

# Regulatory Arrangements, Financial Stability, and Regulatory Reform

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What can be learned from the experience of the past decade or two about financial regulation, supervision, and deposit insurance or a financial safety net? Is there a better way to provide safety and soundness in the future than in the recent past? Does financial regulatory policy conflict with monetary policy?

Commercial banks, building societies, investment banks, and insurance companies in many countries have been under stress. The precise problems, patterns and outcomes differ across countries, but in several countries many financial firms failed, merged, or restructured. Many received an infusion of government capital. Some examples are the thrift bailout in the United States, the Japanese pension funds' purchases of common stock, and the Swedish government's investment in bank equity to prevent insolvency. Others could be added.

The form and extent of regulation and supervision differ across countries as do the lending and investment powers of banks and financial institutions. Hence any lessons to be drawn are general not specific. One general lesson stands out: In many countries regulation and supervision did not prevent sizable losses by the banks and the public. Although quantitative losses differed from country to country, Nakajima and Taguchi (1993) report that the effects on banks of the decline of real estate prices was qualitatively similar in the United States, Japan, United Kingdom, Norway, Sweden, and Australia. Other countries could be added. The experience in the United States of more heavily regulated sectors, such as savings and loans or banks, was worse than in less regulated financial institutions such as insurance companies. Money market mutual funds (or other

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The author thanks his colleague Bennett McCallum for several useful discussions.

\*See pages, pp. 28-33.

open end mutual funds), all of which are exempt from deposit insurance and not subject to banking regulation and supervision, neither failed nor were forced to merge. Most of these funds mark assets to market or severely limit differences between book and market values.

One of the main lessons to be drawn from recent experience is that banking regulation and supervision were neither necessary nor sufficient to prevent failures and, in many cases, to avoid relatively large social costs. Many of these costs resulted from the waste of resources in projects that failed. Public policies added to the problem by requiring or permitting taxpayers to share in the losses. Although fraud and chicanery were present also, they were not the leading cause of failure in most countries.

The second main lesson is that a financial crisis was avoided. Few depositors in failed or weak banks ran to gold or currency as they had in the United States in the 1930s. Open market gold prices fell during the period of stress. Mainly, depositors moved from weaker to stronger banks, so there was no forced contraction of the system. Particularly in the United States, the financial system proved more durable than it had in the early 1930s or on several earlier occasions. In Anna Schwartz's (1987) characterization, this was a pseudo-financial crisis; there was no systemic failure of the payments system. There were, however, substantial costs, so it is useful to consider alternative arrangements that may lower the costs.

The third main lesson concerns the role and responsibility of regulators. Regulatory and supervisory arrangements have changed in several ways. Following the 1988 Basle agreement uniform risk-adjusted capital standards became the norm for banks in major countries. In the United States, the Federal Deposit Insurance Corporation Improvement Act (FDICIA) of 1991 placed greater weight on bank capital and less weight on government deposit insurance to safeguard bank depositors from loss of nominal deposits and real wealth. The Reserve Bank of New Zealand has proposed greater reliance on markets and less direct supervision and regulation. Nakajima and Taguchi (1993) discuss this issue as a problem of dealing with moral hazard. Others have proposed institutional changes to reduce the costs of regulations and moral hazard.

The paper discusses each of these issues. Although most of my examples are drawn from U.S. experience, many of the problems are general and, I believe, some general conclusions can be drawn.

## **I. Regulation and Supervision**

In the modern theory of finance, risk arises from unforeseen events. Efficient firms and markets eliminate systematic risk. The risk that remains is non-systematic—the result of unforeseen and uninsurable events.

The problems that most concern financial supervisors and regulators are not mainly systematic risks arising in markets where information is used efficiently and risks are

correctly priced. Banks and other financial institutions acquire assets that trade infrequently or not at all. The pricing of bank loans involves credit evaluation, including subjective estimates of future cash flow, risk, the quality of management and other factors specific to a particular loan.

Much bank supervision and regulation attempt to limit bank risk by constraining bankers' choices or substituting regulators decisions for those of bankers. Since the interest of the two groups differ, perceptions of risk differ at times.<sup>1</sup> These differences aside, there are four distinct problems in using bank regulation and supervision to control risk or protect the payments system or depositors.

First is uncertainty in the Keynes-Knight sense. An unanticipated event shifts the distribution of actual or anticipated returns. If the change is relatively large, losses, bankruptcy, or illiquidity at financial institutions become a problem.

The oil shock of 1973-74 is an event of this kind. Prices of existing capital assets declined, and the risk of bankruptcy and default rose. There were losses but no financial crisis. Bagehot (1873) and Schwartz (1987) give examples of earlier events that caused panics—large, sudden changes in anticipations of returns and risks. More recent events are the 1982 default by the Mexican government followed by other governments, the October 1987 decline in stock prices on markets in twenty countries (or more), and the decline in real estate prices in New York, London, Tokyo, Sydney, and other cities at the end of the 1980s.

In Bagehot's or Schwartz's account of earlier periods, examination and supervision play no role. This is not surprising, if the events triggering financial problems are not forecastable events. The distinguishing difference they find between problems at an individual bank and systemic problems—between real and pseudo financial crises—resulted from the action or inaction of the central bank as lender of last resort. Schwartz's account shows that, once the triggering event occurred, depositors acted on knowledge or presumptions about the vulnerability of particular banks conditional on the triggering event. Nevertheless, absent the unanticipated triggering event, there was no reason for a run and no information that a supervisor or regulator could be expected to find.<sup>2</sup>

Benston (1973) examined cases of fraud. He found that examiners rarely detect fraud or misuse of assets in a timely way. Often, differences in asset valuations by examiners or supervisors and bankers reflect differences in evaluation. Fraud is rare, and rarer still are cases of fraud found by financial regulators or banking supervisors before the bank's capital is impaired.

The second class of problems arises as a consequence of regulations or laws that distort incentives or opportunities. Fractional reserve banking increases opportunity for

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<sup>1</sup>Differences about the valuation of particular assets may have very little relation to portfolio risk and even less to systemic risk to the payments system.

<sup>2</sup>Not all events are of this kind. Below, I consider cases where information was available but not used.

bank runs. Deposit insurance or a public safety net creates conditions under which moral hazard becomes a problem particularly when bank capital is low. The safety net may be an implicit rather than explicit guarantee, but if it is generally believed that governments guarantee deposits and at times even equity against loss, financial institutions have an incentive to make high risk loans when the value of equity falls below some minimum. Policies that encourage the belief that some banks or financial institutions are too big to fail have similar effect.

Peltzman (1970) investigated the response of bank capital to regulations affecting capital adequacy. He found no evidence that the regulations had any effect. The principal policy effect on capital came from the availability of deposit insurance. Peltzman found that deposit insurance substituted for private capital. The availability of deposit insurance and the increased real value of insurance coverage in recent years increased moral hazard.

One hundred percent reserve requirements held in Treasury bills or equivalent would eliminate bank runs. Marked to market accounting, where it is feasible, could provide timely information to depositors and the public about risks in particular banks or financial institutions. Marked to market accounting provides information about portfolio losses. It has the defect that many bank assets cannot be priced accurately.

The experience of money market funds provides a useful benchmark. None of these funds failed during the period of recent weakness. The funds are subject to less direct regulation than banks and thrift institutions. They do not have deposit insurance. Instead, most restrict their portfolios to short-term assets and try to manage their assets so that the current market value of the asset portfolio remains consistent with a fixed par value.

The third type of problem arises when there are known risks but regulators do not act. The costs to taxpayers of U.S. thrift industry failures were increased by delays in closing institutions with negative net worth. Some of these delays were the result of political interference. But a supervisory process that is open to substantial interference and forbearance is a faulty process.

The thrift failures in the United States were anticipated, not unanticipated. Two economists at the supervisory agency, James Barth and Dan Brumbaugh, circulated estimates of the number and net liabilities of insolvent thrift institutions for several years before many of the insolvent institutions closed. Regulators responded by reducing capital requirements. They also lowered accounting standards by introducing regulatory accounting principles (RAP) in place of generally accepted accounting principles (GAAP). GAAP accounting would have required recognition of failures earlier. The shift to RAP and the lowering of capital requirements can be explained as an attempt to hide or obscure the growing problem rather than insist upon closures and appropriations sufficient to cover losses.

U.S. regulators in the 1980s were unwilling also to require commercial banks to

recognize losses on loans to developing countries. Regulators encouraged banks to book additional loans so that interest payments could be recorded as paid. This continued subterfuge added to the developing country debt and delayed resolution of the debt problem; most of the banks preferred to postpone recognition of losses on their balance sheets. Many succeeded in doing so for most of the 1980s.<sup>3</sup>

Russell (1993) studied failures of New England banks in the 1980s. The failures cost the bank insurance fund more than \$6 billion. Most of the failures involved banks that had a relatively large proportion of assets in commercial real estate. When real estate prices fell, many of the loans became non-performing. Bank managements typically stopped making new commercial real estate loans as problems emerged, but they did not sell off old loans. Regulators did not foresee the problem. They allowed the banks to keep their real estate portfolios, and they acted too late to prevent the failures.

Horvitz (1992) finds very different responses by Texas banks and savings and loans, particularly the latter, to developing problems. Again, the problems were not suddenly thrust on the financial institutions. Some banks and thrifts increased lending on risky assets. Many were unit banks with heavy concentration of loans in their region. Regulators were slow to respond, in part because the Federal Savings and Loan Insurance Corporation did not have the resources to pay out deposits if they closed an association. Political intervention also played a role.

Regulators and supervisors in several countries were slow to recognize and respond to the, at times, illegal practices at the Bank of Credit and Commerce International (BCCI). Fraud and mismanagement continued and losses to depositors increased.

Regulation and supervision were inadequate in these and other cases. Regulatory inaction or delay may reflect pressures from within government. Whatever the motivation, it seems clear that reducing or avoiding political pressure for forbearance must be part of the redesign of regulatory and supervisory arrangements.

The fourth type of problem is inappropriate or incorrect regulation. One recent example was the legal requirement that U.S. savings and loans divest so-called junk bonds by a fixed date. Forced sales lowered the price and increased the losses of thrift institutions, insurance companies and other bond holders. Once the forced sales were completed, prices of junk bonds rose.

The law increased losses to owners of thrifts, insurance companies, and to the deposit insurance fund and taxpayers. The proximate reasons for the law appear to be that the press, including much of the quality press, were critical of the junk bond market. They tied thrift industry failures to defaults on junk bonds, although these would have had a relatively small role if forced sales had been avoided.

The Basle agreement set risk-based capital standards. The hypothesis is that risk of

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<sup>3</sup>Equity markets estimated the value of the losses at publicly traded banks. Meltzer (1986) shows that the shares of banks with developing country debt declined absolutely and relative to other bank shares.

failure can be reduced by requiring capital to increase as the share of risky assets in the portfolio rises. Peltzman's (1970) findings raise a cautionary note about the effectiveness of this type of regulation. Also, it has proved difficult in practice to set risk based capital standards to take account of both interest rate risk and credit risk and to keep up with significant innovations in financial practice.

Other examples of unforeseen effects of regulation include the interest rate ceilings on thrift and bank deposits and the design of the deposit insurance system. These regulations encouraged innovation to avoid the regulations and delayed reform of the thrift industry (Kane, 1989). Interest rate regulations were destructive of bank capital during the period of rising average inflation. Ceilings on interest rates, and prohibition of interest payments on demand deposits, prevented price competition. Financial institutions built branches and engaged in other costly forms of competition. Rules that prohibited branching discouraged portfolio diversification thereby increasing risk and bank failure rates.

Some regulations may serve a social purpose when they are introduced. The lesson, repeated many times, is that once introduced they are slow to change. Those who benefit oppose change; inertia sustains other regulations. Regulators and legislators often delay changes until the social cost is high. Prohibition of interstate banking and Glass-Steagall in the United States, or rule 65 in Japan, are well-known examples of regulations that have lost any rational basis they may have had.

The aim of this section is not to suggest that all financial regulation is misguided or that banking and financial firms should be unregulated. Evidence that auditors are slow to detect fraud and failure does not mean that audits are useless. Anticipation of audits probably deters some wrongdoing or excessive risk taking. However, an improved system of regulation and supervision cannot be constructed without recognizing that regulators and supervisors in many countries and many time periods have failed to prevent costly financial problems.<sup>4</sup> Some of the regulatory failures arose because regulators could not anticipate structural changes and, like everyone else, remained uncertain after the event about whether the changes were permanent or transitory. In such cases, bankers and markets can misprice (with hindsight) risky assets. Some of the regulatory mistakes are based on inappropriate rules, laws and regulations. And some result from political pressures that are unavoidable when regulators and supervisors have discretionary judgment.

The main economic rationale for financial regulation and supervision is to prevent failure of the payments system. Some would broaden the statement of purpose to include the entire financial system. The emphasis in either case is on the system, not individual firms or institutions. The reason for this emphasis is that, in principle, well designed regulation can reduce the risks that society must bear.

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<sup>4</sup>Not all failures are undesirable. Failure eliminates unprofitable firms.

Two issues arise. First is the relation between safeguarding the payments system and monetary control to achieve general macroeconomic goals, such as maintaining the internal or external value of money. The issue here is whether society must grant authority to a central bank that, once granted, can be used to inflate or deflate money values. Second is the type of regulatory and supervisory framework that minimizes the risks from deposit insurance or some other explicit or implicit guarantee of the nominal value of deposits. The risks and costs here include political intervention to prevent closure, rules that restrict financial innovation and risk taking, and the shift of losses to taxpayers. A promising approach in recent literature substitutes market discipline for regulation and supervision while retaining some regulatory oversight. I discuss these issues in turn.

## II. Bank Runs and System Failures

Recent experience, and experience in the 1930s, differs in important respects from the late nineteenth century experiences described by Bagehot (1873) and Schwartz (1987). After 1866, English financial stress did not result in a collapse of the payments system. The Bank of England acted promptly as lender of last resort.

In the 1980's, although there were substantial financial problems, bank failures and liquidations, the payment system did not fail anywhere. There were no runs on banking systems, although there were runs on currencies that, in part, may have reflected concerns about bank safety. But public funds were used to save individual banks. Banking regulators or legislatures in many countries prevented individual failures at substantial cost or risk to taxpayers.

More than a century ago Walter Bagehot proposed a rule that avoids crises affecting the payments system (Bagehot, 1873). I have summarized Bagehot's rule elsewhere (Meltzer, 1986, pp. 82-83).

“First. That these loans should only be made at a very high rate of interest. This...will prevent the greatest number of applications by persons who do not require it [assistance.] The rate should be raised early in the panic, so that the fine may be paid early; that no one may borrow out of idle precaution without paying well for it. ...

Secondly. That at this rate these advances should be made on all good banking securities, and as largely as the public asks for them. The reason is plain. The object is to stay alarm, and nothing therefore should be done to cause alarm. But the way to cause alarm is *to refuse some one who has good security to offer*. ...If it is known that the Bank of England is freely advancing on what in ordinary times is reckoned a good security—on what is then commonly pledged and easily convertible—the alarm of the solvent merchants and bankers will be stayed. But if securities, really good and usually convertible are refused by the

Bank, the alarm will not abate, the other loans made will fail in obtaining their end and the panic will become worse and worse. ... The only safe plan for the Bank is the brave plan, to lend in a panic on every kind of current security, of every sort on which money is ordinarily and usually lent. (Bagehot, 1962, p. 97, emphasis added).’”

I summarized Bagehot’s rule in four points.

1. The central bank is the only lender of last resort in the monetary system.
2. To prevent illiquid banks from closing, the central bank should lend on any collateral that is marketable in the ordinary course of business. It should not restrict lending to paper eligible for discount at the central bank in normal periods.
3. Central bank loans, or advances, should be made on demand at a rate of interest above the market rate. This discourages borrowing by those who can obtain accommodation in the market.
4. The above three principles of central bank behavior should be stated in advance and followed in a crisis.

Bagehot placed great stress on what we would now call credible commitment to a rule for crisis management. His book, *Lombard Street*, does not criticize the Bank of England for failing to lend in a crisis. The principal criticism, repeated several times, is that the Bank hesitated before acting. Hesitation allowed distress and panic to spread.

Bagehot’s rule would leave no scope for central bank discounting in the ordinary course of business. The quantity of base money would be determined by open market operations. Demand for discounts at a penalty rate would signal that credit markets were not operating properly—that there was a market failure and an actual or incipient crisis. The central bank would meet the crisis by providing reserves on demand at a penalty rate through the discount window. When the crisis passed, discounts would be repaid and growth of base money would again be controlled entirely by open market operations. If the central bank followed a monetary rule, Bagehot’s rule for discounting would be part of the monetary rule.

Neither Bagehot nor his contemporaries saw any conflict between the role of a central bank as lender of last resort and its role as supplier of base money under a rule for monetary policy. The gold standard was the operating rule in England at the time and, I suspect, it never occurred to Bagehot or to the directors of the Bank of England that the gold standard was inconsistent with the rule for crisis management. They knew that it would be necessary on some occasions to suspend convertibility temporarily. The reason is that currency issue was subject to a 100% gold reserve under the 1844 Act, so the Bank of England could not always satisfy the demand for Bank of England notes during a crisis unless the government suspended convertibility. With that proviso, the rule and the gold standard were compatible.

The issue of compatibility was raised later by critics of rules for monetary policy. The critics pointed out that if the central bank followed a monetary rule instead of responding



to a crisis, the payments system would be at risk. To safeguard the financial system, the rule would have to be suspended. The claim is false.

Bagehot's rule is consistent with rules for price stability such as those proposed by Friedman (1959), McCallum (1988) and Meltzer (1987). During a crisis, growth of the monetary base would respond to the demand for base money at the discount window. The supply of base money would increase relative to the normal operation of the rule. There would be no need for discretionary judgment by the central bank. Market responses would replace discretion. The penalty rate assures that discounting would be limited to times of market failure. When the increased demand for base money ended, growth of the base would again be given by the rule for price stability.

Goodfriend and King (1988) suggest that the discount window be permanently closed. In their scheme, base money would be supplied only through open market operations. Their proposal has the advantage of eliminating the subsidies to discounting and the complex administrative arrangements introduced in many countries to limit discounting.

In commenting on their paper, Meltzer (1988), I pointed out that, if the discount window operated according to Bagehot's rule, banks or financial institutions would have access to base money even if the central bank failed to act. In the depression of the 1930s, and in many of the panics discussed by Bagehot, access to base money at a penalty rate would have eliminated the threat to the payment system. Discounting is socially valuable if it can be done at a penalty rate. Their proposal removed this safety net.

In his paper for this conference, McCallum (1993) blunts this criticism by combining a rule for base growth with a rule for smoothing interest rates. Instead of having the banks borrow at a penalty rate, McCallum's rule requires the central bank to respond to the sudden increase in market interest rates, as in a crisis, by increasing the stock of base money. It is not clear how fast his proposal would work in an incipient crisis, but if it supplied the desired amount of base money on demand, the two procedures would be similar. Differences might arise because of timing of reserve supply or uncertainty of response. These issues cannot be settled here.

This discussion presumes that the banking system remains subject to runs and potential crises. Recent work questions whether reform should seek a more efficient way to supervise and regulate banks and other intermediaries that reduces regulatory burden and the risk of bank runs.

### **III. Repairing Regulatory Systems**

The recent problems of banking systems in many countries and heightened understanding of principles of insurance and risk have produced new proposals for reform of regulation and supervision. Several proposals recognize that regulatory arrangements and regulations change the incentives faced by participants and the riskiness of the

system. The best parts of this new literature also recognize that forbearance and political intervention are present and not likely to disappear if there is scope for their operation. An efficient system of regulation must seek to minimize regulatory burden and the costs of the safety net while recognizing that political intervention to prevent failure or to shift the costs of failure can raise social cost.

The distinguishing feature of the new approach to regulation is increased reliance on market forces. The new proposals do not eliminate supervision and regulatory oversight; they supplement and, to a degree substitute, market forces for more traditional methods of regulation. Two of the proposals I discuss have been made by central bankers and two by academic economists. One of the academic proposals was the intellectual foundation for the recent legislation in the United States known as FDICIA—the Federal Deposit Insurance Corporation Improvement Act.

Both the Reserve Bank of New Zealand (1993) and the President of the Federal Reserve Bank of Cleveland, Jordan (1993), propose to expand the amount of publicly available information about the quality of bank portfolios. Banks would publicly release information that has been available to regulators but withheld from the public. Depositors are expected to respond to information on the quality of a bank's portfolio by withdrawing deposits from riskier banks. This response is expected to alter banks' practices. Knowing that their position would become public, banks would be quicker to respond to potential losses and more careful about making marginal loans.

The Reserve Bank proposal is preliminary. If adopted, it would require banks to post a credit quality rating at each branch.<sup>5</sup> Minimum capital requirements and publicly available information on asset quality would substitute for direct examination. The Reserve Bank would monitor published reports, license banks, and enforce capital standards along lines similar to those proposed by Benston and Kaufman (1988). Troubled banks would be required to stop lending if capital fell below 6% of assets and management would be replaced at a 3% ratio. Banks would disclose credit quality quarterly and would be audited semi-annually. The Reserve Bank would retain the right to ask for additional information and would continue to serve as lender of last resort. The lender of last resort function would be executed in the open market. There is no explicit deposit insurance.

Jordan's proposals for changes in regulation and supervision are broadly similar to the Reserve Bank proposals. Capital value and published information on portfolio valuations and losses replace the judgment of regulators. This information about management and performance signals to depositors, lenders and equity owners. Regulation and supervisory mandates come to the fore when losses reduce capital below a fixed threshold. Jordan does not discuss deposit insurance or the lender of last resort function.

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<sup>5</sup>This is similar to the proposal in Meltzer (1967), but I accompanied the proposal with a recommendation that deposit insurance be privatized and related to risk. My views on insurance have changed, as noted below.

Proponents believe that the new system will be less costly and more effective. The scope for cost reduction is large. Jordan reports that out-of-pocket costs of the present system of regulation were between 25% and 50% of industry profits in 1992.

Benston and Kaufman (1988, 1993) would retain deposit insurance but reduce its role. Banks would issue uninsured subordinated debentures and equity. Benston and Kaufman somewhat arbitrarily set "adequate" total capital at 10% of assets and measure assets at market value to the extent possible. The role of regulators increases as capital falls relative to assets. For example, when capital falls below 6% of assets, the regulator would be required to suspend payment of dividends, interest on subordinated debt, and net payments to parents or affiliates. This would put the bank in default and invoke action by creditors. Below 3%, supervisors would be required to take control of the bank, recapitalize it, or liquidate it.

A main aim of the Benston-Kaufman proposal is to increase the incentives of the creditors and owners to monitor the banks' performance and protect their interest. If the proposal had been in place in the 1980s, there would have been less forbearance, less delay in response, and smaller losses borne by taxpayers to pay for the losses at U.S. thrift institutions.

Some of the features of the Benston-Kaufman proposal have been enacted as part of the FDICIA. As the authors note, the law "imposes less severe, less mandatory, and less rapid regulatory responses" than they proposed (Benston and Kaufman, 1993, p. 47). In fact, FDICIA leaves much room for discretion and, therefore, forbearance. This weakens the protection of the deposit insurance fund and taxpayers.

Merton and Bodie (1993) raise four objections to reliance on capital requirements, particularly subordinated debentures. First they note (p. 17) that the protection furnished by capital requirements is effective only if regulators promptly close failing banks. This is correct but partial. There are costs of early closing as well as costs of delay (*see* Kane and Yu, 1993). Many banks and thrifts that would have been forced to close in 1981 had become viable again a few years later. This is not an argument for forbearance; it recognizes that, as always, there are costs of acting early as well as late.

A second problem is the appropriate size of the required ratio of capital to assets. The amount of capital deemed to be adequate depends on the volatility of asset prices, the mix of assets that a bank holds, and the covariance of asset prices. If banks respond to higher capital requirements (or falling asset prices) by increasing risk, norms based on past experience will be poor guides to future risk. The problem for regulators is to set standards for capital adequacy and intervention knowing that banks will react to the standards by choosing a different risk position. The Basle risk based capital requirements are an effort to assess the risk in bank assets and relate bank capital to asset risk. The Basle procedure seems a blunt instrument, however, for dealing with a complex and changing problem, and it neglects the effect of covariance when assessing risk.

A third problem is pricing the risk assumed by the debenture holders. If the debenture

ture holders are subordinated to the bank insurance fund, they share the residual risk with the equity owners. This would heighten their interest in monitoring the bank, but also raises the risk premium on subordinated debentures. Benston and Kaufman clearly intend the debentures to be subordinate to the insurance fund to prevent holders from selling the best assets and leaving defaulted securities to the insurance fund. However, the symmetric risk is also present and must be reflected in the yield on the debentures. The authors do not consider whether the system they propose would permit banks to earn a competitive return. Nor do they allow for the risk of political interference that would delay regulatory enforcement of the capital requirements.

Fourth is the problem of monitoring banks' assets to establish value. Many of the problems of supervision and regulation return. Marking bank loans and non-marketable securities to market requires considerable judgment whether it is done by the bank, its auditors, or regulators. The specialized skills and specific information needed to make these judgments are the banker's stock-in-trade. Others can acquire these skills, but they cannot readily do so without learning the techniques that prudent bankers have mastered. There is bound to be a relation between the risks borne by providers of capital and the returns to capital. It is not sufficient to point out that non-banks are able to borrow and sell equity. The issue is whether banks that are subject to audits and regulation, reserve requirements and deposit insurance premiums can compete effectively against less regulated competitors.

Despite these unresolved problems, the Benston-Kaufman proposal is a useful step toward great reliance on market information and private incentives. A remaining issue is whether there is a less regulated alternative that allows banks to meet growing competition from non-bank intermediaries.

A more radical alternative would separate deposit taking from lending. Friedman (1959) proposed 100% reserves against demand and time deposits with interest paid on reserves. Lending and security acquisition would be financed by issuing securities and equity as is done by finance companies, real estate trusts, and many other lenders.

Several proposals of this kind have been made in recent years. Banks subject to 100% reserve requirement are now called "narrow" banks. Although Merton and Bodie (1993a, 1993b) deny that theirs is a narrow bank, the only difference is that their bank would be part of an institution that makes loans and acquires securities. The deposits would be subject to a 100% reserve of Treasury bills, as in a narrow bank, and the Treasury bills would be held in custody at a Federal Reserve Bank. Loans and securities would be financed by issuing debt and equity, Government would offer deposit insurance. It is not clear what risk the insurance would absorb.

The Merton-Bodie proposal removes the distinction between banks and non-banks in lending and investing. All financial institutions would be subject to the same rules. Losses on loans would be borne by lenders and investors as in non-bank financial markets.

Merton and Bodie argue that banks are relatively expensive providers of deposit services. They note that money market mutual funds provide similar services at 10% of the non-interest cost of banks. Some money market funds have 100% of their assets in short-term Treasury securities, so they resemble the proposed system. However, currently there are limits on the number of checks per month that can be drawn on a money market fund. And part of the cost difference is locational, so there may be offsetting benefits to the bank. The evidence shows, however, that money market funds have taken and held a significant share of the deposit business.

Benston and Kaufman (1993) argue that separation of lending and deposit taking removes economies of scope or synergies. They note that the two functions have been provided jointly for centuries under very different regulatory and monetary conditions. They suggest that removal of the opportunity to combine these functions in a single firm is socially costly. This cost may offset part of the gain from reducing risk and regulation.

Which type of bank would be more likely to survive in a competitive market? The answer depends on the costs of attracting capital and providing services in alternative ways, on possible economies of scope, on the likelihood of greater political intervention under one proposal or the other. I do not believe we can decide a priori.

There is no reason to choose one or the other. Banks and the public could be offered a choice. Banks could either hold more capital, as in FDICIA or Benston-Kaufman, or they could choose to avoid banking regulations and their costs by separating deposit taking into a narrow bank.<sup>6</sup> The latter would require minimal capital for the banking function. Perhaps there could be mixtures of the two, a tradeoff between the size of the ratio of capital to assets and the percentage of short-dated government securities held as collateral for deposits. Banks would use market information to decide how to operate, much as they now choose state or federal charters in the United States.

A simple experiment could be run in the United States. Remove restrictions on checking accounts, such as the number of checks that can be written, from money market funds that hold only Treasury bills. The resulting narrow bank would then compete with other banks, and the public would decide where they wish to hold deposits.

#### **IV. Conclusion**

Deposit banking has social benefits, but most depositors lack the skill, knowledge, incentives, or opportunity to monitor their bank's position. A central issue at this conference is how to organize or change the regulatory and supervisory system to achieve the benefit of deposit banking at lowest (or lower) cost.

Experience in several countries during the last decade suggests that traditional methods of bank insurance regulation and supervision worked poorly in the past decade.

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<sup>6</sup>A similar proposed is made in Brookings Task Force (1989).

Moral hazard, errors of judgment, political intervention, and fraud had a part in the failures and losses. Regulatory and supervisory systems could not or did not prevent these problems. In some cases, the explicit deposit insurance system or implicit safety net contributed to the size and scope of the problem. The paper discusses some principal reasons for failure.

Several proposals for reform of the regulatory system call for reliance on market discipline as a supplement or substitute for traditional regulation. One type of proposal would increase the amount of capital and impose rules for capital maintenance. A second type would separate deposit taking and lending activities. So-called narrow banks would offer deposits backed entirely by Treasury bills or other riskless assets. Lending would be separated and financed by issuing debt and equity. Lenders' liabilities would be uninsured. Regulations would be reduced.

The two proposals have different costs and benefits. It is not clear whether the loss of economies of scope under the narrow bank is large enough to offset the increased capital costs and regulatory costs of the alternative. Experiments in several countries would be useful.

Both proposals, particularly the narrow bank, differ from the Basle proposals for risk-based capital. The Basle rules assign financial assets to arbitrary risk groups. A bank chooses its asset position, on the margin, taking account of the cost of increasing capital. Regulators' decisions, not market forces, determine the portfolios that banks hold. It is hard to see how banks would flourish in competition with less regulated financial institutions.

A related issue is the role of the lender of last resort. A narrow bank eliminates the need for a lender of last resort for the banking system, but there are advantages to having a lender for the financial system to prevent spread of default. The design of a lender to avoid both subsidies and interference with goals of monetary policy such as price stability has long been possible. Rules for the lender devised by Bagehot a century ago remain appropriate.

Reform of regulation and supervision can reduce risk. But it does not require much vision to see that many of the problems of banking and financial markets in recent decades have been either caused or worsened by unstable monetary and fiscal policies. Relatively safe and sound banking and financial systems cannot be produced solely by reform of regulation. Economic policy, too, should change. More stable, more predictable, less inflationary policies are the senior partner in the effort to maintain financial stability.

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