Using Market Incentives to Reform Bank Regulation and Federal Deposit Insurance

by James B. Thomson

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Introduction

Reform of the financial services industry became a hotly debated issue in the 1980s, and this debate continues to rage in the 1990s. Much of the debate has been generated by a growing recognition that fundamental reforms are needed in our bank and thrift regulatory systems to respond to market-driven changes in the financial services industry. Deposit-insurance reform has taken center stage in the political arena, as the Financial Institutions Reform, Recovery and Enforcement Act (FIRREA) of 1989 formally commits $159 billion of taxpayer money to resolve the thrift crisis and mandates that a study of federal deposit insurance be undertaken.

The overall objective of reform in the financial services industry should be to maximize the efficiency and stability of the banking and thrift systems while minimizing the exposure of the federal safety net, and hence the taxpayer, to losses generated by insured banks and thrifts. A plethora of reform proposals have been advanced by the banking industry, bank regulators, and the academic community. These reform proposals typically can be divided into proposals that rely on increased regulation and less discretion for bank management,[1] and proposals that rely on market-oriented solutions and increased management discretion within supervisory guidelines.[2]

The purpose of this paper is twofold. First, it presents the case for adopting market-oriented reforms to the regulatory system and to the financial safety net.[3] Second, it summarizes the literature from one perspective and presents a cohesive view on the topic. Section I reexamines the issue of whether banks are special and the

■ **1** Reform proposals that rely on increased government regulation include Corrigan (1987) and Keehn (1989). These authors propose the use of regulation as a substitute for market discipline, and hence reforms to the federal safety net. In their separate proposals, Corrigan and Keehn would allow bank holding companies to engage in virtually any financial activity so long as there is legal separation between the nonbanking activities and the insured banks in the holding company. In principle, this would capture some of the efficiencies of an integrated financial services industry without increasing the size and scope of the safety net. However, Kane's (1989b) application of principal-agent theory to regulatory agencies calls into question the substitutability of regulation and market discipline.

■ **2** Proposals that rely on increased market discipline include Cates (1989), Ely (1985, 1989), Kane (1983, 1985, 1986), Benston et al. (1986, ch. 9), Benston et al. (1989), Benston and Kaufman (1988), the Federal Reserve Bank of Minneapolis (1988), Hoskins (1989), Thomson and Todd (1990), and Wall (1989).

■ **3** For an opposing view, see Campbell and Minsky (1987), Guttentag and Herring (1986, 1988) and Randall (1989).

issue of stability in banking markets, both regulated and unregulated. In addition, section I looks at principal-agent problems associated with bank regulation (Kane [1988b]). Section II proposes reforms to our system of regulatory taxes and subsidies. Conclusions are presented in section III.

I. Stability in Banking Markets

Those who propose reforms that rely on an increased role for regulation in determining limits on bank powers and activities—and hence a reduced role for management discretion, shareholders' control, and market discipline—assume that financial markets are inherently unstable or that banks are "special" in the sense that the social costs of bank failures significantly exceed the private costs (Corrigan [1987] and Tallman [1988]). Therefore, proponents of increased regulation are willing to trade efficiency for stability. Moreover, in principle, increased regulation protects the public purse from losses by restricting the participation of insured depository institutions in activities that are deemed to be excessively risky.

The reforms outlined in this paper assume that the opposite is true; that, left to their own devices, financial markets are stable in the sense that in the long run they exhibit an orderly process of change, and that, if there is a trade-off between efficiency and stability, it exists only in the short run.[4] Moreover, it is the system of regulatory taxes and subsidies, in our view, that makes banks "special," and not any intrinsic characteristic of banking.[5]

Are Banks Special?

The banks-are-special argument typically is based on one of two notions: either that bank failures have a high social cost or that all runs on individual banks are contagious and, therefore, the banking system is unstable. Since the issue of banking-system stability is dealt with in the following section, we will concentrate on the social cost of bank failures here. To argue that banks are special because there are high social costs associated with their failures, one must demonstrate two things: first, the social costs of bank failures are significantly greater than the private costs of bank failures (that is, there is an economically significant externality associated with the failure of a bank); and second, the social costs of bank failures are significantly higher than the social costs of failures of other firms.

What has been the cost of bank failures? Benston et al. (1986, ch. 2) show that for the entire period from 1865 to 1933 (the time period between the National Banking Act and the creation of the FDIC), total losses were $12.3 billion, or about 1 percent of total commercial bank assets. Losses to depositors were only about $2.4 billion, or about 0.21 percent of commercial bank deposits. Even in the Great Depression (1930-1933), the losses to depositors were only about 0.81 percent of total commercial bank deposits. So, in an environment of no federal deposit insurance and lighter regulation, the private costs of bank failures appear to have been small.

The issue of the "specialness" of banks rests on social costs, however, and not on private ones. Unfortunately, the social costs of bank failures are difficult to quantify, because measures of the size of the externalities associated with bank failures are highly subjective or do not exist.

The first of these externalities is the loss of banking services in the community or the disruption of special banking relationships. Banking relationships are considered valuable because one service performed by banks is information intermediation. In the first case, rarely does a community lose all of its banking services when an individual bank fails. Kaufman (1988) argues that in those few cases where the only bank in the area fails, it is often replaced by another bank or financial institution, often in the same location. Furthermore, liberal chartering of new banks and the relaxation of intrastate and interstate branching restrictions should take care of this problem when it does arise.

Second, most firms have relationships with more than one financial institution, and many of the lending officers of the failed institution find jobs with other banks in the area, often with the bank that replaces the failed institution (Benston and Kaufman [1986]). Moreover, as Schwartz (1987) argues, it is difficult to believe that financial institutions interested in acquiring the liabilities of failed banks would not also be interested in capturing their creditworthy customers, especially if banking relationships have value.

■ **4** The trade-off between efficiency and stability in the short run can occur only when there are no principal-agent problems associated with bank regulation or, in other words, when bank regulators are "faithful agents" as defined by Kane (1989b). Otherwise, the trade-off between efficiency and stability would not hold even in the short run. The author thanks Edward Kane for this analysis.

■ **5** For a comprehensive look at the arguments and evidence as to why banks are not special, and a list of articles on the subject, see Saunders and Walter (1987).

The second externality may be the disruption of the payments system.[6] Because banks are the conduit for payments in this country, the failure of a major depository institution could cause the failures of other banks on the payments system, topple the payments system itself, or at least shut it down for an unacceptable period of time. However, there is no reason that the failure of any institution, let alone a large one, should result in the collapse of the payments system.

Even today, the loss on assets associated with large bank failures is typically small, certainly not approaching 100 percent.[7] Therefore, banks with payments-related exposure to the failed institution should realize only a small loss, and the threat of loss from payments-system defaults should cause banks to limit their exposure to other banks that are considered to be excessively risky. After all, banks routinely do this today in the federal funds market. In addition, the lender of last resort can immunize the rest of the payments system from the failure of a single bank by lending (with a "haircut") to banks against their claims on the failed institution until those claims are realized.[8] The Federal Reserve's role in providing liquidity to financial markets during the October 1987 stock market crash illustrates how a properly functioning lender of last resort can prevent spillover effects from bank failures or from crises in individual financial markets.

The third component of social costs is the causal relationship between declines in the banking industry and in the level of general economic activity. Do declines in the banking sector cause declines in economic activity, or is the opposite true? A review of the historical evidence by Benston et al. (1986, ch. 2) and Schwartz (1987) suggests that bank failures are caused by the declines in general economic activity, whether the declines are national or regional.

Therefore, although there are economic and social costs associated with individual bank failures, these costs do not appear to be significantly larger than those for other firms. As Saunders and Walter (1987) point out, the costs of individual bank failures are much different from the costs to the economy from a collapse of the banking system, and those who argue that bank failures have high social costs often fail to recognize that difference. Thus, the argument that banks are special because of social externalities associated with their failures does not appear to be valid.

Bank Runs and Stability

Opponents of market-based banking reforms argue that the very nature of bank and thrift deposit liabilities (that is, they are redeemable at par on demand) makes free-market banking systems inherently unstable.[9] They argue that, without federal deposit guarantees, the banking system is subject to contagious bank runs. As the argument goes, deposit insurance removes or reduces the incentives for bank runs and thus stabilizes the banking system. Regulation, in turn, is needed to protect the federal deposit insurance agency, and ultimately the taxpayer, from the moral hazard embedded in federal deposit guarantees.[10]

To analyze this claim of instability, one needs to distinguish between rational and irrational bank runs. Kaufman (1988) argues that a rational bank run is one that occurs because depositors have good information that their depository institution has (or may) become insolvent. This type of run should not be contagious and, in fact, is the method the market uses to weed out weak institutions. Because rational bank runs are essentially a market-driven closure rule, they act as a form of market discipline on bank management and shareholders (Benston and Kaufman [1986]).

Kaufman (1988) describes an *irrational* bank run as one that occurs because poorly informed depositors mistakenly believe that their depository institution has (or may) become insolvent. Institutions that are truly solvent can stop an irrational run by demonstrating their solvency. Although these runs theoretically could be contagious, it is unlikely that they would be (except,

■ **6** Payments-system concerns are the motivation for the safe-bank proposals of Litan (1987) and others.

■ **7** Although loss rates have ranged as much as 50 percent of assets in small-bank failures, the failure of these banks is not a threat to the payments system.

■ **8** Lending with a haircut refers to the practice of making short-term collateralized loans for less than the estimated market value of the collateral. That is, the lender estimates the value of the collateral and then "takes a little off the top." This is usually done when the market value of the collateral is measured with uncertainty.

■ **9** The theoretical foundation for this viewpoint is found in Diamond and Dybvig (1983). In their model of a simple economy, Diamond and Dybvig find that government deposit insurance improves social welfare by removing the possibility of systemic bank runs. However, McCulloch and Yu (1989) show that private contracts could perform the same function as deposit insurance in the Diamond and Dybvig world. Furthermore, McCulloch and Yu find that neither the private contracts nor government deposit insurance can improve social welfare in the Diamond and Dybvig world if private capital markets exist outside the official banking sector.

■ **10** For a detailed discussion of bank runs and their positive implications for economic stability, see Kaufman (1988).

possibly, to other insolvent institutions) because other banks and thrifts have incentives to provide liquidity to solvent institutions experiencing runs. In fact, private bank clearinghouses performed this function prior to the creation of the Federal Reserve System (Gorton and Mullineaux [1987]).

Moreover, a properly functioning lender of last resort can prevent irrational bank runs from becoming systemic bank runs by providing liquidity to solvent institutions experiencing runs. In so doing, the central bank further relieves pressures on solvent institutions, while removing any potentially destabilizing effects of irrational bank runs, yet without precluding rational bank runs on insolvent institutions (Meltzer [1986] and Schwartz [1987, 1988]). One should note that bank runs were historically a statewide or systemic problem primarily in unit banking systems, where regional and therefore industry diversification of assets was artificially restricted by regulations. Thus, irrational bank runs may simply be an unintended side effect of branching restrictions, rather than a natural source of instability in free-market banking systems.

By suppressing or overriding market closure mechanisms, federal deposit insurance has reduced or removed one of the self-correcting forces that ensures the efficiency and long-run stability of banking markets. Kane (1985, ch. 3) and Thomson (1986, 1989) argue that the way federal deposit insurance is priced and administered results in government subsidization of the risks undertaken by insured banks and thrifts. This, in turn, leads to perverse incentives for risk-taking by insured institutions and decreases the stability of the financial system.

Moral Hazard and Regulation

To mitigate the moral hazard (that is, the incentives for the insured to increase their risk in order to maximize the combined value of their equity and deposit guarantees) intrinsic in deposit-insurance guarantees, strict regulations were adopted that limited the scope of activities in which banks could participate and the types of products (both asset and liability) they could offer. In other words, regulations were used as a tax to offset the perverse effects of the subsidy inherent in federal deposit insurance (Buser et al. [1981]). These regulations sought to alleviate the moral hazard problem by removing a large degree of management and shareholder discretion in the operation of depository institutions.

An unintended side effect has been that these regulations have made managers and shareholders less responsive to market incentives and have reduced the flow of capital from poorly managed institutions to well-managed ones (because all institutions are equally insured). This system most assuredly resulted in fewer bank failures from the mid-1930s through the late 1970s, but did so at the expense of the long-run stability of the financial system, as evidenced by the escalation of problems in the banking and thrift industries in the 1980s.[11] The movement of capital from marginal firms in an industry to the strongest and best-managed firms is another of the self-corrective forces that would ensure the long-run stability of our banking system.

While regulation may reduce the moral hazard associated with deposit guarantees, Kane (1988b, 1989b) shows that principal-agent problems cause other forms of moral hazard to arise.[12] In the principal-agent framework, bank and thrift regulatory agencies are viewed as self-maximizing bureaucracies whose primary task is to act as the agent for taxpayers to ensure a safe and sound banking system and to minimize the taxpayer's exposure to loss. In addition, regulators must cater to a political clientele who are intermediate or competing principals. Furthermore, regulators are sometimes motivated by their own self-interest.[13]

In Kane's (1989e) principal-agent framework, political pressures and self-interest considerations create perverse incentives for regulators that may cause them to "paper over" emerging problems in an industry instead of dealing with them early and forcefully with the hope that, by buying time to deal with each crisis, the ultimate cost of resolving it will be smaller. Policies such as "too big to let fail," capital forbearance programs, and the adoption of regulatory accounting principles (RAP) for thrifts are some of the more visible manifestations of the problem (Kane [1989b]).

■ **11** Schwartz (1987, 1988) argues that the 60 years of relative stability in our financial system were due to price stability and not to either deposit insurance or bank regulation. She argues that one cost of price-level instability is troubled depository institutions, regardless of whether they are regulated.

■ **12** For a general discussion of agency costs and pricipal-agent problems and their applications in corporate finance, see Jensen and Meckling (1976) and Jensen and Smith (1985).

■ **13** Of course, throughout this paper, it is assumed that all politicians and bureaucrats firmly believe that their actions are motivated exclusively by the public interest. The analysis provided here emphatically does *not* accuse public servants of intentionally acting in bad faith but, rather, assumes that they do not always articulate or understand their real motives.

Regulation and Stability

Government-regulated systems, such as those operative in our banking and thrift industries, attempt to achieve stability by setting up a delicate and complex web of regulatory taxes and subsidies. In the case of banks, regulation has attempted to achieve stability by limiting competition between banks and nonbank financial institutions, both through prohibitions on activities banks can engage in (Glass-Steagall restrictions) and by subsidizing bank funding (through federal deposit insurance). Regulators are charged with the task of stabilizing the banking system by delivering an optimal mix of regulatory subsidies and taxes.

As Kane (1985, ch. 5) points out, the ability of regulators to deliver an optimal mix of regulatory taxes and subsidies becomes increasingly difficult over time as competitive forces in financial markets gradually erode existing regulations and alter the size and mix of regulatory taxes and subsidies.[14] Existing regulations often are weakened, or are made completely inappropriate, or become counterproductive. In addition, subsidies inherent in fixed-rate deposit insurance, access to discount-window credit, and free finality of payments over the Federal Reserve's wire transfer system increase in size. This effect is accentuated by exogenous shocks to the financial system, such as surges of inflation or technological changes.

These market-driven changes in our system of regulatory taxes and subsidies are the beginning of the ongoing process of regulation, market avoidance, and reregulation: a process that Kane (1977, 1988a) calls the "regulatory dialectic." The response of government-regulated systems to market-driven changes in the size and mix of regulatory taxes and subsidies is to accommodate the shocks. Changes to the regulatory structure tend to lag developments in the marketplace and are typically piecemeal, usually with the purpose of either validating market innovations or reregulating areas where market forces have made existing regulations obsolete.[15] This may include regulations designed to limit or prohibit new activities that are deemed too risky (for example, thrifts' investments in high-yield bonds), the removal of regulations that are unenforceable or politically costly to continue (for example, deposit-rate ceilings), or the modification of existing regulations (for example, risk-based capital standards for banks and RAP accounting standards for thrifts).

Essentially, the regulatory response is to deal with the symptoms of a shock without making the basic structural adjustments necessary to allow the banking system to adjust fully. This often results in policies aimed at protecting the regulator's weakest client firms at the expense of the efficient firms in the industry and, hence, the stability of the banking system. An example is the capital forbearance policies adopted by both the bank and thrift regulators during the 1980s (Barth and Bradley [1989, table 3], Caliguire and Thomson [1987], and Thomson [1987a]). Moreover, regulatory interventions in the banking system tend to thwart market-oriented forces often enough that normal market outcomes are difficult to achieve within the limited scope of activities that the regulators are willing to permit. Consequently, increased subsidies from the public purse become necessary to permit regulated entities to achieve the returns on equity that enable them to remain competitive. This system minimizes the number of failures of individual, regulated firms in the short term, but increases the efficiency loss and the aggregate public exposure to loss in the long term. Kane (1989b) points to the current thrift debacle as a vivid example of this type of regulatory behavior.

The result is a set of financial institutions that are special or unique only in terms of the regulatory taxes and subsidies to which they are subject. In other words, it is the restrictions on organizational form, where they can do business, and what businesses they can be in, coupled with access to federal deposit guarantees, to the Federal Reserve's discount window, and to the Federal Reserve-operated payments system that make depository institutions special. Additionally, banks and thrifts are less efficient and less able to adapt to changes in the economy than they would be if they were more subject to market incentives, and the resulting banking system is less stable in the long run than one governed by market principles.

■ **14** Regulatory subsidies arise because banks and thrifts are not charged the fair value of the risk-bearing services provided to them by the federal safety net. Regulatory taxes represent the reduction in the value of a bank or thrift due to constraints placed on its profit-maximization function through regulation.

■ **15** The difference between the market and regulatory adjustment process is equivalent to the difference in exchange-rate adjustments under floating and fixed exchange rates. Under a floating-exchange-rate regime, supply and demand factors in markets cause nearly continual adjustment of the exchange rate. Under a fixed-exchange-rate regime, the official exchange rate is maintained for long periods of time, with large adjustments made periodically.

II. Market-Oriented Reforms

The alternative to increased regulation is a system of reforms that relies more heavily on market forces to shape the structure of the financial services industry.[16] Market-oriented reforms, such as a reduction in the scale and scope of the federal safety net, improved information systems (including the adoption of market-value accounting and early dissemination of information), and the adoption of a timely, solvency-based closure rule for banks and thrifts, would increase the efficiency and long-run stability of the banking system. Rather than blocking or attempting to circumvent market forces, these reforms would rely on market forces to reestablish the trade-off between risk and return in financial services, so that those who benefit from the gains of risky strategies would also bear the losses when these strategies did not pan out. Therefore, there would be less of a need for regulations, as distinct from reliance on market forces, to protect the public purse from losses.

In its most extreme form, market-oriented reforms would establish a free-market banking system with no remaining vestiges of the federal safety net (discount-window access, deposit insurance, and direct access to the Federal Reserve payments system). The market would determine the structure and scope of financial intermediaries' activities, and market-determined closure rules would prevail. The role of the government would be limited to collecting and disseminating information and to enforcing property rights by resolving contractual disputes. However, reforms to the federal safety net necessary for a free-market banking system are unlikely to be implemented. Kane (1987), echoing Downs (1957), argues that subsidies, like those embodied in the financial safety net, tend to become viewed as entitlements by the subsidized industry. Industry trade associations and other special interest groups lobby Congress vigorously to protect their narrow interests, while society's interests are sufficiently diffuse that they cannot defeat special interest lobbies.

One caveat to note is that the following proposed reforms have transitional or "switching" costs that must be dealt with. This is especially true of deposit-insurance reforms. These transitional costs would be less of a problem if the reforms were applied to an industry that is already healthy. Obviously, this is not the case for either our banking industry or the thrift industry.

It must be recognized that the transitional costs, which include the cost of recapitalizing, reorganizing, or closing insolvent and unsound institutions, cannot be avoided forever regardless of whether reforms are adopted. Moreover, as demonstrated so vividly by the thrift crisis, the sooner these costs are dealt with, the smaller they are likely to be (Kane [1989b, ch. 3] and Barth and Bradley [1989]). Therefore, the realization of the switching costs should not be seen as an impediment to reform, but rather as an important first step in implementing any set of reforms. FIRREA represents a partial realization of these switching costs; however, considerably more needs to be done before a comprehensive package of deposit insurance and regulatory reforms can be implemented.

Deposit-Insurance Reform

Restoring market discipline as an effective constraint on bank and thrift activities is the main purpose of deposit-insurance reform. The coverage and pricing of federal deposit guarantees must be changed so that federal bank and thrift insurance funds do not subsidize risk in the financial system.

To restore market discipline to banking, federal deposit insurance coverages must be limited, and remaining coverage must be correctly priced.[17] At the very least, deposit insurance should be cut back to strict observance of the current statutory limit of $100,000. Furthermore, this limit should be applied per depositor, rather than to each insured deposit account. Coverage should not be extended in any circumstance to explicitly uninsured depositors, unsecured creditors, or stockholders of banks and their parent holding companies. In other words, the failures of all insured institutions should be handled in a manner that reduces the regulators' and insurers' incentives to minimize insured deposit payouts while maximizing long-term exposures to uninsured claims.

Kane (1985, ch. 6) proposes that strict enforcement of the current limit would require some changes to the failure-resolution policies of the FDIC and might require statutory constraints on

■ **16** This section draws heavily on Benston et al. (1986), Benston and Kaufman (1988), and Kane (1985, 1986, 1987, 1989a, 1989b, 1989c, 1989d).

■ **17** Merton (1977, 1978) shows how option pricing can be used to model and value deposit guarantees. Using Merton's results, Thomson (1987b) shows how information regarding the market prices of uninsured and partially insured deposits can be used to construct risk-based deposit-insurance premiums for insured deposit balances. Ronn and Verma (1986) show how option pricing can be used to derive estimates of the value of deposit insurance using stock-market data and different closure assumptions.

the authority of the FDIC to rescue large insolvent financial institutions.[18] These constraints would preclude the use of failure-resolution techniques such as open-bank assistance and purchase-and-assumption transactions, which provide de facto coverage to de jure uninsured claimants.[19] Such changes would give the "too big to let fail" doctrine the decent burial it deserves and would restore some measure of market discipline to banking.

However, to truly reap the benefits of deposit-insurance reform, the statutory limits on coverage should be reduced to levels significantly below the current $100,000 ceiling. Kane (1986) and Thomson and Todd (1990) suggest that a reduction in the limit from $100,000 to $10,000 (indexed to the Consumer Price Index) would be consistent with a social desire to provide a safe haven for the savings and transactions balances of small savers while reestablishing large depositors as a source of discipline on banks' risk-taking. Thomson and Todd (1990) point out that a $10,000 ceiling exceeds the average (arithmetic mean) insured deposit account in both banks and thrifts (about $8,000) and that depositors with balances in excess of $10,000 already have access to U.S. Treasury bills, which are close substitutes for federally guaranteed bank deposits.

In addition to lowering the insured deposit ceiling, several authors have suggested that a coinsurance feature could be added for additional deposit balances above the full-insurance level.[20] For example, if the deposit insurance ceiling were set at $10,000, the FDIC could provide 90 percent coverage for balances between $10,000 and $50,000 and 70 percent coverage for balances in excess of $50,000. Other, apparently more drastic, variations on this theme are possible; the original (1933) interim deposit insurance scheme provided for only 50 percent coverage for balances in excess of $50,000, for example. Presumably, if mandatory closure rules were adopted, private insurance markets would develop to provide coverage for the coinsurance deductible portion of the deposit for those depositors who desired full protection.

An important feature of coinsurance is that it would establish minimum recoveries on deposit balances in excess of the fully insured limit. This would remove an important constraint on the FDIC's ability to resolve bank failures quickly without extending forbearances to uninsured depositors. With coinsurance, the federal deposit guarantor would not need to estimate in advance the losses to the uninsured depositors. It would simply apply the coinsurance haircut to depositors' balances. If the institution's total losses did not exceed the haircut amount, the receiver would rebate to the uninsured depositors their share of the difference. Thus, coinsurance would alleviate financial hardship for uninsured depositors by paying them a predetermined portion of their deposits up front.

The Role of the Discount Window

For deposit-insurance reform to be truly effective, the Federal Reserve should avoid using its discount window to support the solvency (capital replacement) of, or to delay the closing of, an insolvent bank or thrift (Kane [1987]). Benston et al. (1986, ch. 5) maintain that solvency support or capital replacement lending by Federal Reserve Banks is simply another way for regulators to extend de facto guarantees to uninsured depositors and other creditors of depository institutions: it provides an opportunity for these claimants to liquidate their claims at par, thereby increasing the ultimate cost (loss upon liquidation) to either the lender of last resort, the deposit insurance fund, or the receiver.

This loss arises because, if good assets are pledged to the lender of last resort to fund early redemption at par of some (usually the largest) uninsured claims, then the pool of good assets remaining to cover eventual payments to insured depositors and other uninsured claimants is reduced. The effect of this practice is analogous to the effect of a leveraged buyout (LBO) announcement on outstanding corporate bonds of the LBO target: the pool of assets available to cover outstanding bonded debt service is reduced to cover LBO debt service. Rating agencies have no choice but to downgrade outstanding bond issues, and those bonds decline in secondary market value.

■ **18** For expressions of skepticism that regulators would allow big banks to fail, even if explicit deposit-insurance coverage were reduced or, in advance, said to be strictly enforced, see Trigaux (1989) and Passell (1989).

■ **19** The failure-resolution policies of the FDIC are the process through which implicit guarantees are issued to uninsured depositors, general creditors, subordinated creditors, and even stockholders. For a discussion of FDIC failure-resolution policies, see Benston et al. (1986, ch. 4), Caliguire and Thomson (1987), Kane (1985, ch. 2), and Todd (1988b).

■ **20** Coinsurance was a feature in the original FDIC Act (see Todd [1988a]). Kane (1983) suggested coinsurance as part of a six-point deposit-insurance reform proposal. Baer (1985) suggested it as part of a proposal for mixed private and public coverage of deposits. More recently, Cates (1989), the Federal Reserve Bank of Minneapolis (1988), and the Federal Reserve Bank of Cleveland (Hoskins [1989]) have embraced the concept of coinsurance.

To prevent the use of the discount window for purposes other than *liquidity* support for solvent institutions (the originally intended and the only theoretically sound purpose, according to Todd [1988a]), the following guidelines should be followed. First, the discount window should be available only to demonstrably solvent institutions, with the loans fully secured by sound and fairly evaluated collateral. Heavy and frequent borrowers at the window should be required to demonstrate their solvency, and loans should not be extended or renewed once an institution is determined to be insolvent.

Second, discount-window advances should be made at unsubsidized rates with a penalty for loans made to heavy or frequent borrowers. Finally, the discount window should not be seen as a substitute for the maintenance of a reasonable amount of liquidity by even solvent financial institutions, except in extraordinary circumstances.

Information and Market-Value Accounting

Kane (1989b, ch. 6) asserts that better information systems are needed to increase the effectiveness of both government regulation and market-oriented regulation of depository institutions. Currently, our regulatory system suppresses information about depository institutions, which results in information flows to market participants that are both noisy and "lumpy."[21] Noisy and lumpy information flows do not allow markets to make several small corrective adjustments as new information comes in; instead, they cause the market to make larger and more dramatic adjustments as market participants attempt to process new information. This, in turn, leads to the appearance that markets overreact to new information as it arrives.

To improve the informational efficiency of markets, several authors have advocated the use of market-value accounting (Kane [1985, chs. 5 and 6; 1987, 1988a], Benston et al. [1986, ch. 8], Benston et al. [1989], and Benston and Kaufman [1988]). Traditional accounting systems like GAAP (generally accepted accounting principles) and RAP result in unnecessary noise in the information system because they allow firms to carry assets and liabilities at their par value (usually, historical cost) and do not reflect the subsequent changes in their market value. Therefore, Thomson (1987a) argues that GAAP and RAP may not be good measures of the true solvency of a bank or thrift, that both GAAP and RAP tend to be high-biased measures of solvency for banks and thrifts experiencing solvency problems, and that the degree of error in GAAP and RAP measures increases as solvency deteriorates.

Berger et al. (1989) correctly point out that market-value accounting systems themselves are not perfect, as there are many assets and liabilities on the balance sheets of banks and thrifts for which estimates of market value are not readily available. However, Benston and Kaufman (1988) and Mengle (1989) argue that it is possible to adjust asset and liability values for changes in interest rates and that, as markets develop for securitized bank assets, the ability to make reasonable, market-based adjustments to the value of similar assets in bank portfolios increases. Market-value accounting is not a panacea and still results in noisy information streams. Nonetheless, it is a less-noisy information stream than the one that flows from both GAAP and RAP. Over time, market-value accounting should become less noisy as financial markets evolve.

In addition to the use of market-value accounting, Benston et al. (1986, ch. 7) suggest that the regulatory community move from suppression to timely dissemination of information. FIRREA takes an important step in this direction as it mandates that cease-and-desist orders, supervisory agreements, and other regulatory actions are to be published by the appropriate supervisory agency. Hoskins (1989) goes even further in advocating that banks and thrifts should have the right to release their examination ratings and reports to the public.[22] Finally, annual audits by independent accounting firms should be required for all financial institutions. For small, well-capitalized institutions for whom this rule could prove to be a financial hardship (for example, consolidated entities with less than $100 million in assets), outside audits could be required only every second or third year.

Both of these changes in the current information system would increase the effectiveness and efficiency of market-based oversight of depository institutions and would increase the stability of the financial system. Markets would be better able to discriminate among financial institutions and to force corrective action much sooner than

■ **21** The information flows are lumpy in the sense that large amounts of information are arriving at discrete intervals, as opposed to smaller amounts of information arriving nearly continuously.

■ **22** Mandatory release of examination ratings and reports by the regulators is a sufficient, but not necessary, condition for the timely dissemination of information about the condition of insured institutions. If banks and thrifts are allowed to release their examination ratings and reports to the public, then institutions with high ratings would have incentives to signal their condition to the market.

is currently possible, thereby reducing the probability of bank runs (Pennacchi [1987]). Consequently, systemic stability would be improved, as the size and the volatility of the market correction would be smaller. Better information systems also would reduce the ability of regulators to conceal problems in the financial services industry as they emerged.

Deregulation and Timely Closure of Insolvent Institutions

Under a market-based incentive system, the role for supervision and regulation would be radically different. Regulators would be assigned the task of enforcing a few basic rules (for example, minimum capital requirements, periodic reporting and public disclosure requirements, outside audits, and market-value accounting), and monitoring efforts would be directed at ensuring that those rules were observed. Any individual or financial institution able to meet these minimum guidelines would be granted a bank charter. Institutions that failed to meet these guidelines would be required either to close or to adjust their operations to comply.[23]

This approach, proposed by Benston and Kaufman (1988) and Benston et al. (1989), recognizes that a bank's management has the skills, information, and incentives to make optimal use of its resources, while bank regulators do not. As long as supervisors tolerated failure (either through market closure or a solvency-based closure rule), any financial service or activity could be performed by any financial institution, as long as it could do so within the minimum operating guidelines.

Unlike the current approach toward bank regulation, which often seeks to suppress market forces, this approach attempts to complement and enhance market discipline. Allowing managers and stockholders to make the decisions governing the operation of their institution, including scope of activity and institutional structure, would make them more responsive to market incentives. The perverse incentives currently facing managers and owners of weak and barely solvent institutions would be neutralized by supervisory interference as the condition of the institution deteriorated.[24] The most extreme case of supervisory interference would be the closure or forced sale of institutions that deteriorated to the point where they violated the minimum operating standards.

This approach would lead to a more efficient and stable financial system than pure regulation. Fewer resources would be expended in the enforcement and evasion of outdated rules by regulators and regulatees, respectively, and those who took the risks would bear the consequences of those decisions. Organizational form and activities would be dictated by markets.

Since market forces would be allowed to operate unfettered, efficiency and stability would be enhanced: private capital would be reallocated by market forces to the best-managed institutions and away from the weak and poorly managed ones, which would be allowed to fail. Timely release of information to markets under the supervisory approach would allow financial distress in an institution to be detected more quickly, constraining the growth of marginally solvent and insolvent institutions. Market recognition of financial distress would lead to an orderly outflow of funds and an increase in the cost of funds for troubled institutions, which, in turn, would lead to more orderly and timely closure of insolvent institutions and a reduction in their ultimate failure-resolution costs.

III. Conclusion

At the August 9, 1989 signing ceremony for FIRREA, President Bush proclaimed, "We will keep the federal deposit insurance system solvent and help serve those millions of small savers who make America great ..." while "...ensuring the taxpayers' interests will always come first ...."[25] Accomplishing both of these objectives will require great effort in any case, but might be impossible without market-oriented reforms of the financial structure such as those described here.

Moreover, as Kane (1989c, 1989e) argues, the Bush plan from which FIRREA evolved was not based on a comprehensive theory of how the

■ **23** Prior to 1933, the solvency test applied in bank closing cases was *either* incapacity to pay obligations as they matured or balance-sheet insolvency. Since then, the Office of the Comptroller of the Currency has tended to use *only* the former "maturing obligations" test, although the statutory basis for the latter-"balance-sheet" test remains intact. Compare 12 U.S.C. Section 191 (balance-sheet or maturing obligations) with Section 91 (usually interpreted as "maturing obligations" only).

■ **24** The Benston and Kaufman (1988) and Benston et al. (1989) proposals set up several different trigger points for increasing supervisory interference as the institution slides toward insolvency and allows regulators to close the institution before it becomes insolvent.

■ **25** See "Bush Remarks: 'First Critical Test' Has Been Passed," *American Banker*, August 10, 1989, p. 4.

losses in the thrift industry occurred and were allowed to grow so large. Consequently, because the Bush plan (and, by inference, FIRREA) fails to correct the incentive-incompatibility problems in the current deposit-insurance contract that caused the current thrift crisis, there is a high probability that taxpayers will be faced with another deposit-insurance crisis in the near future.

It is hoped that the study of federal deposit insurance mandated by FIRREA, and currently under way at the U.S. Treasury Department, will address the fundamental structural flaws in the federal safety net and, in particular, in federal deposit insurance. The purpose of any reforms to the federal safety net and to our system of bank regulation should be to increase the efficiency and long-run stability of the banking system while protecting the public from financial loss. The market-oriented reforms put forth in this paper would go a long way toward achieving these goals.[26]

■ **26** The reforms set forth in this paper are aimed at increasing market discipline primarily through increased depositor and stockholder discipline on insured banks and thrifts. Another way to increase market discipline on banks is through the use of subordinated debt (see Baer [1985], Benston et al. [1986, ch. 7], and Wall [1989]) and surety bonds (see Kane [1987]). For conflicting evidence of the ability of subordinated-debt holders to discipline bank risk-taking, see Avery et al. (1988) and Gorton and Santomero (1990). Ely (1985, 1989) would use banks to discipline each other through a system of cross-guarantees for their liabilities.

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