but to support. Such regulations may, no doubt, be considered as in some respect a violation of natural liberty. But those exertions of the natural liberty of a few individuals, which might endanger the security of the whole society, are, and ought to be, restrained by the laws of all governments; of the most free, as well as of the most despotical. The obligation of building party walls, in order to prevent the communication of fire, is a violation of natural liberty, exactly of the same kind with the regula-

To the extent that banks as financial intermediaries are special today, it is the legal restrictions and regulations under which they operate, not the functions they perform, that make them so.

tions of the banking trade which are here proposed.[14]

Smith was alluding to the inherent instability of banks operating in a fractional reserve system, which, if true, merits their regulation. Banks are financial intermediaries that take in deposits that are payable on demand, which they then use to make loans and to invest in marketable securities and other financial assets and, in the process, create a multiple expansion of the money supply for the system as a whole. As such, banks channel funds from those who have excess funds to those who need them for productive investment opportunities. Because banks' liabilities (i.e., the deposits they take in) are usually fixed in value and payable on demand (short term), while banks' assets (i.e., the loans they give out and the securities in which they invest) are of variable value and not collectable on demand (long term), it has generally been believed that banks are prone to failure and runs (i.e., the sudden and simultaneous withdrawal of funds by a large number of depositors who have lost confidence in the bank). That has the potential of negatively affecting solvent institutions through a contagion effect, which in turn could negatively affect the entire financial system. That has become the main justification for the regulation of the banking industry today.

The private sector has traditionally been quite adept at dealing with a fragile system and, before government-sponsored deposit insurance, took numerous steps to address it.

But before imposing regulations, one must answer the following questions. First, is there any theoretical or historical validity to the claim that banks are inherently unstable and prone to runs? Second, if they are unstable, how has the private sector traditionally dealt with that instability? Third, if the private sector response has not been satisfactory, what has been the regulatory response? And fourth, has the regulatory response actually accomplished the goals that it set out to achieve? Answering those questions reveals that to the extent that banks as financial intermediaries are special today, it is the legal restrictions and regulations under which they operate, not the functions they perform, that make them so.[15] Indeed, excessive regulation over the decades has been a contributing factor in the banks' diminished role as financial intermediaries in recent years.[16]

Bank Runs and Federal Deposit Insurance

A fractional reserve banking system, in which banks loan out all or part of their deposit liabilities, is theoretically fragile and prone to runs if depositors have incomplete information about their bank's activities and financial health (i.e., the safety of their deposits and the bank's ability to return those deposits to them on demand).[17] Furthermore, a run on an individual bank can theoretically have destabilizing effects on other banks.[18]

However, the private sector has traditionally been quite adept at dealing with this fragility and, before government-sponsored deposit insurance, took numerous steps to address it. For example, banks would disclose their levels of capital to investors and depositors to put them at ease about the safety of their investments and deposits.[19] Indeed, as Benston states, "banks used to advertise prominently [in newspapers and inside their branches] the amount of their capital and surplus."[20] It is worth noting that those levels used to be considerably higher than they are today.[21] Second, investors and depositors used to monitor the activities of banks and demand higher rates of return on their investments or higher interest rates on their deposits if they deemed their banks were taking on investments that were too risky. Third, prior to government-sponsored deposit insurance, banks created private clubs and clearinghouses to help one another. Membership in those associations was restricted to those banks that met certain requirements with regard to levels of capital, activities of the bank, and risk profiles.[22] Fourth, banks had "option clauses" in their contracts that allowed them to suspend payments for a specific period of time in exchange for a higher rate of interest on the debt whose payments had been suspended. Those clauses, widely used in the Scottish free-banking period of the 18th century, had the effect of stopping panic runs and provided

banks with breathing room to reorganize their assets without having to engage in fire sales. Finally, bank debt holders often signed debt covenants with banks that restricted the activities and investments in which banks could participate.

Market discipline by depositors and shareholders worked rather well to prevent runs and, when those occurred, to prevent them from spreading to other banks. Bank failures in the United States were on average lower for the period between the end of the Civil War and the end of World War I than those for nonfinancial firms. Furthermore, those banks that failed were usually insolvent before the run and did not fail as a result of it.[23] Even during the Great Depression, depositors were able to distinguish between banks that had liquidity problems but were solvent (i.e., that had net worth greater than zero but that could not sell their assets in time to pay their debts as these came due without incurring great costs) and banks that were insolvent (i.e., that had a negative net worth).[24]

However, the large number of bank failures during the 1920s, especially between 1929 and 1933,[25] led to the separation of the banking industry across product lines and to the establishment of the Federal Deposit Insurance Corporation after the passage of the Banking (Glass-Steagall) Act of 1933. Federal deposit insurance was established with three goals in mind: To restore confidence in the banking system, especially among small depositors; to protect the payments system; and to protect branching restrictions.[26] The establishment of the FDIC has had three effects: (1) depositors and shareholders no longer have an incentive to monitor the activities of their banks; (2) runs on banks have become rare, although runs had never been a problem for the stability of the financial system; and (3) by charging a flat premium, the FDIC has created a classic moral hazard, because it subsidizes risk-taking by banks.[27]

Other industrialized countries have followed the example of the United States and implemented taxpayer-financed deposit insurance schemes in the second half of the 20th century.[28] In addition, many countries that do not have a formal deposit insurance scheme have an implicit deposit guarantee.[29]

Does Deposit Insurance Justify International Regulation?

Before deposit insurance, market discipline usually ensured that banks maintained sufficient levels of capital. Depositors and investors monitored banks' activities to prevent bank managers from taking excessive risks, and banks held more capital than they do today. Today the existence of a government safety net makes the *domestic* regulation of capital necessary. With deposit insurance, bank managers have an incentive to lower their capital base and take on more risk, which increases the value of the government subsidy, if insurance premiums are underpriced, and makes the financial system more fragile.

Government-sponsored deposit insurance, however, is not a justification for setting international capital standards, unless there is financial contagion among countries. That is not the case in today's world of central banks and fiat money, because central banks can pump liquidity into the domestic banking system through the discount window and thus insulate it from any external shocks. As Benston has stated, "As long as the money supply of a country is controlled by its own central bank, there cannot be a contagious run on either domestic or foreign banks that disrupts that country's financial system."[30]

An international capital standard prevents regulatory competition among countries and sets a dangerous precedent for the establishment of international standards in other areas, such as taxation, antitrust, labor regulations, or even accounting standards.[31] William A. Niskanen, chairman of the Cato Institute and former acting chairman of President Ronald Reagan's Council of Economic Advisers, has summed up that point aptly:

> On the case for international harmonization of financial regulations and accounting standards, I am very suspicious. The Basle standards on bank capital, approved in 1988 by a cartel of central bankers and fully implemented by

Before deposit insurance, market discipline usually ensured that banks maintained sufficient levels of capital.

> the end of 1992 without any domestic review or legislative authority, are my case in point. Those standards, I suggest, were (and are) both unnecessary and ill conceived. . . . The Basle standards were the wrong response to a real problem—the conflict between national deposit insurance systems and the regulation of the capital standards of foreign banks by their home country governments. Instead of applying a national treatment standard to banks, the standard to which foreign firms in other industries are subject, the cartel of central bankers chose to implement international bank capital standards that eliminated any competition in the setting of standards and conveniently restricted the penetration by Japanese banks in the U.S. and European financial markets.[32]

With deposit insurance, bank managers have an incentive to lower their capital base and take on more risk, which increases the value of the government subsidy.

Indeed, free entry for foreign-owned subsidiaries, national standards and a territorial rule would be a much better solution. In other words, if the foreign subsidiary of a Japanese bank wants to operate in the United States, it would be free to do so as long as it abides by the rules and regulations that apply to all banks, domestic and foreign, in the United States. Similarly, if the foreign subsidiary of a U.S. bank wants to operate in the European Union, that subsidiary should abide by the regulations set by EU banking authorities. With the exception of the banking sector, that custom has been the modus operandi for conducting transnational business. The Basel Accord moved banking regulation in the opposite direction.

The Political Economy of the Basel Accord

The main impetus for the regulation of banks at the international level came from the United States.[33] In August 1982 the Mexican government announced that it would be unable to roll over its debt to private creditors and would therefore be forced to suspend principal payments. Soon after, other developing countries such as Argentina, Brazil, and Venezuela, among others, found themselves in financial difficulties. U.S. banks, which had lent recklessly to Latin American countries in the 1970s and early 1980s, faced huge losses. Indeed, the nine largest U.S. banks had loans outstanding to the most indebted countries that were equivalent to almost twice their capital at the end of 1982. Those banks had also lent 140 percent of their capital to Mexico, Brazil, and Argentina.[34] Although U.S. banks curtailed substantially their lending to developing nations after Mexico's announcement, they still faced the possibility of becoming insolvent if the debtor countries defaulted. It was at this stage that the U.S. government orchestrated a resolution to the crisis.

First, the Reagan administration provided bilateral loans to Mexico. Second, it instructed the International Monetary Fund to organize rescue packages for the countries in difficulties. Those new IMF loans would allow debtor countries to service their loans. The loans also had the effect of transferring developing countries' debt from the banks to the public sector, in what amounted to a bailout of large money centers in New York.[35] Third, the administration encouraged the banks to restructure loans and provide new loans to developing countries. For its part, the IMF requested from member countries an increase in its resources of 47 percent, of which the United States would have to contribute $8.4 billion. That request was initially met with skepticism by U.S. legislators. The U.S. Congress finally agreed to provide the new funds in 1983 as part of the International Lending Supervision Act in exchange for a series of reforms and new regulations of the banking industry, including higher capital requirements. Congress also instructed U.S. banking regulators to "encourage . . . other major banking countries to work toward maintaining, and where appropriate strengthening, the capital bases of banking institutions involved in international lending."[36]

Not surprisingly, U.S. banks initially opposed those new regulations. They were

fearful that the regulations, in particular the requirement to increase their minimum capital levels, would set them at a disadvantage vis-à-vis other banks, especially Japanese banks, which were gaining market share globally and domestically, and other nonbanking financial institutions. Consequently, they pressed bank regulators in the United States to try to make the new regulations international. Despite the objections of Japanese and German banking regulators, which greeted the U.S. proposal for harmonization with great skepticism, the G-10 countries had little choice but to agree to the harmonization of capital standards for banks when the United States and Great Britain signed a bilateral agreement on minimum capital standards in 1986. As Thomas Oakley and Robert Nabors suggested:

> By concluding a stringent bilateral accord with Great Britain and threatening to apply the terms of this accord to foreign banks operating in the U.S. market, American policymakers effectively eliminated the regulatory status quo from G-10 policymakers' choice sets. Rather than a choice between a multilateral accord and the regulatory status quo ante, G-10 policymakers confronted a choice between a costly multilateral accord and an even more costly bilateral accord. Given these options, G-10 policymakers chose the multilateral accord.[37]

And so 1987 saw the beginning of negotiations between Japan on the one hand and the United States and Great Britain on the other, under the auspices of the Basel Committee on Banking Supervision to harmonize banking regulations in the G-10 countries.

The Basel Accord of 1988

On December 10, 1987, after years of negotiations among the supervisory institutions of its member countries, the Basel Committee released a proposal on the "International Convergence of Capital Measurement and Capital Standards." After a brief period of consultation, the committee issued a final proposal, agreed upon by all its member countries, on July 15, 1988. The stated objectives of the Basel Accord of 1988 were "firstly, that the new framework should serve to strengthen the soundness and stability of the international banking system; and, secondly, that the new framework should be fair and have a high degree of consistency in its application to banks in different countries with a view to diminishing an existing source of competitive inequality among international banks."[38] To achieve those goals, the committee set out a framework for measuring capital adequacy in relation to credit risk. That framework can be divided into four parts: (1) the definition of capital, (2) the determination of risk-weighted assets, (3) the required ratio of capital to risk-weighted assets, and (4) the conversion of off-balance sheet instruments into risk-weighted assets.

Definition of Capital

The Basel Accord divides capital into two tiers. Tier 1 (or core) capital is made up of equity capital[39] and disclosed reserves from post-tax earnings. Tier 2 (or supplementary) capital comprises undisclosed reserves from post-tax earnings, revaluation reserves from assets that have been revalued to reflect more accurately their market (as opposed to historic or book) value,[40] general provisions/general loan-loss reserves, which are created against the possibility of losses not yet identified, and debt capital instruments (capital instruments that combine characteristics of debt and equity) that can support losses on an ongoing basis. Tier 2 capital also comprises subordinated debt (unsecured debt of a fixed maturity that is junior to all other claims).

The limits and restrictions in the composition of capital set by the Basel Accord are as follows:

- Tier 2 capital is limited to a maximum

The risk assessment methodology is flawed in that it assumes that a portfolio's total risk is equal to the sum of the risks of the individual assets in the portfolio.

Table 1
Risk Weight Categories for Bank Assets

Zero percent	Cash; claims on central governments and central banks denominated in the national currency and funded in that currency; other claims on Organization for Economic Cooperation and Development central governments and central banks; and claims collateralized by cash of OECD central-government securities or guaranteed by OECD central governments.
20 percent	Claims on multilateral development banks and claims guaranteed by, or collateralized by securities issued by such banks; claims on banks incorporated in the OECD and claims guaranteed by OECD-incorporated banks; claims on securities firms incorporated in the OECD subject to comparable supervisory and regulatory arrangements, including in particular risk-based capital requirements and claims guaranteed by these securities firms; claims on banks incorporated in countries outside the OECD with a residual maturity of up to one year and claims with a residual maturity of up to one year guaranteed by banks incorporated in countries outside the OECD; claims on nondomestic OECD public-sector entities, excluding central government, and claims guaranteed by or collateralized by securities issued by such entities; and cash items in process of collection.
50 percent	Loans fully secured by mortgage on residential property that is or will be occupied by the borrower or that is rented.
100 percent	Claims on the private sector; claims on banks incorporated outside the OECD with a residual maturity of over one year; claims on central governments outside the OECD; claims on commercial companies owned by the public sector; premises, plant and equipment and other fixed assets; real estate and other investments; capital instruments issued by other banks; and all other assets.

Source: Basel Committee on Banking Supervision, "International Convergence of Capital Measurement and Capital Standards," 1988, Annex 2.

of 100 percent of Tier 1 capital.

- Subordinated debt is limited to a maximum of 50 percent of Tier 1 capital.
- General loan-loss reserves are limited to a maximum of 25 percent of Tier 2 capital.[41]

Determination of Risk-Weighted Assets

The Basel Committee considered that "a weighted risk ratio in which capital is related to different categories of asset or off-balance-sheet exposure, weighted according to broad categories of relative riskiness, [is] the preferred method for assessing the capital adequacy of banks."[42] Although there are many different kinds of risk that banks have to manage, the accord initially addressed only credit risk—that is, the risk of counterparty failure. Other types of risk, such as investment risk, interest-rate risk, exchange-rate risk, concentration risk, and operational risk, were not made part of the accord.[43] The Basel Accord classifies assets according to four risk-weight categories—zero percent, 20 percent, 50 percent, and 100 percent—which are measured at book value rather than market value (see Table 1).[44]

Required Ratio of Capital to Risk-Weighted Assets

The Basel Accord set the ratio of capital to risk-weighted assets at 8 percent, of which Tier 1 capital must be at least 4 percent. For instance, if a bank has assets in the form of U.S. Treasury bonds worth $100, the capital charge required for those assets is zero. If, alternatively, a bank has assets in the form of corporate bonds worth $100,

the capital charge required is equal to $8, of which at least $4 must be in Tier 1 capital. Internationally active banks had until the end of 1992 to bring their capital ratios to that level.

Off-Balance Sheet Exposures

The Basel Accord converts "all categories of off-balance-sheet engagements . . . to credit risk equivalents by multiplying the nominal principal amounts by a credit conversion factor, the resulting amounts then being weighted according to the nature of the counterparty."[45] The conversion factors are: 100 percent for instruments that substitute for loans, such as standby letters of credit; 50 percent for transaction-related contingencies, such as standby letters of credit for a particular transaction; and 20 percent for short-term, self-liquidating trade-related contingent liabilities, such as commercial letters of credit. For example, a commercial letter of credit worth $100 would be converted into an asset worth $20, and the capital charge for that asset would be $1.6 ($20 times 0.08).

Criticisms of the Accord

The original Basel Accord has several problems. First, the use of arbitrary risk categories and arbitrary weights that bear no relation to default rates incorrectly assumes that all assets within one category are equally risky or that one type of asset is, for instance, 100 percent riskier than another. Thus, Turkish government bonds are assumed to be just as risky (actually risk free) as U.S. government bonds, because both countries are members of the Organization for Economic Cooperation and Development. Turkish bonds are also assumed to be less risky than government bonds from other emerging countries, such as Chile, Hong Kong, or Singapore, that have a better history of fiscal and monetary discipline and sustained economic growth since the mid-1980s, because those countries are not members of the OECD.

Similarly, a loan to a well-established U.S. corporation, such as General Electric or Microsoft, is considered as risky as a loan to a start-up company, and riskier by a factor of 100 percent than Turkish government bonds. Loans made to companies in the nontrading sector of the economy are considered as risky as loans made to companies in the trading sector, even though the latter are usually less risky than the former.

Second, the risk assessment methodology is flawed in that it assumes that a portfolio's total risk is equal to the sum of the risks of the individual assets in the portfolio. No account is taken of portfolio management strategies, which can greatly reduce the overall risk of a portfolio, or of the size of a portfolio, which can greatly influence its total risk profile.[46]

Third, the accord gives preferential treatment to government securities, which are considered risk-free. That means that banks need not hold any capital against them. But as the sovereign debt defaults of Russia in the summer of 1998 and Argentina in early 2002 demonstrate, government debt is not a risk-free investment. At any rate, Basel's treatment of that debt has had a crowding-out effect. As University of Chicago economist Randall S. Kroszner has stated: "Since the risk associated with some of the OECD government debt may be roughly on par with (and in some cases greater than) that for top quality private firms, the capital standards reduce the cost of holding government debt relative to holding private instruments. Commercial banks now have a special incentive to purchase government debt rather than private debt."[47]

That is indeed what happened in the United States in the early 1990s, as U.S. banks raised their risk-adjusted capital levels to meet the deadline for the implementation of the accord. Bank credit in the United States increased from $2,751.5 billion to $3,321.6 billion from 1990 to 1994. In that same period, holdings by U.S. banks of U.S. government securities increased from $456.4 billion (16.58 percent of total bank credit in 1990) to $722.2 billion (21.74 percent), while commercial and industrial loans reached a peak of $645.5 bil-

As the sovereign debt defaults of Russia in the summer of 1998 and Argentina in early 2002 demonstrate, government debt is not a risk-free investment.

Table 2
U.S. Bank Credit at All Commercial Banks, 1989–94
(In Billions of Dollars)

Year	Total Credit	U.S. Government Securities	Commercial & Industrial Loans
1989	2,604.6	400.8	642.7
1990	2,751.5	456.4	645.5
1991	2,857.7	566.5	624.0
1992	2,956.6	665.0	600.3
1993	3,115.3	730.7	590.7
1994	3,321.6	722.2	650.7

Source: *Economic Report of the President* (Washington, D.C.: U.S. Government Printing Office, 2001), p. 359.

The existence of risk categories that create a divergence between economic risks and measures of regulatory capital has led to widespread regulatory capital arbitrage.

lion in 1990 (23.46 percent of total bank credit that year) and did not reach that level again until 1994, when they were $650.7 billion (19.58 percent) (see Table 2).[48] Some economists attribute the 1990–91 recession in part to the credit crunch created by the implementation of the accord, as small and medium-sized enterprises are heavily dependent on the banking sector for their financing.[49]

Fourth, following political considerations more than economic reasoning, the accord divided capital into two tiers, with equity being given preferential treatment over other types of capital. That division does not make much economic sense, because under certain assumptions a firm's capital structure—that is, its optimal mix of equity and debt—is irrelevant to that firm's profitability.[50] From a regulatory point of view, subordinated debt may indeed be superior to equity as a form of capital because, as shown below, it gives regulators information about the risks banks are taking and provides the holders of that uninsured debt with an incentive to monitor the activities of the bank.

Fifth, the existence of risk categories that create a divergence between economic risks and measures of regulatory capital has led to widespread regulatory capital arbitrage—that is, the assumption of greater economic risks without an increase in regulatory capital requirements—especially among large U.S. banks. One such form of arbitrage, known as "cherry picking," involves the holding of riskier assets within a given category. As William McDonough, president and CEO of the Federal Reserve Bank of New York and chairman of the Basel Committee on Banking Supervision, has acknowledged, "One significant weakness is that the Accord's broad brush structure may provide banks with an unintended incentive to take on higher risk exposures without requiring them to hold a commensurate amount of capital."[51]

Federal Reserve Board economist David Jones suggests that one of the motivations for banks to engage in regulatory capital arbitrage is the accord's preference for equity over debt as a source of capital. If regulatory capital standards require banks to have more equity, which is usually costlier than debt, than they would otherwise choose to have based on market considerations alone, banks may view those standards as a form of regulatory taxation.[52] For that reason, Jones concludes, "For a given perceived differential between the cost of equity and the cost of debt financing, incentives to take RCA [Regulatory Capital Arbitrage], therefore, are related *negatively* to the associated structuring costs, and *positively* to the extent to which RCA permits debt to be substituted for equity."[53]

The accord has also led to substantial

asset securitization—that is, to the transformation of illiquid financial assets, such as mortgages or credit card debt, into marketable capital market instruments—which can be another form of regulatory capital arbitrage. One important reason why banks securitize their assets, although not the only one, is that they can maintain their capital levels unchanged *and*, at the same time, increase their economic risks.[54] For instance, banks have an incentive to securitize their high-quality assets (otherwise the securitization would be too costly) and keep on the balance sheet only the low-quality assets, which would deteriorate the overall quality of a bank's portfolio.

In sum, the accord, already adopted by more than 100 countries, has failed to achieve its main goal and may have made the international financial system less, not more, stable. Indeed, it is widely acknowledged that assigning a 20 percent weight to short-term loans to banks (as opposed to the 100 percent weight that lending to most private nonbank institutions carries) led to an increase in lending to Asian banks, which in turn contributed to the Asian crisis of 1997–98.[55] Sixty percent of the $380 billion in international bank lending to Asia at the end of 1997 had a maturity of one year or less.[56]

Nor has the accord been successful in leveling the playing field. Differences in accounting systems (assets are measured at book, not market, value), tax systems, legal systems, and, more important, the size of the explicit (or implicit) government safety net remain as sources of "competitive inequality among international banks." As Hal S. Scott and Shinsaku Iwahara point out in a well-known study that compares the implementation of the accord in Japan and the United States,[57] similar implementations of the accord led to different outcomes in those countries. However, this lack of success merely reflects the presence of different regulatory regimes, competition among which can be just as healthy in promoting efficiency as competition among market participants.

Given those shortcomings, it is not surprising that the Basel Committee has attempted over the years to fine-tune the accord. However, those attempts have not been successful in keeping up with the brisk pace of change and innovation in the financial marketplace, which has left the regulatory framework under which banks operate antiquated and completely at odds with the way market participants measure risk. For that reason, in January 2000 the Basel Committee issued a proposal for a New Basel Accord, which builds on an earlier proposal, "to align regulatory capital requirements more closely with underlying risks and to provide banks and their supervisors with several options for the assessment of capital adequacy," as William J. McDonough noted.[58]

The New Basel Accord

The new proposal is based on "three mutually reinforcing pillars": minimum capital requirements, supervisory review, and market discipline. Having three pillars (as opposed to just one) is in sharp contrast to the 1988 accord, which dealt almost exclusively with minimum capital standards. However, minimum capital standards continue to be the main focus of the Basel Committee, as evidenced by the lengthy treatment they receive in the new proposal.[59]

The First Pillar

Minimum capital standards for credit risk. Under the New Basel Accord, the definition of regulatory capital—that is, its division into Tier 1 and Tier 2 capital and the rules limiting its composition—remains unchanged. The ratio of capital to risk-weighted assets also remains unchanged at 8 percent. But the accord introduces significant changes in the way risks are measured. The first change is that the New Basel Accord contains a new capital charge for operational risk—defined as "the risk of loss resulting from inadequate or failed internal processes, people and systems or from external events"[60]—in addition to the charges it already has for credit and market risks. Second, the proposal has an

The accord has failed to achieve its main goal and may have made the international financial system *less* stable, not more.

Table 3
Risk Weights for Sovereign Borrowers

Credit Assessment	AAA to AA-	A+ to A-	BBB+ to BBB-	BB+ to B-	Below B-	Unrated
Risk Weights	0%	20%	50%	100%	150%	100%

Source: Basel Committee on Banking Supervision, "The New Basel Capital Accord," 2001, p. 7.

The characteristics that most distinguish the new accord from its predecessor are its complexity and detail.

adjustment for concentration risk. If a bank has a high degree of credit-risk concentration to a single borrower or sector, an additional capital charge will apply. Conversely, if a bank has a well-diversified portfolio—one with a low concentration of risk—it will benefit from a reduction in its capital charge, at the discretion of supervisors.

A third change (and perhaps the most important) is that the approach to measuring credit risk has been completely revamped.[61] Under the New Basel Accord, banks will have three different options to measure credit risk: A standardized approach, which is a revision of the 1988 accord's approach to credit risks and which still assigns risk weights to different assets; and an internal ratings based (IRB) approach, which allows banks to estimate the amount of capital necessary to confront their economic risks using their own internal risk-assessment models.[62] The IRB approach is further divided into two frameworks: (1) the foundation IRB framework, where banks provide just one input for their assessments of the creditworthiness of borrowers and supervisors provide the remaining inputs to complete those assessments, and (2) the advanced IRB framework, where banks provide all the inputs in the measurement process subject to regulatory approval.

The standardized approach. Under the standardized approach, the risk weights are determined by the category of the borrower, using external credit assessment institutions, such as Standard and Poor's, Moody's, or Fitch, to name the three largest bond rating firms in the United States. There are three main categories for sovereign, bank, and corporate borrowers. Table 3 shows the weights for sovereign borrowers.

For claims on banks there are two options.[63] Under the first option, banks would receive a risk weight that is one rank less than that of the country in which the bank is incorporated. For instance, if the United States receives a zero weight, U.S. banks would receive a 20 percent weight. Option two bases the risk weight on the external credit assessment of the bank itself, irrespective of the credit assessment of the country in which that bank is incorporated (see Table 4).[64]

Table 5 shows the risk weights for corporate borrowers.[65]

The standardized approach also assigns weights to other types of claims, such as claims secured by residential property, which receive a weight of 50 percent, and claims secured on commercial real estate, which receive a weight of 100 percent.

The IRB approach. Under the IRB approach, banks will categorize their assets into six different classes: corporates,[66] banks, sovereigns, retail, project finance, and equity. Before banks can apply the IRB approach, they must meet a set of requirements that includes a meaningful differentiation of credit risk, completeness and integrity of rating assignment, oversight of the rating system and processes, estimation of the probability of default, internal validation of the rating system and disclosure requirements. As stated above, the IRB approach is further divided into two categories: foundation and advanced. Under the foundation approach, banks must estimate

Table 4
Risk Weights for Bank Borrowers (Option 2)

Credit Assessment of Banks	AAA to AA-	A+ to A-	BBB+ to BBB-	BB+ to B-	Below B-	Unrated
Risk Weights	20%	50%	50%	100%	150%	100%
Risk Weights for Short-Term Claims	20%	20%	20%	50%	150%	20%

Source: Basel Committee on Banking Supervision, "The New Basel Capital Accord," 2001, p. 10.

Table 5
Risk Weights for Corporate Borrowers

Credit Assessment	AAA to AA-	A+ to A-	BBB+ to BB-	Below BB-	Unrated
Risk Weights	20%	50%	100%	150%	100%

Source: Basel Committee on Banking Supervision, "The New Basel Capital Accord, 2001, p. 10.

internally the probability of default (PD) associated with a borrower grade, while supervisors provide the other inputs—the loss given default (LGD); the exposure at default (EAD); and the maturity (M), which is assumed to be two and a half years under the foundation approach for all exposures—that go into the formula for the derivation of the risk weight associated with a particular asset. In the advanced approach, banks supply all four inputs—PD, LGD, EAD, and M—subject to supervisory review and validation.

Minimum capital standards for operational risk. Basel II introduces a capital charge for operational risk that was expected to be equal, on average, to 20 percent of the minimum regulatory capital charge. However, industry complaints during the consultative period led the Basel Committee to lower that percentage to 12 percent in the fall of 2001. Although substantial revisions to the treatment of operational risk are likely, given the incompleteness of the New Basel Accord in this area and the numerous industry complaints, the Basel Committee has advanced a proposal that gives banks three options to measure capital requirements for operational risk. The Basic Indicator Approach, the simplest one of the three, allocates operational risk capital using a single indicator as a proxy for an institution's overall risk exposure. The required capital will be a fixed percentage of a bank's gross income. The Standardized Approach will allow bank supervisors to establish eight standardized business lines, standardized broad indicators, and standardized loss factors per business line. The capital charge within each business line will be calculated by multiplying the bank's broad indicator measurement by

Just as with the original accord, the New Basel Accord fails to take into account portfolio effects that can greatly reduce a portfolio's overall risk profile.

Even in its approach to the measurement of individual assets, Basel II could adopt an inaccurate approach that might become outdated in the near future.

the relevant loss factor. The total capital charge will be obtained by adding the capital charges for all business lines. The third approach is the Advanced Measurement Approach. Under this approach, which is the most complex of the three, banks will use their own internally generated risk estimates (subject to qualitative and quantitative standards set by the committee) to determine the capital charges for operational risk. The Basel Committee is willing to consider insurance for operational risk as a mitigating factor under the AMA so that banks have a lower capital charge if the insurance coverage is deemed to be appropriate.[67]

The Second Pillar: Supervisory Review

The New Basel Accord sets four key supervisory principles "to ensure that banks have adequate capital to support all the risks in their business . . . [and] to encourage banks to develop and use better risk management techniques in monitoring and managing their risks."[68] The four principles are as follows:

1. Banks should have a process for assessing their overall capital in relation to their risk profile and a strategy for maintaining their capital levels.[69]
2. Supervisors should review and evaluate banks' internal capital adequacy assessments and strategies as well as their ability to monitor and ensure their compliance with regulatory capital ratios. Supervisors should take appropriate action if they are not satisfied with the results of this process—i.e., supervisors can demand that banks maintain a level of capital above the minimum required if they deem it appropriate.
3. 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.
4. Supervisors should seek to intervene at an early stage to prevent capital from falling below the minimum levels required to support the risk characteristics of a particular bank and should require rapid remedial action if capital is not maintained or restored.

The Third Pillar: Market Discipline

The final pillar of the three-pronged approach of the New Basel Accord is market discipline, which the Basel Committee understands as disclosure requirements that would allow market participants to assess the strength of individual banks. The New Basel Accord sets out disclosure recommendations and requirements in four key areas: (1) scope of application—that is, which entities within a banking company are subject to the accord; (2) composition of capital—that is, the amount of Tier 1 and Tier 2 capital, the total amount of capital, and the accounting policies for the valuation of assets and liabilities; (3) exposure assessment and management processes—that is, information relating to the bank's balance sheet, in particular, to the asset side, the different types of risk to which the bank is exposed and the amounts exposed, the method used for calculating those risks, the external credit agency used for the risk-weighting purposes, in the case of banks using the standardized approach, and general information on the risk assessment methodology used, in the case of banks using the IRB approach, among other requirements;[70] and (4) capital adequacy—that is, the capital requirements for each different type of risk and the total capital requirements.

Criticisms of the New Basel Accord

The characteristics that most distinguish the new accord from its predecessor are its complexity and detail,[71] which Basel Committee officials have defended as "a natural reflection of the advancement and innovations in the financial marketplace and the need for a more risk-sensitive framework."[72] Indeed, the new accord tries to mimic, especially in the IRB approaches, the ways in which banks measure the risk of individual

assets. But, in so doing, it has become an extremely complex and opaque proposal. The added complexity does not translate into greater accuracy. Banks do not just measure the risk associated with individual assets; rather, they measure the risk associated with a whole portfolio. So, just as with the original accord, the new accord fails to take into account portfolio effects that can greatly reduce a portfolio's overall risk profile.

Furthermore, risk management (and risk measurement) is an imperfect science, still in its early stages of development. Improvements are occurring rapidly, so that what may be considered a "best business practice" today may be out of date tomorrow. Former Federal Reserve Board of Governors member Laurence H. Meyer, who is very supportive of the new proposal, has nonetheless expressed concern that an overly prescriptive accord could end up stifling market-based innovation in risk-management practices. "The art and the science of risk and economic capital determination," he said, "are changing so rapidly that neither the banking community nor the supervisors have the luxury of determining an acceptable or best practice and adhering to it very long."[73] So, even in its approach to the measurement of individual assets, Basel II could adopt an inaccurate approach that might become outdated in the near future. John D. Hawke Jr., head of the Office of the Comptroller of the Currency, which regulates and supervises more than 2,200 national banks and some subsidiaries of foreign banks in the United States, recently expressed a similar sentiment: "We need to be cautious," he said, "that Basel II does not stultify private-sector innovation by forcing banks to invest prematurely in a single government-dictated approach that may not reflect the best practices that might otherwise evolve."[74]

A second characteristic of the New Basel Accord is its vagueness, the result of its overly prescriptive and detailed approach.[75] That vagueness can be identified in two ways. First, many of the more complex details and problems of the New Accord have yet to be worked out, and it could be a long time before national banking regulators, industry participants, and the members of the Basel Committee come to an agreement as to the solutions. Second, Basel II leaves a lot of discretion to national regulators, in particular with regard to the validation of banks' internal systems and the disclosures necessary to use those systems for the determination of capital charges.

Indeed, Basel II leaves so much discretion to national regulators that one could make the case that international capital standards have ceased to exist, even if there is still an international agreement on capital standards.[76] The absence of international capital standards would be a welcome development if domestic regulators were able to set the rules with which banks that are operating under their jurisdiction must comply, but that is not the case. Instead of having different rules-based regulatory systems, which would give way to regulatory competition, the accord creates a vague system under which regulators interpret and apply an overly complex set of rules in an arbitrary manner.

That could be a problem for both regulators, who are not prepared to deal with that much complexity and vagueness, and market participants, who could see the costs of complying with the regulations skyrocket, especially because it is not clear with which regulations they have to comply. The vagueness of the New Basel Accord as well as the leeway that it gives regulators makes it easier for regulators to engage in regulatory forbearance and be subject to corruption.[77] As the Shadow Financial Regulatory Committee, a group of publicly recognized, independent experts on financial issues, stated in its comment on the New Basel Accord: "Although the task of computing the correct economic capital for a bank is very difficult and complex, bank capital regulation need not be. Indeed, greater complexity in bank regulation reduces transparency and may increase the scope for regulatory arbitrage and regulatory forbearance."[78]

Even in the best-case scenario—that is, the case with no forbearance or corruption—it is

"Greater complexity in bank regulation reduces transparency and may increase the scope for regulatory arbitrage and regulatory forbearance."

not clear that regulators in most countries are ready to perform the tasks that the new proposal requires of them. Former Federal Reserve governor Meyer raised the possibility that banking supervisors, even those in the United States, may be overwhelmed by the new proposal: "There is, therefore, a practical limit to the number of institutions that we—and, I would argue, other countries—can effectively supervise under the IRB approaches."[79] Meyer also doubted whether regulators in other countries were up to the task of supervising banks' internal methodologies and the ongoing compliance with sound practices: "This challenge will be particularly pronounced in countries where the supervisory tradition has not emphasized the types of on-site review needed to validate a bank's IRB implementation."[80]

Although banks are in a better position than regulators to estimate their risk exposure, giving them that option presents them with obvious conflicts of interest when the government acts as the ultimate guarantor.

For all the added complexity, it is not yet clear that even the best-managed banks with the most sophisticated risk-management models will have lower capital charges. For banks, the incentive to adopt those costly models is that, insofar as they provide a more accurate picture of the risks taken, they could lead to lower capital charges. But regulators have already stated that total charges, including those stemming from operational risk, cannot fall below 90 percent of the current minimum required in the first year and 80 percent in the second year after Basel II is implemented.[81] So, in the best-case scenario, banks will get a 10 or 20 percent reduction in their total capital charges in exchange for the implementation of costly risk-management systems and much greater regulatory oversight and compliance costs.

But, even those reductions in capital charges are doubtful, as recent tests conducted by the Basel Committee revealed. According to the results of those tests, banks using the IRB foundation approach would have faced capital requirements that are 14 percent higher than under the current accord. With a charge for operational risk, the increase in capital would have been 24 percent. Even after certain parameters were modified with the specific goal of lowering capital charges for banks using the IRB foundation approach, capital charges for the banks participating in the test would have increased by an average of 2 percent relative to what is now required.[82] So, thus far, it does not appear that the new proposed rules will provide banks with the right incentives.

Will Basel II be likely to succeed in achieving its two stated goals—namely, leveling the playing field and strengthening the safety and soundness of the international financial system—even if it does not succeed in lower capital charges for the most sophisticated banks? It appears that competitive inequality will remain and even increase with Basel II, which will likely produce a bifurcated system, with one small group of banks using the IRB approaches while the majority of banks uses the standardized approach. In addition, the accord still applies to banks only, but not to other financial institutions.

As for the second goal, other features of the New Accord will probably undermine it. For example, the use of External Credit Assessment Institutions—or, credit-rating agencies, as they are commonly known—is fraught with danger. First of all, the ratings those agencies give are not always accurate and, in fact, tend to follow market trends rather than anticipate them.[83] In the case of Enron, for instance, all three SEC-approved credit-rating agencies gave Enron an investment-grade rating on its debt up until five days before the Houston-based company filed for bankruptcy.[84]

Second, the increasing use of credit ratings for regulatory purposes can easily lead to market participants' viewing those ratings as mere "regulatory licenses."[85] In that case, those agencies would be under tremendous pressure to inflate their grades, because higher ratings would result in lower regulatory capital charges. For instance, if a bank makes a loan to a corporation with an A+ rating, the risk weight on that loan will be 50 percent; if the loan is to a corporation with an AA- rating, the risk weight drops to 20 percent. However, the bond default rate for corporations rated A+ is negligible.[86] Pressure will also come from the

companies being rated, as a better rating will result in significantly lower borrowing costs, or from the holders of the debt, as evidenced in the Enron crisis, when former Secretary of the Treasury Robert Rubin, now an executive at Citigroup, a major lender to the Houston company, called current Under Secretary of the Treasury for Domestic Affairs Peter Fisher to inquire about the wisdom of having the latter call the rating agencies to discuss Enron's ratings. Although the under secretary never made the call, the whole episode is symptomatic of things to come, especially as credit ratings become more important for regulatory purposes.

A second characteristic of Basel II that could create problems is the use of the IRB approaches, because banks will still be measuring risks one asset at a time. The difference between the standardized approach and advanced approaches is that the risk categories of assets are not predetermined under the latter, so banks can evaluate the riskiness of their own assets. Although banks are in a better position than regulators to estimate their risk exposure, giving them that option presents them with obvious conflicts of interest when the government acts as the ultimate guarantor. Will bank managers under those conditions knowingly or unknowingly underestimate the riskiness of their assets to lower their regulatory capital charges? Or will banks use one of the IRB approaches only to discover that their capital charges are significantly higher under that approach than under the standardized approach, as the recent quantitative study conducted by the Basel Committee on Banking Supervision showed, and then switch to the latter, because doing so will result in lower capital requirements? They would certainly have an incentive to do so. How can regulators make banks' ratings systems comparable? Basel II does not make that clear, but because those systems will be used to determine capital charges, that becomes a crucial question, if having a level playing field is one of the goals of the accord.

Even in the areas in which the New Basel Accord represents an improvement over the current one, the improvements fall short of what could have been achieved. For instance, the new proposal ends the discrimination against non-OECD countries and lessens it against corporate borrowers. However, default rates among differently rated corporates do not justify different capital charges for those corporates, charges that bear little or no relation to the differences observed in risk premiums or default rates among assets within a risk category or across categories. For example, the new proposal still gives preferential treatment to short-term interbank lending vis-à-vis lending to corporations.

A second area in which the new Basel is an improvement over the old Basel is supervisory review (Pillar II). Principle four of the supervisory review process (early intervention) could be interpreted as a regulatory system that includes Structured Early Intervention and Resolution, or Prompt Corrective Action, for troubled banks—that is a system with built-in triggers for a regulatory response when banks' capital levels fall below a certain level. Yet the Basel Committee has fallen short of making that recommendation.

In the end, the new proposal may do little to improve the current accord and it may actually make it worse by adding to it unnecessary complexity and vagueness and by giving regulators and banks far more discretion than they had before. Overly prescriptive rules are likely to become outdated before the new accord is implemented; vague rules are likely to be manipulated by banks and regulators alike. The question that arises then is, if international harmonization of banking regulations, however detailed and complex, is unlikely to produce adequate capital levels for banks, provide a stable financial system, and protect taxpayers' interests, can more decentralized, market-based arrangements based on simple rules produce those results?

Alternatives to International Harmonization of Banking Regulations

Perhaps the main problem with international harmonization of banking regula-

The main problem with international harmonization of banking regulations is that they prevent competition among different regulatory regimes and innovation in those regimes.

A subordinated debt requirement would align the interests of subordinated debt holders with those of the deposit insurance fund (and hence taxpayers).

tions—regardless of whether those regulations are adequate or not—is that they prevent competition among different regulatory regimes and innovation in those regimes.[87] Harmonization also makes it more difficult for domestic regulators to adapt the regulatory regime to the special circumstances of their own banking system. What may be an adequate regulatory framework for one country (or group of countries) today may not be for another country (or group of countries), or for that same country, tomorrow. There are two alternatives to international harmonization that rely more on market mechanisms: A subordinated debt requirement and free banking. The first alternative seems more appropriate for industrialized countries with a long tradition of central banking and deposit insurance, while the free-banking alternative is more appropriate for developing nations with particularly weak banking systems.[88]

Indeed, in a recent report, the World Bank concluded that "the weight of the evidence [suggests] that in practice, rather than lowering the likelihood of a crisis, the adoption of explicit deposit insurance has been associated on average with less banking sector stability. . . . The natural interpretation of this result is that banks, exploiting the availability of insured deposits, take greater risks."[89] For that reason, the report recommended that developing countries that do not have a formal system of deposit insurance refrain from establishing one especially if the institutional environment in that country is weak.

Subordinated Debt Requirement

The rationale for enacting a subordinated debt requirement is clear.[90] Subordinated debt—that is, uninsured debt junior to all other claims—is one of the most effective market mechanisms for relaying information about a bank's risk profile. Although there are different proposals for a subordinated debt requirement, this paper uses the one advanced by the Shadow Regulatory Financial Committee, because it satisfactorily addresses the concerns highlighted below.[91] Columbia University economist Charles Calomiris, a leading proponent of the subordinated-debt requirement and a member of that committee, has summed up the benefits of a subordinated debt requirement aptly: "The most desirable feature of a reliance on subordinated-debt requirements is that they place the primary 'regulatory' and 'supervisory' burdens on sophisticated market participants with their own money at stake. Government regulators and supervisors have neither the adequate skills nor sufficient incentives to monitor continuously and control the conditions of banks."[92]

Indeed, a subordinated debt requirement would align the interests of subordinated debt holders with those of the deposit insurance fund (and hence taxpayers), because they do not profit from a bank's risky investments if those investments turn out to be profitable, but they stand to lose their money if those investments are not profitable. For that reason, holders of subordinated debt would have a very strong incentive to monitor closely the activities of banks. At the same time, yields on subordinated debt provide the market's assessment of the risks taken by banks. Indeed, the interest paid on subordinated debt serves as a market-determined risk-adjusted insurance premium. Regulators could then limit the yield paid on subordinated debt, which would in effect limit the risks banks take, as measured by the market, not by the regulators themselves.

The main concern about a subordinated debt proposal is the possibility that the regulators will bail out the holders of that debt if a bank should get in trouble, even if the government has no explicit authority to do so. Although that is a valid concern, the problem is with the institutional incentives during periods of crises and not with a subordinated debt proposal per se. A second concern is the possibility that banks may not be able to sell the debt during times of liquidity crunches, which could make the proposal ineffective. Additional concerns include the costs of issuing that debt,[93] the potential for insider trading, and the possibility that it might be procyclical (i.e., that banks will find it too costly

to issue subordinated debt during an economic downturn, thus exacerbating the decline in economic activity).

In their report to the Congress, the Federal Reserve and the U.S. Treasury Department acknowledged that a subordinated debt requirement "could improve direct market discipline if an institution's expected cost of issuing subordinated debt became more directly related to purchasers' perceptions of the riskiness of that institution . . . [and] the objective of augmenting indirect market discipline would be achieved if a subordinated debt policy made secondary market prices for an institution's subordinated debt more directly related to the institution's risk."[94] Unfortunately, the report concluded, "On balance, the net benefits of even the most straightforward policy are less than clear than what is necessary to justify a mandatory [subordinated debt] policy."[95]

Free Banking

For the purposes of this paper, a free banking system is one in which governments do not hold a monopoly right to issue currency and there are no legal requirements to use one currency or another.[96] Furthermore, that system has no central bank playing a lender-of-last-resort role or government-sponsored mandatory deposit insurance. Finally, that system has no minimum capital requirements, reserve requirements, geographic restrictions, restrictions on entry, or restrictions on the types of investments banks can make or in the activities in which they can engage.

Given the absence of legal restrictions, it is not possible to give just one model of how banks would operate under a regime of free banking, or how that regime would deal with the issues of stability and liquidity. However, it is likely that banks would operate in principle much as they do today. They would take in demand deposits in any currency they accepted and would be free to invest those deposits, in whole or in part, or keep 100 percent of those deposits as reserves.[97] If they invested the deposits, banks and depositors would determine whether the deposits were fixed in value and payable on demand, in which case the deposits would be equivalent to debt claims, or not, in which case deposits would be equivalent to equity claims.[98] In the former case, depositors would force bank managers to hold adequate levels of capital—that is, levels of capital sufficient to absorb any losses the bank may have and pay depositors back in full. Depositors would also monitor the lending activities of banks to ensure that they were not too risky. In the event that they were, depositors would demand higher interest rates on their deposits or withdraw their funds from banks. Capital would be provided by shareholders who would have to negotiate with depositors the levels of capitalization that the latter would be comfortable with. Those levels would probably be considerably higher than they are today, which would solve the problem of instability.[99]

As for the issue of liquidity, solvent banks experiencing liquidity problems would be able to obtain credit in the marketplace (usually from other banks), provided their solvency was beyond doubt and that they took the measures necessary to reassure their creditors of that fact, for example by engaging in less risky lending. Insolvent banks experiencing liquidity problems would be more likely to disappear, but that would make the whole banking system stronger, not weaker.

In sum, the theoretical case for free banking is solid. It is further supported by the historical experience of Scotland, which had a stable and efficient free banking system during the 18th and 19th centuries—a system with no lender of last resort, no formal system of deposit insurance, and no minimum capital requirements. Canada, Sweden, Australia and Colombia, among others, also had systems of free banking. In all cases, those systems were highly stable and noninflationary.[100]

Conclusion

International harmonization of banking regulations is neither necessary nor desirable.

Market forces are usually the most effective mechanism for bringing safety and soundness to the financial system while protecting the interests of taxpayers.

Regulation at the national level combined with greater transparency of banking activities is sufficient and more desirable. Competition among different national regulatory frameworks is better for maintaining the safety and soundness of the international financial system. In short, the Basel Accord was and remains unnecessary and should be repealed, not revised.

The global spread of free markets has transformed international finance since the original Basel Accord was enacted 14 years ago. The Basel Committee and banking regulators around the world should be commended for their efforts to make the international financial system more efficient and stable and for trying to make capital requirements more reflective of the ways banks measure their own risk taking. However, the committee's one-size-fits all approach has failed in that endeavor, and the new proposal, however detailed and complex, will probably fail as well. Basel II will most surely be followed by Basel III, Basel IV, and so forth. Banking regulators should take changes in international finance into account by recognizing that market forces are usually the most effective mechanism for bringing safety and soundness to the financial system while protecting the interests of taxpayers. To that end, the following policy recommendations are advanced:

- At the national level, the trend should be toward regulatory simplicity, because regulators are unlikely to be able to keep up with the rapid pace of innovation in financial markets. If there were to be a minimum capital requirement, a simple capital leverage rule with no risk weights would suffice, especially if there is an added emphasis on market discipline and disclosure. Basel II, unfortunately, goes in the opposite direction, with its obsession with the precise weights of credit risks;
- The countries that have a public deposit insurance system should privatize those systems, or, at the very least, make the insurance premia that banks pay commensurate with the risks they take. Those risks are best assessed by the market itself through a subordinated-debt requirement; and
- The countries that do not have a public deposit insurance system should move toward a system of financial laissez-faire, in which the type and amount of financial services provided are determined jointly by buyers and sellers of those services.

In short, a system that relies more on market discipline, innovation, and competition will achieve the Basel Committee's one laudable goal (i.e., safety and soundness of the international financial system) in a better way than will either the old or the new Basel Accord.

Notes

1. The Group of Ten comprises Belgium, Canada, France, Germany, Italy, Japan, the Netherlands, Sweden, Great Britain, and the United States.

2. If there is a single event that prompted this concerted effort at international regulation of the banking industry it is the failure of Bankhaus Hersttatt, a small German bank, in June 1974. But, as former Citicorp chairman Walter B. Wriston pointed out in a brief but informative account of the event, "no government agency was involved in any aspect of the Herstatt crisis. It was handled entirely by the New York Clearing House." Walter B. Wriston, "Dumb Networks and Smart Capital," *Cato Journal* 17, no. 3 (Winter 1998): 339. So the private sector was able to avoid its own—and the regulators'—worst fear: that the interbank payments system would come to a halt as a result of a bank's failure.

3. The Committee on Banking Regulations and Supervisory Practices (hereinafter cited as the Basel Committee) includes banking regulators from Luxembourg, Spain, and Switzerland in addition to those of the G-10 countries.

4. See Basel Committee, "History of the Basel Committee and Its Membership," March 2001, www.bis.org/publ/bcbsc101.pdf.

5. See Basel Committee, "International Convergence of Capital Measurement and Capital Standards," 1988, www.bis.org/publ/bcbs04A.pdf. Cited

hereinafter as "International Convergence."

6. In 1996, the accord was amended to incorporate market risks, which were defined as "(a) the risks in the trading book of debt and equity instruments and related off-balance-sheet contracts and (b) foreign exchange and commodities risk." Basel Committee, "Amendment to the Capital Accord to Incorporate Market Risks," 1996, www.bis.org/publ/bcbs24.pdf. As discussed below, the New Basel Capital Accord includes a capital charge for operational risk in addition to those for credit and market risks.

7. In June 2001 the committee announced its intention to have another round of consultation in early 2002, finalize the new accord by the end of 2002, and fully implement it by 2005. Whether the committee will be able to stick to its own timetable this time remains doubtful given the number of issues that are yet to be resolved.

8. In recent speeches, both the chairman of the Federal Reserve Board, Alan Greenspan, and the comptroller of the currency, John D. Hawke Jr., have expressed their concern that even the most sophisticated U.S. banks do not yet have internal risk-management systems that are up to par with the requirements of Basel II. Those two regulators are also concerned that regulators from other countries have expressed quite confidently that their banks do indeed have those systems already in place—a doubtful claim, at best—which would allow those banks to use those internal risk-management systems to determine capital charges. See Remarks by Chairman Alan Greenspan at the Conference on Bank Structure and Competition, Federal Reserve Bank of Chicago, Chicago, Illinois, May 10, 2002, www.federalreserve.gov/boarddocs/speeches/2002/20020510/default.htm; and John D. Hawke Jr., "The Road to Basel II: Good Intentions and Imposing Challenges," Remarks Made at the Risk Management Association's Capital Management Conference, Washington, June 6, 2002, www.occ.treas.gov/ftp/release/2002-49.doc.

9. Explicit deposit insurance refers to a formal system of depositor protection in which the insurance premiums and the amount protected are well specified. Implicit deposit insurance refers to a government guarantee of deposits, even if no formal system of depositor insurance is in place. In many cases, that government guarantee is a blanket guarantee, which makes implicit deposit insurance much more costly than explicit insurance.

10. Credit Suisse Group, "The Basel Capital Accord: Consultative Paper of January 16, 2001: Comments," May 30, 2001, p. 7, www.bis.org/bcbs/ca/cresuigro.pdf.

11. Regulation of banks has usually come in the form of entry restrictions, limits on activities, geographical restrictions, reserve requirements, and capital requirements. See George J. Benston, "Regulating Financial Markets: A Critique and Some Proposals," Hobart Paper no. 135, Institute of Economic Affairs, London, 1998, pp. 18, and 27–85. See also Randall S. Kroszner, "Financial Regulation," in The Elgar Companion to Austrian Economics, ed. Peter J. Boettke, (Northampton, Massachusetts: Edward Elgar, 1998), p. 421; Edward J. Kane, "Ethical Foundations of Financial Regulation," *Journal of Financial Services Research* 12 (August 1997): 51–74; and Charles A.E. Goodhart et al., *Financial Regulation: Why, How and Where?* (London: Routledge, 1998), especially chapter 9.

12. Historically the main reason for government regulation of financial institutions has been to finance wars. See, for instance, Kroszner (1998), p. 419; and Niall Ferguson, *The Cash Nexus* (New York: Basic Books, 2000).

13. See Adam Smith, *An Inquiry into the Nature and Causes of the Wealth of Nations* (1776; reprint, New York: Modern Library, 11937), p. 285.

14. Ibid., p. 308.

15. For instance, the "first come, first served" nature of bank deposits, which gives depositors an incentive to run, could be eliminated if banks were allowed to mark their liabilities to market, much like money market mutual funds do. In that case, depositors would become shareholders of a bank, and their deposits would fluctuate in value constantly. In the United States, money market mutual funds have become increasingly attractive as a substitute for bank deposits even though the FDIC does not insure them.

16. The share of assets of financial institutions in the United States held by commercial banks and thrift institutions fell from 89.2 percent in 1860 to 34.8 percent in 1993. See Randall S. Kroszner, "Bank Regulation: Will Regulators Catch Up with the Market?" Cato Institute Briefing Paper no. 45, March 12, 1999, p. 3.

17. Douglas Diamond and Philip Dybvig, "Bank Runs, Deposit Insurance, and Liquidity," *Journal of Political Economy* 91 (June 1983): 401–19. Economists Diamond and Dybvig argue, moreover, that when depositors think that their bank will fail, they will run on it and will actually cause that bank to fail. The failure of one bank can cause other banks to fail and thus create a banking panic. In their model, imperfect information creates third-party costs and thus justifies some kind of (government-sponsored) deposit insurance. For criticism of the Diamond-Dybvig

model, see Lawrence H. White, *The Theory of Monetary Institutions* (Malden, Massachusetts: Blackwell Publishers, 1999), especially chapter 6; and Kevin Dowd, *Money and the Market* (New York: Routledge Press, 2001), especially chapter 3.

18. Such effects would occur in the case where a run on a bank(s) is not followed by a redeposit of funds in other banks so that there is an overall contraction of the money circulating through the banking system. That situation is not possible today, as discussed below.

19. The amount of capital held, in the absence of government insurance, is a function of the riskiness of a bank's assets, liabilities, and off-balance sheet positions.

20. Benston, p. 39.

21. "The very threat of a run served as a powerful source of market discipline. At the turn of the century, capital ratios at banks were close to 25 percent and effectively higher, as shareholders at national banks and some state banks were subject to double liability up to the initial par value of the shares." George G. Kaufman, "The Truth about Bank Runs," in *The Financial Services Revolution,* ed. Catherine England and Thomas Huertas (Norwell, Massachussetts: Kluwer Academic Press 1988), pp. 9–40.

22. For an account of how clearinghouses traditionally operated in the United States, see Richard H. Timberlake, *Monetary Policy in the United States: An Intellectual and Institutional History* (Chicago: University of Chicago Press, 1993), especially chapter 14.

23. In this regard, the existence of runs on insolvent banks has a salutary effect on the economy by eliminating from the financial system firms that have an incentive to engage in risky lending in an attempt to become solvent again, a practice that could have negative effects on other market participants.

24. See Charles W. Calomiris and Joseph R. Mason, "Contagion and Bank Failures During the Great Depression: The June 1932 Chicago Bank Panic," *American Economic Review* 87 (1997): 863–83.

25. Bank failures in the 1920s averaged more than 500 per year. It is worth noting, however, that most of those banks had three common characteristics: First, they were unit banks (i.e., banks with just one branch); second, they were located in agricultural states and so were tied to the local economy; and third, they were located in states with taxpayer-financed deposit insurance schemes. Between 1929 and 1933 the number of banks in the United States contracted by about one-third and the banking crises were so severe that they led to the National Banking Holiday—banks in the United States were closed for one week—in March of 1933. See Milton Friedman and Anna J. Schwartz, *A Monetary History of the United States, 1857–1960* (Princeton, N.J.: National Bureau of Economic Research and Princeton University Press, 1963).

26. For the political economy of the introduction of deposit insurance in the United States, see Eugene White, "Deposit Insurance," in *Reforming Financial Systems: Historical Implications for Policy,* ed. Gerard Caprio Jr. and Dimitri Vittas (New York: Cambridge University Press, 1997), pp. 85–100. White shows how deposit insurance legislation was passed mainly to protect the position of unit banks—usually small, rural banks—against the larger branching banks—usually better-diversified, urban banks. See also, Genie D. Short and Kenneth J. Robinson, "Bank Deposit Guarantees: Why Not Trust the Market?" in *Money and the Nation State,* ed. Kevin Dowd and Richard H. Timberlake (New Brunswick, New Jersey: Transaction Publishers, 1998) pp. 213–45; and Gerald P. O'Driscoll Jr., "Deposit Insurance in Theory and in Practice," in *The Financial Services Revolution,* ed. Catherine England and Thomas Huertas (Norwell, Massachusetts: Kluwer Academic Press 1988), pp. 165–79.

27. The Federal Deposit Insurance Corporation Improvement Act of 1991, which allowed premiums to be risk-adjusted to some extent, was a step in the right direction toward mitigating the moral hazard risks of having a system of taxpayer-financed deposit insurance. For an assessment of FDICIA and the reforms to the deposit insurance system that are currently being contemplated by the U.S. Congress, see George G. Kaufman, "FDIC Reform: Don't Put Taxpayers Back at Risk," Cato Institute Policy Analysis no. 432, April 16, 2002.

28. In contrast, New Zealand has recently moved in the opposite direction, doing away with its national insurance scheme. Other countries without an explicit deposit insurance scheme include Australia, Israel, Taiwan, Singapore, Panama, and South Africa. See James R. Barth, Gerard Caprio Jr. and Ross Levine, "The Regulation and Supervision of Banks around the World: A New Database," World Bank Working Paper, February 2001.

29. Short and Robinson (1998), pp. 222–25.

30. Benston (1998), p. 116.

31. For a criticism of attempts, mainly by the Organization for Co-Operation and Development, to harmonize tax systems across industrialized coun-

tries, see Veronique de Rugy and Chris Edwards, "International Tax Competition: A 21st-Century Restraint on Government," Cato Institute Policy Analysis no. 431, April 12, 2002. The recent corporate and accounting scandals in the United States have led to calls by many, including the American Institute of Certified Public Accountants, to harmonize U.S. Generally Accepted Accounting Principles with International Accounting Standards. Those calls are, in my opinion, misguided.

32. See William A. Niskanen, "Capital Mobility, Inflation, and Harmonization," *Cato Journal* 17, no. 3 (1988): 323–26.

33. For accounts of the political economy of the Basel Accord, see Ethan B. Kapstein, "Supervising International Banks: Origins and Implications of the Basle Accord," *Essays in International Finance,* no. 185, 1991; and Thomas Oatley and Robert Nabors, "Redistributive Cooperation: Market Failure, Wealth Transfers, and the Basle Accord," *International Organization* 52, no. 1 (1998): 35–54.

34. See Thomas Oatley, "The Dilemmas of International Financial Regulation," *Regulation*, Winter 2000, p. 37.

35. Ibid., p. 37.

36. Public Law 98-181, Title IX, "International Lending and Supervision Act of 1983," pp. 1280–81.

37. Oakley and Nabors, "Redistributive Cooperation."

38. Basel Committee, "International Convergence," p. 1.

39. Equity capital is defined as issued and fully paid ordinary shares/common stock and noncumulative perpetual preferred stock.

40. Asset revaluation reserves that take the form of latent gains on unrealized securities are subject to a discount of 55 percent on the difference between the historic cost book value and the market value.

41. Basel Committee, "International Convergence," Annex 1.

42. Ibid., p. 7.

43. The Basel Accord was modified in January of 1996 to reflect the introduction of a capital charge for market risk—that is, the risk of losses in on- and off-balance sheet exposures arising from changes in market prices. The risks subject to that capital requirement include interest-rate and foreign-exchange risks. See Basel Committee (1996).

44. There is another risk category for claims on domestic public-sector entities, excluding central government, and loans guaranteed by or collateralized by securities issued by such entities. The weight attached to that category is left to the discretion of national regulators, who can apply a weight of zero, 10, 20, 50 or 100 percent.

45. Basel Committee, "International Convergence," p. 12.

46. As a general rule, smaller portfolios are significantly riskier than larger ones.

47. Kroszner (1998), p. 421.

48. See *Economic Report of the President* (Washington, D.C.: U.S. Government Printing Office, 2001), p. 359.

49 Allen N. Berger, Margaret N. Kyle, and Joseph M. Scalise, "Did U.S. Bank Regulators Get Tougher during the Credit Crunch? Did They Get Easier during the Banking Boom? Did It Matter to Bank Lending?" in *Prudential Supervision: What Works and What Doesn't,* ed. Frederic S. Mishkin (Chicago: University of Chicago Press and National Bureau of Economic Research, 2001), pp. 300–49. Berger, Kyle, and Scalise tested the hypothesis and concluded that "the empirical results generally do not support risk-based capital as a major contributor to the lending slowdown, but do provide some support for the effects of tougher explicit or implicit leverage capital requirements." Ibid., p. 321.

50. A bank's (or any other firm's) capital structure is determined by income taxation (interest payments on debt are usually tax deductible, whereas dividends are paid from after-tax income and are taxed again when shareholders realize their capital gains), bankruptcy costs, and monitoring costs that result from asymmetric information. See Franco Modigliani and Merton Miller, "The Cost of Capital, Corporation Finance and the Theory of Investment." *American Economic Review* 48, no. 3 (1958): 261–97.

51. See William J. McDonough, Remarks by William J. McDonough, President and Chief Executive Officer, Federal Reserve Bank of New York, before the Eleventh International Conference of Banking Supervisors, Basel, Switzerland, September 20, 2000, p. 8, www.bis.org/review/rr000920a.pdf.

52. K. K. Donahoo and S. Shaffer, "Capital Requirements and the Securitization Decision," *Quarterly Review of Economics and Business* 31, no. 4 (1991): 12–23.

53 David Jones, "Emerging Problems with the Basel Capital Accord: Regulatory Capital Arbitrage and

Related Issues," *Journal of Banking and Finance* 24 (2000): 39. See also, Basel Committee, "Capital Requirements and Bank Behavior: The Impact of the Basel Accord," Working Papers no. 1, April 1999, especially pp. 21–26, www.bis.org/publ/bcbs_wp1.pdf.

54. Other reasons banks securitize assets include taking advantage of increased economies of scale, reduced costs of debt financing, and better diversification of funding sources.

55. See, for instance, Doug Cameron and John Willman, "Loosening Banks' Capital Ties," *Financial Times*, January 12, 2001; and Robert E. Litan, "Testimony of Robert E. Litan before the Senate Foreign Relations Committee," November 5, 1999, www.brookings.edu/Views/Testimony/litan/19991105/19991105.pdf.

56. See Zanny Minton-Beddoes, "A Survey of Global Finance: Time for a Redesign?" *The Economist*, January 30, 1999, p. 11.

57. See Hal. S. Scott and Shinsaku Iwahara, "In Search of a Level Playing Field: The Implementation of the Basle Capital Accord in Japan and the United States," Occasional Paper no. 46 (Washington, D.C.: Group of Thirty, 1994).

58. Basel Committee, "The New Basel Accord," Press release, January 16, 2001, p. 1, www.bis.org/press/p010116.htm.

59. The New Basel Accord is 133 pages long, of which almost 100 pages deal with minimum capital standards, plus over 400 pages of supporting documents. When one adds the working papers and additional documents relating to the accord that have been published since January 2001, the ones that are yet to be released, and the rules that national regulators will have to issue, Basel II will be well over a 1,000 pages. By comparison, the original Basel Accord is about 30 pages long, including the appendices. As we will see, greater complexity and attention to detail does not translate into a better proposal.

60. See Basel Committee, "Working Paper on the Regulatory Treatment of Operational Risk," September 2001, www.bis.org/publ/bcbs_wp8.pdf. This definition is slightly revised from the definition adopted in the New Basel Accord of January 2001.

61. The approach to measuring market risk remains unchanged from the 1996 Market Risk Amendment.

62. The new proposal gives a much more complete treatment to asset securitization and attempts to quantify the risks retained by banks after the assets have been securitized so that appropriate capital levies can be assessed. The Basel Committee, however, could not offer at this time a proposal on how to treat some forms of securitization, especially in the IRB approaches. The New Basel Accord also takes into account the full range of credit risk mitigation techniques, such as collateral, on-balance sheet netting (i.e., arrangements that set off matching sales and purchases against each other, especially sales and purchases of derivative products), guarantees, and credit derivatives, which reduce somewhat the credit risk to which a bank is exposed. See Basel Committee, "The New Basel Accord," 2001, pp. 15–31, 87–93; and Basel Committee, "Consultative Document: Asset Securitization," January 2001, www.bis.org/publ/bcbsca06.pdf.

63. Claims on securities firms are treated as claims on banks subject to regulatory approval. See Basel Committee, "The New Basel Accord," p. 10.

64. Claims on banks, however, cannot have a rating lower than 20 percent.

65. Remember that in the 1988 Accord all corporate claims were given a 100 percent risk weight.

66. Germany had threatened to veto the implementation of the accord unless loans to small and medium-sized enterpises (SMEs), which make up the bulk of German industry and borrow heavily long term, received preferential treatment. The Basel Committee agreed in July 2002 to distinguish between loans to SME borrowers and loans to larger firms. The reduction in the capital required to be set aside for a loan to an SME will be as high as 20 percent and approximately 10 percent for the entire set of SME borrowers in the IRB framework. There will also be a reduction for SME borrowers under the standardized approach, provided certain conditions are met. See Basel Committee, "Basel Committee Reaches Agreement on New Capital Accord Issues," Press release, July 10, 2002, www.bis.org/press/p020710.htm. Cited as "Agreement" hereinafter.

67. Notwithstanding the publication of three additional documents dealing with operational risk since the New Basel Accord consultative package was published in January 2001, operational risk continues to be one of the major stumbling blocks toward the completion of Basel II. The main obstacle is the fear that many industry participants and experts have that regulators will use the capital charge for operational risk as a top-off charge so that overall capital charges will remain on average unchanged from current levels, thus diminishing the incentives for banks to adopt better risk-management systems. Consequently, those critics oppose the establish-

ment of a floor—that is, a mandatory minimum separate capital charge for operational risk—and advocate instead that it be treated under Pillar II (Supervisory Review) of the New Basel Accord. The problem with treating operational risk under Pillar I is that the type of events for which a separate capital charge would be necessary (for example, a rogue trader taking on many risky and large positions) are events that have a low probability of occurring but a high cost when they do. Consequently, a capital charge no matter how high may not be enough to cover the losses resulting from those events. Furthermore, it is very difficult to measure with any degree of certainty the probability that such an event will occur and provide accordingly for any losses that it may create. Higher probability, lower cost events related to failings in the internal control system tend to be provided against with general loss reserves because those losses are usually very small. In this case, setting up a separate capital charge for operational risk does not appear to be very effective. For a fuller description of the operational risk framework, see Basel Committee, "Working Paper on the Regulatory Treatment of Operational Risk." For a criticism of the committee's approach to operational risk, see Hawke, "The Road to Basel II," and Shadow Financial Regulatory Committee, "The Basel 2 Approach to Bank Operational Risk: Regulation on the Wrong Track," Statement No. 179, May 6, 2002, www.aei.org/shdw/shdw179.htm.

68. See Basel Committe, "The New Basel Accord," p. 104.

69. Ibid., p. 105.

70. For more information about the requirements, see Basel Committee, "The New Basel Accord," pp. 114–33; and Basel Committee, "Consultative Document: Pillar 3 (Market Discipline)," January 2001, www.bis.org/publ/bcbsca10.pdf.

71. For instance, the granularity scaling factor (GSF) is computed according to the following formula:

$$GSF = (0.6 + 1.8 \times LGDag) \times (9.5 + 13.75 \times PDag/Fag),$$

where LGDag is the aggregate loss given default, PDag is the aggregate probability of default and Fag is the aggregate systematic risk sensitivity. It seems unlikely, to say the least, that that formula, with those specific coefficients, will be appropriate for all bank holding companies on a consolidated basis in all countries.

72. See Danièle Nouy, Secretary General of the Basel Committee on Banking Supervision, as quoted in Basel Committee, "The New Basel Accord."

73. See Laurence H. Meyer, Remarks at the Annual Washington Conference of the Institute of International Bankers, Washington, March 5, 2001, www.federalreserve.gov/boarddocs/speeches/2001/20010305/default.htm.

74. See Hawke, "The Road to Basel II," p. 5.

75. The 1988 Accord was based on simple—and, in retrospect, rudimentary—rules. That simplicity provided a lot of flexibility, which banks have used to game the system. Basel II is a reaction to that simplicity, hence its extreme complexity. The Basel Committee, however, appears to want to have it both ways—that is, a set of rules that is complex and detailed enough that banks do not engage in much regulatory arbitrage and flexible enough that differences in industry and regulatory practices are not penalized.

76. See Shadow Financial Regulatory Committee, "Statement of the Shadow Financial Regulatory Committee on The Basel Committee's Revised Capital Accord Proposal," Statement no. 169, February 26, 2001, p. 5, www.aei.org/shdw/ shdw169.htm.

77. Because regulators will determine which banks qualify for the IRB approach, an approach that can lower capital requirements for banks, the possibility for corruption is significant, especially if the price of the bribe banks pay regulators to engage in regulatory forbearance or be lax in their judgments is lower than the amount of regulatory capital saved by banks by using the IRB approach as opposed to the standardized approach.

78. "Statement of the Shadow Financial Regulatory Committee on The Basel Committee's Revised Capital Accord Proposal", pp. 1–2.

79. Meyer, Remarks at the Annual Washington Conference of the Institute of International Bankers, p. 7.

80. Ibid., p. 8.

81. Basel Committee, "Agreement." Once Basel II is implemented in 2006, the committee will determine whether the floor for capital requirements will be kept after 2008.

82. Basel Committee, "Results of the Second Quantitative Study," November 5, 2001, www.bis.org/bcbs/qis/qis2summary.pdf; and Basel Committee, "Results of Quantitative Impact Study 2.5," June 25, 2002, www.bis.orgbcbs/qis/qis25 results pdf.

83. See Edward I. Altman and Anthony Saunders, "An Analysis and Critique of the BIS Proposal on Capital Adequacy and Ratings," *Journal of Banking and Finance* 25 (January 2001): 25–46.

84. Although it is true that the three rating agencies made Enron's maintenance of its investment-grade rating contingent on its being acquired by rival energy company Dynegy, which was a possibility until days before Enron filed for bankruptcy, it is also true that they were very late in identifying problems with the failed energy company.

85. In 1975, the Securities and Exchange Commission declared Standard and Poor's, Moody's, and ICBA Fitch to be Nationally Recognized Statistical Ratings Organizations. However, there were no guidelines issued, nor was there an understanding of the requirements needed for new firms to gain recognition as NRSROs. The result has been the establishment of a government-sponsored cartel with almost insurmountable barriers to entry. For critical views of the credit-rating agencies, see, for instance, Frank Partnoy "The Siskel and Ebert of Financial Markets? Two Thumbs Down for the Credit Rating Agencies," *Washington University Law Quarterly* 77, no. 3 (1999): 619–714; Lawrence J. White, "The Credit Rating Industry: An Industrial Organization Analysis," Paper presented at the Stern School of Business Conference on ""Rating Agencies in the Global Financial System," New York, June 1, 2001, www.bis.org/bcbs/ca/lwhit.pdf; and L. Jacobo Rodríguez, "The Credit Rating Agencies: From Cartel Busters to Cartel Builders," Cato Institute Policy Analysis (forthcoming 2002).

86. Altman and Saunders found that, for A-rated bonds, of 12,122 issuers, only seven defaulted. They also found that no company rated AAA to AA defaulted during a one-year period.

87. One can argue that Basel provides only a floor—that is, a minimum set of regulations—and that national regulators are free to adopt more restrictive regulatory systems. While that is true, it is also true that any regulatory system will have to follow the framework established by Basel. For that reason, it is accurate to speak of harmonization of regulatory regimes.

88. The appropriateness of each proposal stems from what is politically feasible in one group of countries and in the other. Industrialized nations are very unlikely to do away with their deeply entrenched systems of deposit insurance and central banking. Emerging economies have been more willing to engage in radical reforms and so a banking system that relies more heavily on market mechanisms seems more likely to develop there than in industrialized nations. That does not mean that the establishment of a market-based banking system should not be the ultimate goal for the United States and other industrialized nations; it means that the steps taken to move in that direction will probably be smaller.

89. World Bank, *Finance for Growth: Policy Choices in a Volatile World* (New York: Oxford University Press, 2001), p. 110.

90. There are numerous studies on subordinated debt. Only five will be mentioned here: Charles W. Calomiris, *The Postmodern Bank Safety Net: Lessons from Developed and Developing Countries* (Washington: The AEI Press, 1997); Board of Governors of the Federal Reserve System, "Using Subordinated Debt as an Instrument of Market Discipline," Staff Study no. 172, Washington: Board of Governors of the Federal Reserve System, December 1999; Shadow Financial Regulatory Committee, "Reforming Bank Capital Regulation: A Proposal by the U.S. Shadow Financial Regulatory Committee," Statement no. 160, March 2, 2000; Douglas D. Evanoff and Larry D. Wall, "Subordinated Debt and Bank Capital Reform," Working Paper 2000-07, Federal Reserve Bank of Chicago, August 2000; and Board of Governors of the Federal Reserve System and United States Department of the Treasury, "The Feasibility and Desirability of Mandatory Subordinated Debt," Report by the Board of Governors of the Federal Reserve System and the Secretary of the U.S. Department of the Treasury, submitted to the Congress pursuant to section 108 of the Gramm-Leach-Bliley Act of 1999, December 2000. The last two studies contain comprehensive lists of subordinated debt proposals as well as empirical studies on the effectiveness of market discipline as exerted by subordinated debt.

91 Shadow Financial Regulatory Committee, Statement no. 160, pp. 17–19. Their proposal requires that subordinated debt have the five following characteristics: (1) the debt is subordinated to all other liabilities and cannot be collateralized or convertible into equity; (2) to count as capital, subordinated debt should have a minimum remaining maturity of one year; (3) it must be sold in large denominations; (4) the terms of the debt should include a covenant that allows the issuing bank to withhold payment of interest and principal if the issuing bank's capital falls below a specified percentage of assets; and (5) the debt must be sold at arm's length and may not be bought or held by the issuing bank, which could be achieved by selling the debt to foreign institutions (which would also reduce the possibility that the holders of subordinated debt be bailed out at taxpayers' expense). The Shadow Financial Regulatory Committee proposal is part of a comprehensive plan for banking reform that also includes (1) the elimination of risk-weighted capital requirements, as those weights bear little or no relation to economic risks within and across categories of assets and thus distort lending; (2) the establishment of a flat but higher minimum capi-

tal requirement than the one in place today; (3) the measurement of assets, liabilities and capital at market, not book, values; and (4) a system of structured early intervention and resolution, along the lines set out by the Federal Deposit Insurance Corporation Improvement Act of 1991.

92. Calomiris, p. 26.

93. It is worth mentioning that the largest banks in the United States already issue subordinated debt on a regular basis. Issuance costs are considerably lower than the costs of issuing equity. See Shadow Financial Regulatory Committee, Statement no. 160; and Report by the Board of Governors of the Federal Reserve System and the Secretary of the U.S. Department of the Treasury, 2000.

94. See Report by the Board of Governors of the Federal Reserve System and the Secretary of the U.S. Department of the Treasury, 2000, p. V.

95. Ibid., p. 56.

96. There is an extensive literature on free banking, both from a theoretical and an historical perspective. Some of the better-known studies include Lawrence H. White, *Free Banking in Britain: Theory, Experience, and Debate, 1800–1845* (New York: Cambridge University Press, 1984); Lawrence H. White, *Competition and Currency: Essays on Free Banking and Money* (New York: New York University Press, 1989); George Selgin, *The Theory of Free Banking* (Totowa, New Jersey: Rowman and Littlefield, 1988); *Laissez-Faire Banking*, ed. Kevin Dowd (London: Routledge, 1993); and *The Experience of Free Banking*, ed. Kevin Dowd (London: Routledge, 1989). For a study on how the Scottish free-banking experience could be applied to emerging economies, see Randall S. Kroszner, "Free Banking: The Scottish Experience as a Model for Emerging Economies," in *Reforming Financial Systems: Historical Implications for Policy*, pp. 41–58.

97. This latter option is known as the "Chicago Plan for Banking Reform." See Milton Friedman, *A Program for Monetary Stability* (New York: Fordham University Press, 1959), especially chapter 3. Friedman's proposal differs from that of his predecessors Henry Simons and Lloyd Mints in that banks would be required to pay interest on demand deposits.

98. The second case is one that already exists, as was mentioned before. Money-market mutual fund banking is more stable than traditional banking because the checking accounts are claims on equity, whose value oscillates, not claims on debt-deposits. In that regard, one can consider mutual fund banking run-proof. See Lawrence H. White, *The Theory of Monetary Institutions*, 1999, pp. 128–31.

99. It is worth pointing out that almost all large complex banking organizations and most smaller banks have capital levels that are higher than the minimum levels required by Basel or by domestic regulators. That is an example of private regulation at work in which the banks are responding to the demands of shareholders and creditors and are rewarded through higher credit ratings and lower borrowing costs.

100. See Kevin Dowd, "Free Banking," in *The Elgar Companion to Austrian Economics*, ed. Peter J. Boettke (Northampton, Massachusetts: Edward Elgar, 1998), pp. 408–13, and references therein.

Published by the Cato Institute, Policy Analysis is a regular series evaluating government policies and offering proposals for reform. Nothing in Policy Analysis should be construed as necessarily reflecting the views of the Cato Institute or as an attempt to aid or hinder the passage of any bill before congress. Contact the Cato Institute for reprint permission. Additional copies of Policy Analysis are $6.00 each ($3.00 each for five or more). To order, or for a complete listing of available studies, write the Cato Institute, 1000 Massachusetts Ave., N.W., Washington, D.C. 20001, call toll free 1-800-767-1241 (noon - 9 p.m. eastern time), fax (202) 842-3490, or visit our website at www.cato.org.