

THE INSOLVENCY OF FINANCIAL INSTITUTIONS:
ASSESSMENT AND REGULATORY DISPOSITION

by

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The development of deposit insurance has eliminated the possibility of runs at most financial institutions, and converted potential runs into "walks" at others. This has largely transformed the bankruptcy decision from a market-driven process to a deliberate, administrative process. In this paper we explore a number of issues connected to this process: the requisites for maintaining a credible deposit insurance system that will continue to prevent runs; the basic rationale for supervisory intervention when market pressures to intervene do not arise; the traditional methods of determining solvency and their shortcomings, especially in a world of volatile interest rates; the special problems of thrift institutions and how application of the traditional solvency criteria leads to errors in solvency determination by the insuring agencies and dysfunctional behavior by thrift institutions; the disposition decision after an insolvency determination has been made, as to whether the institution should be liquidated, merged or continued with financial assistance under the insuring agency's control; and the need for a new type of "capital assistance" for thrift institutions that are solvent but threatened by a "walk" because they are perceived as insolvent by the market.

I. A Schematic Overview of Definitions, Concepts and Problems

It may be useful to define some of the terms used in this paper, at the same time indicating how the problems we are investigating fit into a broader

complex of issues. The cross-hatched boxes in Figure I show the problem areas covered in this paper.

The term "problem bank" will be used in this paper to mean a financial institution that is subject to regulatory or supervisory intervention because of an administrative decision that it is already insolvent or that without intervention it might become insolvent. (For convenience we shall refer to all such financial institutions as "banks" although the analysis applies as well to thrift institutions that issue deposit liabilities.) An insolvent bank is one with an economic net worth of zero or less, or one which is expected to have a non-positive net worth within a short time. The question of how to identify problem banks has been studied at some length¹ and will not be considered in this paper. Our major concern is with the identification of insolvent banks and with their subsequent disposition, issues that have been largely neglected in the literature.

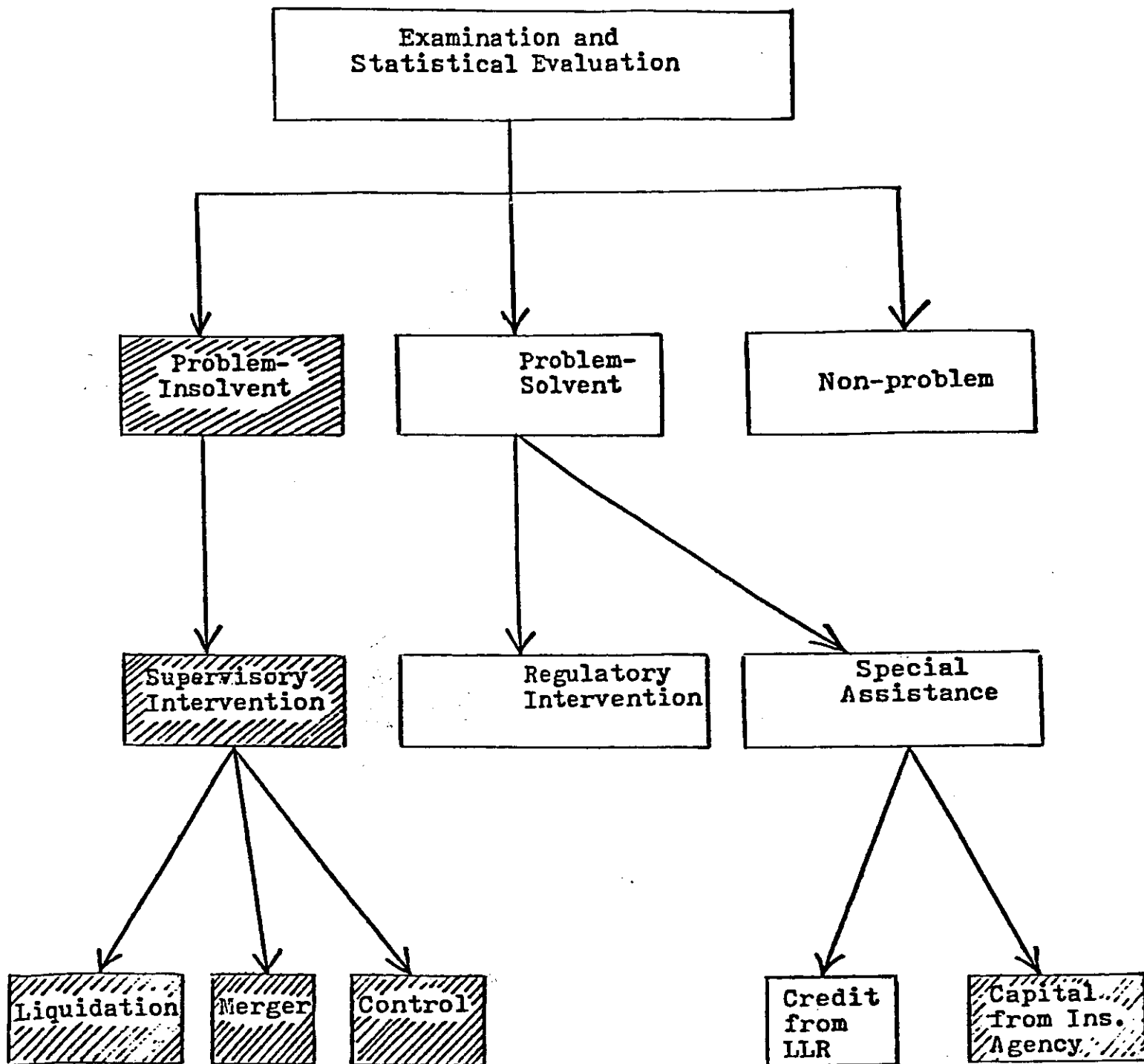
The term "regulatory intervention" refers to actions taken by a bank regulator (which may or may not be the insuring agency) to affect the behavior of a problem bank. Such actions may range from "suggestions" to "cease and desist" orders, to suspension of insurance or removal of management. Regulatory intervention problems will not be considered in this paper.²

The term "supervisory intervention" will be used to mean actions taken by insuring agencies in dealing with insolvent banks. All such actions involve some sort of financial outlays or commitments by the agency. Decisions about supervisory intervention must be worked out jointly between the lender of last resort (which will want to recover any funds it may have

¹See Flannery and Guttentag (1980) and the sources cited there.

²For a recent study of regulatory intervention by three Federal agencies, see Comptroller General of the U.S. (1977).

FIGURE I



lent the problem bank), the bank's chartering agency (which has the legal responsibility for declaring the bank insolvent), and the insuring agency (which in the end must bear the financial burdens involved in the disposition).

Supervisory intervention usually involves termination of the bank as a separate legal entity, either through liquidation or (more commonly) through merger into another bank. But supervisory intervention also includes continuance of the bank with financial assistance under insurance agency control, usually (but not always) combined with replacement of the existing management. In general, management is replaced when there is an indication that malfeasance or incompetence has contributed to the bank's problem status.

If solvent problem banks are misperceived as insolvent by the market, they may require special assistance of a type that does not involve any significant cost to the agency providing it. The traditional credit assistance provided by lenders of last resort (LLRs) falls in this category. We will argue that currently there is an analogous need for a special type of capital assistance to thrift institutions by their insuring agencies.

II. Private Market Identification and Disposition of Problem Banks

Before the development of lender of last resort facilities and deposit insurance, the identification and disposition of problem banks was largely a market decision. The suspicion that a bank was illiquid or insolvent would precipitate a run by depositors, and if the bank was unable to replace its reserves by liquidating assets or borrowing from other banks, it would be unable to meet these demands and forced to close.

Banks have been peculiarly vulnerable to runs because they have been heavily dependent on maintaining the confidence of their creditors. Since a large part of bank liabilities are very short term, creditors have the

opportunity to run whenever insolvency is suspected. Creditor confidence is inherently fragile since it depends on expectations regarding the quality of a bank's loans and securities. These expectations are often shallowly held and subject to abrupt revisions, since they are based on information that is difficult to obtain and verify. Moreover, since banks are highly leveraged, there is always the possibility that a major, unanticipated shock may have wiped out the bank's capital. Banks are also subject to contagion, in that a weakening of creditor confidence in one bank may easily give rise to suspicions about others, especially when there are substantial interbank transactions.

The private market process for identifying and disposing of insolvent banks was subject to manifest inefficiencies. The run that caused a bank to close might or might not be well founded in terms of the bank's true condition. The bank's closure under pressure, furthermore, generally involved loss of a major part of the bank's going concern value which a less precipitate demise (as through merger with a stronger bank) could have preserved.

Because of the peculiar vulnerability of banks to runs, and because of the social costs of banking crises,¹ most societies have developed arrangements to reduce or eliminate the vulnerability of banks to runs. The earliest was the evolution or creation of lenders of last resort (LLRs), which are charged with responsibility for providing credit to banks under conditions of stress. An effective LLR prevents solvent banks from being closed by a run. But LLRs have their limitations. Their reach may be limited to only a subset of vulnerable institutions--as was the case in the U.S. until very

¹See Guttentag and Herring (1981).

recently. By tradition and law, moreover, LLRs have made only collateral lending, which under some circumstances limits their ability to aid solvent banks and in other circumstances may encourage them to aid insolvent banks at the expense of other creditors.¹ Finally, LLRs have not had the legal powers required to dispose of insolvent banks.

Where LLRs attempt to prevent sound banks from being overwhelmed by runs, deposit insurance aims at preventing runs altogether by making the soundness of banks irrelevant to depositors. This performs the dual function of insuring individual depositors against loss and protecting the banking system against crises. In addition, because deposit insuring agencies can consolidate the claims of creditors they are strategically positioned to dispose of insolvent banks in the most advantageous way. Hence, the insuring agencies play the key role in making solvency determinations and in disposing of insolvent banks.

III. Deposit Insurance

A. Insuring Agency Solvency

As a theoretical simplification one might depict the insuring agency as an intermediary between the bank and depositors as in the following set of balance sheets.²

Bank _i	Insurer	Depositors
A_i	$\sum_i D_i$	G_i
D_i ENW_i	$\sum_i R_i$	Net Worth

¹See Guttentag and Herring (1981) for a discussion of the limitations of collateral lending.

²Sharpe (1978) follows this convention.

where A_i is the market value of the i th bank's loans and securities, D_i is the market value of the i th bank's deposit liabilities, ENW_i is the market value of the i th bank's economic net worth, $\sum R_i$ is the reserves of the Insurer, and $\sum G_i$ is the market value of depositors' claims on the Insurer. So long as there is confidence in the Insurer, depositors will consider their deposits, G_i , default free, and $G_i > D_i$. Any difference between G_i and D_i would be due to the risk that bank i might default on its deposit obligations.

Assume that banks are ordered in terms of the difference between the default-free market value of their deposit liabilities and the market value of their assets: $G_i - A_i$. For some set of banks $1, \dots, J$, this difference will be positive. Since the Insurer is liable for the difference $G_i - A_i$ when it is positive, the condition of Insurer solvency is that:

$$\sum_{i=1}^J G_i - \sum_{i=1}^J A_i < \sum_{i=1}^N R_i .$$

The difference between the default-free value of deposits issued by all insolvent banks and the market value of assets held by all insolvent banks must be less than the Insurer's reserves.

While it is conceivable that in a stationary world $\sum_{i=1}^N R_i$ might exceed $\sum_{i=1}^N G_i$ and thereby sustain confidence in the Insurer regardless of the size of the shocks to which banks are exposed, in a growing economy this is hardly possible. The resistance of banks to payment of insurance premiums also constrains the accumulation of reserves. (In the U.S., a portion of premiums are rebated when reserves exceed a specified percentage of insured deposits.)

Insuring agencies, however, may have access to other sources of funds in an emergency. They may have the right to borrow from the Treasury or Central Bank, or to assess solvent banks, and they may even obtain a special appropriation from the government. Indeed, since there is always some shock

to the banking system that would exhaust the insuring agency's reserves, complete credibility is not possible without one of these other sources as a fallback when needed.

Insurance agencies in the U.S. have only small credit lines with the Treasury, do not have the right to impose additional levies on solvent banks, and have no explicit legal right to more monies from the Government. Although most observers believe that Congress would appropriate additional funds to meet an emergency situation, this cannot be known with any degree of certainty. The situation is ambiguous.

B. Assuring Credibility

In our view the three policies that might be followed with regard to the Federal Government's ultimate liability should the insurance reserve prove insufficient, in order of their desirability are:

1. An explicit and unconditional assumption of full liability.¹
2. An explicit declaration of no liability.
3. Ambiguity--the current situation.

We believe that the Federal Government should explicitly assume full liability for deposit insurance commitments because this is the only way to make the insurance system fully credible when potential claims against the agencies' reserves loom large. The Federal Savings and Loan Insurance Corporation (FSLIC), the insurance agency for the savings and loan industry, is rapidly approaching this situation today. If the insurance agencies'

¹The simple way to make such a commitment is to eliminate the insurance reserve accounts, transferring their "assets" to the Treasury, and make all future obligations of the insuring agencies unconditional obligations of the Treasury. The agencies' credit lines would be redundant. This change would have no bearing on the size or structure of insurance premiums, on cash flows between the (consolidated) Government and the public, or on the functions of the insurance agencies.

promises are not accepted without reservation, depositors will not be dissuaded from running under pressure, and the system will at some point fail.

A second reason for assumption of full liability is that the failure of the Government to meet all the insurance agencies' commitments would be morally, and perhaps legally, indefensible. Deposit insurance in the United States has never been marketed or publicized as if the Government's liability was limited. On the contrary, it has always been implied that the insurance agencies were a part of the U.S. Government. In corporate law, the doctrine of estoppel holds that if Corporation A owns Corporation B and if creditors of B were led to believe that lending to B was tantamount to lending to A, then in the event of B's failure A cannot hide behind a claim of limited liability.¹ The Federal Government should not be held to a lower standard than private business.

A third reason the Federal Government's commitment should be made explicit is that, if the worst did happen, political pressures would ultimately force the Government to assume full liability. The delay in accepting the commitment, however, would impose heavy and unnecessary costs. In the worst scenario, significant depletion of the insurance reserves would lead to a loss of confidence by insured creditors in the deposit insurance system, to runs on many institutions, and to a volume of closings beyond the capacity of the insuring agencies to make orderly dispositions. Because of limitations on their human resources, there is a limit on the number of terminations the agencies can effectively handle at one time. If they are swamped, the result would be a destruction of going concern values that would otherwise cut their losses, and the ultimate costs to the Government and

¹See Posner (1976).

society would be well above what it should have been. In a less severe variant, the insuring agencies might attempt to protect the reserve funds by carrying banks that should be terminated. In such cases continuance could lead to a further dissipation of the banks' capital and higher losses to the agencies and society in the future (see the discussion below of the hazards of keeping non-viable institutions alive).¹

Absent an explicit assumption of responsibility by the Federal Government, an explicit disavowal may be better than ambiguity. This would encourage depositors to exercise greater care and surveillance. In order to permit meaningful private adaptation and avoid setting off a panic, it is important that such an announcement be made at a time when the insurer's reserves are clearly adequate. Ironically, it is just such a time when the issue is least likely to be addressed.

C. Converting Runs into Walks

Deposit insurance, even with 100% credibility, would not completely eliminate the possibility of runs unless insurance covered all bank liabilities. It seldom does. In the U.S. the portion of a deposit above some specified level (currently \$100,000) is not insured and non-deposit liabilities are not insured at all. These exclusions from coverage can be rationalized on the grounds that creditors of substantial means can afford to protect themselves, and their efforts to do so by monitoring bank risk exposure help the regulators to constrain tendencies to assume excessive risk.

¹The agencies' tendency to protect the reserve funds may be reinforced by political considerations. Several years ago the financial operations of the agencies were placed within the Federal budget, since it was always a surplus item. The possibility that it may now become a deficit item is a source of serious concern to the current administration.

To be sure, deposit insurance systems may indirectly protect bank liabilities that are not explicitly insured. The lender of last resort, in assisting the insuring agency to make an orderly disposition of an insolvent bank, may provide liquidity for a period long enough that uninsured creditors can be paid off before the bank is closed. Moreover, whenever possible, the insurer tries to avoid liquidating a bank, preferring instead to merge it with another bank that assumes its liabilities. De facto insurance, however, is not operationally equivalent to de jure insurance. So long as there is some probability that the authorities will liquidate an unsound bank, uninsured depositors have an incentive to withdraw their accounts if the solvency of the institution becomes suspect, as they did with Franklin National Bank, and more recently with First Pennsylvania.

Thus, deposit insurance eliminates the possibility of runs only for banks that have mainly insured deposits. In the U.S. that category includes the great majority of small and medium-sized banks and thrift institutions. Larger firms typically have larger proportions of uninsured liabilities that will be withdrawn if doubts arise concerning the solvency of the bank. But withdrawals by large creditors do not have the precipitate and lemming-like quality of runs by the general public. They tend to occur gradually over time as deposits mature and one after another large creditor decides to bank elsewhere. The process is perhaps better described as a "walk" than a "run." This being the case, and assuming the cooperation of the LLR which will have to replace some of the liabilities that have "walked," the insuring agency has time to make a considered decision regarding the future of the bank.

D. Market-imposed Decisions Versus Administrative Decisions

Before deposit insurance most closings were forced by the market. The Federal Reserve after 1913 attempted to prevent panicky reactions from

depositors from terminating the existence of a sound member bank, but the Fed would not carry a bank indefinitely and usually required collateral to protect itself, while non-member banks and thrift institutions had only uncertain access to private LLRs when they got into trouble.

Today in contrast, largely because of deposit insurance, administrative decisions predominate. This is clearly the case with small institutions having largely insured deposits, where the insuring agency can delay taking action indefinitely. In the case of large institutions subject to a "walk" by uninsured creditors the insuring agency is forced to take some action but ordinarily it has wide latitude regarding what action to take--including the option of continuance.¹ This raises important questions regarding the basis for both the primary decision to intervene, and the secondary decision regarding disposition.

There is a presumption that the process of solvency determination and subsequent disposition is more efficient under the deposit insurance system. First, bank runs before deposit insurance were often capricious and the contagious effect that sometimes accompanied them often caught up solvent banks even when the earliest target of the run was well selected. And while the Federal Reserve and de facto LLRs often saved such solvent firms, no doubt many with inadequate collateral perished. Second, prior to the insurance reserve system no adequate machinery existed for the preservation of going concern values of insolvent banks. This function can be performed only by an

¹The need to take action to deal with a problem bank from which large creditors are taking a walk is a double-edged sword. If the pressures are very great there may be insufficient time to explore available options. On the other hand, if there are no pressures at all the agency may delay too long before it does anything. Such delay may be costly for reasons indicated below. Given bureaucratic inertia, in the continuum between "walk" and "run" there is in principle an optimum speed of liability depletion.

institution that can consolidate all the creditor claims against a failed bank.¹

On the other hand, administrative procedures used by Government agencies may have their own problems. Before examining these problems, however, we shall investigate why there should be supervisory intervention in the instances where the market does not compel the authorities to intervene.

IV. The Rationale for Supervisory Intervention

A principal rationale for supervisory intervention in an insolvent bank is that once a bank's capital has been depleted there is no longer a buffer to protect uninsured creditors from additional losses. If the supervisory agency knows that the bank is insolvent, but some uninsured creditors do not, the supervisory agency would be morally if not legally culpable if such creditors lend the insolvent bank money and suffer loss as a result.

But not only is a bank's capital a buffer against loss to the bank's creditors, it also constrains the owners of the bank to act in the best interest of the bank's creditors and society. We believe that this is the more important role of bank capital.² When a bank's capital declines relative

¹In the coalition models of bankruptcy developed by Bulow and Shoven (1978) and White (1980, 1981), suboptimal results are often achieved--in the sense that firms which should be liquidated are continued and firms which are continued should be liquidated--because of the conflicting interests of different creditor groups. Under some institutional arrangements, for example, equity-holders are able to bargain for continuance with inside creditors by appropriating the share of outside creditors.

²Bagehot (1921, p. 230-32) emphasized this role of bank capital, noting that capital was needed "not to work the business but to guarantee the business...(T)he capital is wanted to assure the public and to induce it to trust the concern." Bank capital was "...only wanted as a 'moral influence'..." An implication of this view of the role of bank capital is that subordinated debt should not be counted as capital for regulatory purposes. While subordinated debt serves as buffer against loss to creditors holding superior claims, it does nothing to counter moral hazard, which should be the main concern of regulators.

to potential claims against it (or, what amounts to the same thing, potential claims rise while capital does not), the potential arises for moral hazard to the bank's creditors. The hazard is that the bank will act in such a way as to increase the probability of both large profits and large losses.¹ To the degree that the losses exceed remaining capital they will be borne by creditors and/or by the insuring agency. A bank's capital position is like a deductible clause in an insurance contract: the smaller the deductible the greater the risk of moral hazard.

If the bank still has a significant amount of capital so that the risk of moral hazard is not severe, regulatory intervention may suffice to protect creditors and the insuring agency. But if the bank's capital is completely depleted all risk is borne by a bank's creditors while all returns (in excess of the contractual payments to the bank's creditors) accrue to the bank's shareholders. Under these circumstances, the managers have a strong incentive to play "go for broke," i.e., to select investment and loan options with the highest possible returns, even if the expected return is substantially lower than for less risky options.

For example, suppose a bank has liabilities to creditors totalling \$1 billion, it can choose between two operating strategies that yield different end-of-period asset positions, and there are two possible future states of the world that carry probabilities of .9 and .1. (See Table 1.) Strategy A will yield an end-of-period asset position of \$1 billion in both states of the world, which is just enough to cover the bank's obligation to its creditors, but with nothing left over for the shareholders. Strategy B will yield a very low end-of-period asset position (\$1 million) if the first state of the world

¹For a formal analysis of the impact of moral hazard on lending decisions, see Guttentag and Herring (1981).

occurs, but if the second state of the world occurs Strategy B will yield an end-of-period asset position of \$2 billion. While Strategy B has a lower expected value, the bank's management may adopt it nonetheless, since there is one chance in ten that the bank's shareholders will earn \$1 billion and they cannot be worse off than under Strategy A. The bank's creditors and society, however, are much worse off under Strategy B.

Table 1

	State 1 (p=.9)	State 2 (P=.1)	Expected Values of Assets
Strategy A	\$1 billion	\$1 billion	\$1 billion
Strategy B	\$1 million	\$2 billion	\$.2 billion

Moreover, when a bank's capital position has been (or is about to be) depleted, incentives increase for self-dealing transactions and fraud. When continuance of the bank is in doubt, the bank's managers face greater temptations to take the money and run.

Financial penalties for excessive risk-taking imposed on the firm, as under a system of variable premium deposit insurance, do not necessarily induce the managers of a problem bank to adopt conservative policies. Viewed ex ante, such policies do shift risk-return relationships in favor of more conservative policies. But the actual payments required of problem banks weaken their financial position and this tends to shift them in the opposite direction.¹ To reduce the risk of moral hazard unequivocally, financial

¹Stiglitz and Weiss (1981) make a similar point.

penalties for excessive risk-taking must be imposed on the management, not on the firm.

Thus the case for supervisory intervention when a bank's capital has been or will be severely depleted is that losses are likely to accelerate. When the bank's capital has been depleted, the bank's managers will have strong incentives to conduct the bank's business in a socially inefficient manner and the standard regulatory constraints are likely to prove ineffective.

V. Solvency Determinations

We turn next to the methods the insuring agencies use to determine solvency, and their deficiencies.

A. The Traditional Method

The criteria used in solvency determinations by the two major deposit insurance agencies in the U.S. (the FDIC and FSLIC) are quite straightforward.¹ A bank is considered insolvent when its adjusted book net worth falls to zero or less. Adjustments consist mainly of asset value writedowns associated with actual and probable defaults. (A variety of procedures are used to do this.) Assets used for trading may also be "marked to market." Given its most recent net worth benchmark, reports on current operating income are used to project future book net worth. If the benchmark is already low (say less than 2% of assets) and current deficits would erode the remaining net worth within a relatively short period, the bank is marked for supervisory intervention.

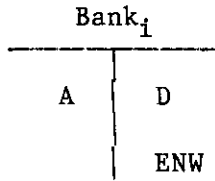
¹This description of solvency criteria is based on Guttentag's reading of examiner and other reports at FSLIC and informal enquiries at the FDIC.

This approach probably differs little from that used by national and state bank examiners in the 19th century. However, since intervention decisions today are much less likely to be forced by pressures of a run, they are more subject to legal challenge. When the Centennial Bank of Philadelphia, Pennsylvania was shut by the Banking Commissioner of the state in 1976, with the approval of FDIC, the bank was quite liquid, virtually all its deposits were insured, and there is little question but that the bank could have survived indefinitely. Subsequently, the stockholders of the bank sued the Commissioner and the state for depriving them of their property. The Commissioner claimed that the bank was insolvent but the stockholders denied this and alleged that the Commissioner had not properly appraised its financial condition. Similar cases have arisen in connection with termination of thrift institutions, a recent example being Washington Federal Savings and Loan which is suing FSLIC for wrongfully shutting it down.

Legal challenges to termination decisions to date have been based on judgmental or procedural grounds. The supervisory agency, for example, is alleged to have erred in classifying loans as "loss" which were in fact good, or it imposed an unreasonable constraint on the firm that prevented it from meeting its commitments. Since regulators are human beings and are bound to make mistakes occasionally, such challenges are to be expected. But we have found no cases where the basic criteria used by the agencies in terminating institutions has been challenged. These criteria will now be examined.

B. Book Net Worth Versus Economic Net Worth

In principle solvency determinations should be made on the basis of economic net worth (ENW) rather than book net worth (bnw). Assume that the bank has the following balance sheet:



A is the present value of all the bank's assets. This measure of the bank's assets is comprehensive. It includes not only the tangible assets and financial instruments which appear on standard accounting balance sheets, but also the present value of options such as lines of credit, acceptances and forward contracts as well as the present value of intangible assets such as the bank's charter, customer relationships that the bank has established, and the expertise of the bank's management. These assets are expected to yield a stream of cash flows $(\tilde{R}_1, \tilde{R}_2, \dots, \tilde{R}_N)$.

It is useful to disaggregate A into three components:

- (1) A^s , the present value of the bank's tangible assets and financial instruments that appear on standard balance sheets;
- (2) A^f , the present value of the bank's commitments and assumptions of liability including forward contracts, lines of credit, acceptances, etc;
- (3) A^g , the present value of the bank as a going concern.

The bank has issued a mix of deposits on which it promises to make a stream of payments $[E_1, E_2, \dots, E_N]$ that has a present value of D. Since we assume that all the deposits are insured, the stream of payments is discounted at a risk free rate.¹

¹In the case of demand deposits, the stream of payments includes the costs of providing transactions services.

ENW is the economic net worth of the bank. It represents the present value of the risky stream of net income ($\tilde{R}_1 - E_1, \tilde{R}_2 - E_2, \dots, \tilde{R}_N - E_N$) to the bank. The balance sheet constraint implies that ENW also can be expressed as $ENW = A - D$. An intervention decision is appropriate when $ENW \leq 0$, or when ENW will become ≤ 0 with a very high probability.

Now consider how book net worth, denoted bnw , differs from economic net worth. The book value of assets, A , will generally reflect the original cost of tangible assets and the original cost or face value of financial claims. Few, if any, assets will be recorded at current market value. The value of options will not appear on the balance sheet and the value of the bank as a going concern will not appear at all. Thus the book value of assets equals:

$$a = A - A^f - A^g - \bar{\Delta} A^s,$$

where $\bar{\Delta} A^s$ is the change in the market value of the bank's tangible and financial assets between the acquisition date and the current period. On the right-hand side of the balance sheet, the book value of deposits, D , will be the sum of the principal amount due each depositor. Assuming that deposits were originally entered in the bank's balance sheet at market value, the book value of deposits will equal

$$d = D - \bar{\Delta} D,$$

where $\bar{\Delta} D$ is the change in the market value of the bank's deposits between the date they were acquired and the current period. The bank's book net worth can be expressed simply as:

$$bnw = a - d$$

The difference between economic net worth and book net worth is thus:

$$ENW - bnw = (A - D) - (a - d) = A^f + A^g + \bar{\Delta} A^s - \bar{\Delta} D.$$

C. Bias in Using bnw

The extent to which these differences bias solvency determinations depends both on their magnitude and on the ability of supervisory agencies to assess them. The agencies are not unaware that bnw may be misleading. A major objective of the examination process is to ferret out certain disparities between bnw and ENW.

a. A major portion of bank examination effort is directed toward that part of $\bar{\Delta} A^S$ associated with losses on defaults or impending defaults which have not yet been recorded as loss. Obviously this component of $\bar{\Delta} A^S$ is always negative.

b. Examiners also seek to identify negative components of A^f --they are less interested in positive components--and banks are often asked to report such information. Since commitment-generating activities are often easy to conceal they may be overlooked, but this is an information disclosure problem rather than a problem inherent in the criteria.

c. A^g is nowhere reported nor is it sought by examiners. However, A^g will be reflected in the bank's income stream and income ordinarily is taken into account in solvency determination. As noted earlier, a solvency determination is based on current and near-term expected bnw. The future change in bnw is estimated from current income statements. This approach without doubt overemphasizes near term cash flows and to some degree this may be due to the fact that the solvency criteria applied does not explicitly identify A^g . This is probably not a major source of error in solvency determination, however, because of the great difficulty in estimating A^g even if it were identified.

d. Changes in A and D from changes in market interest rates affect ENW but they are not reflected in bnw unless the assets or liabilities

affected are cashed at market values. Assets can be converted through sale at the discretion of the bank and bnw will be adjusted by the difference between book value and market value at that time. No attempt is made by the supervisory agency to adjust other assets, which would violate generally accepted accounting principles (GAAP). Deposits can be cashed only by their holder but since banks seldom repurchase their liabilities at a price other than face value plus accrued interest, changes in the market value of liabilities are not reflected in bnw--except indirectly over time as they affect the income statement.

Changes in A and D resulting from changes in market interest rates have always been a source of difference between ENW and bnw. When interest rates were stable, it did not matter much, but when, as now, interest rates are volatile it can matter a great deal. While a change in rates affects A and D in offsetting directions, the positive and negative components will be the same only if the duration of its assets is exactly the same as the duration of its liabilities. If asset duration is longer (shorter), a rise (decline) in interest rates will reduce (increase) ENW.

Thus, in a world of volatile interest rates, a major discrepancy may arise between bnw and ENW, the direction and extent of the discrepancy depending on the size of the rate change and on the asset and liability composition of the specific firm. In such a world, bnw (or projected bnw) becomes a treacherous criteria for determining solvency. It may cause some banks to be terminated which should be continued and some banks to be continued which should be terminated.¹

¹In White's terminology (1980, p. 552), the bnw criterion leads to ex post inefficiency (pareto non-optimality) in continuance and liquidation decisions.

VI. The Case of Thrift Institutions

A. Errors in Solvency Determinations

Thrift institutions in the U.S. (savings and loan associations and mutual savings banks) circa 1981 are a particularly striking example of the problem created by volatile interest rates. Because their asset portfolios have been of very substantially longer duration than their liabilities, the upward ratcheting of interest rates in years prior to 1981 reduced the market value of their liabilities by substantially less than that of their assets. As a result ENW declined sharply for the industry as a whole, and the correlation between bnw and ENW dropped sharply. There is thus a very strong presumption that solvency determinations by the insuring agencies are subject to serious error.

In a recent set of studies Fred Balderston valued the mortgage portfolio of each of 2183 savings and loan associations, and compared the resulting "revised net worth" to book net worth.¹ The coefficient of determination (R^2) between the revised and book net worth was .44 for all mutual associations, and for the 12 Federal Home Loan Bank districts the R^2 s ranged from .14 to .71. For stock associations, in contrast, the R^2 was .88. Balderston made no attempt to value other assets or liabilities but the presumption is at least as strong that a more comprehensive set of net worth adjustments would reduce the R^2 s as that it would raise them. These results confirm that solvency determinations based on book net worth are highly unreliable for mutual associations.

In reading examination reports on terminated institutions at FSLIC, Guttentag came across a particularly striking illustration of a questionable

¹Frederick E. Balderston, S&L Mortgage Portfolios: Estimating the Discount from Book Value, and Regression Tests of the Relationship Between Book Net Worth and Revised Net Worth of S&Ls, Working Papers 81-36 and 81-38, Center for Real Estate and Urban Economics, University of California at Berkeley, October 1981.

solvency determination. Because their solvency is evaluated by bnw thrift institutions cannot sell mortgages that have declined in market value without writing down their net worth, and therefore their portfolios of low rate mortgages have been largely frozen.¹ One institution, however, thought it had a way to circumvent this difficulty.

This association sold mortgages on a participation basis, where it is the custom to sell at par and adjust the contract rate to the current market yield by supplementing the interest payment out of the seller's own resources. (For example, if a 10% mortgage is sold to yield 11%, instead of discounting the mortgage the seller adds 1% of the balance to the payment every month.) In fact, GAAP requires that when the yield to the buyer exceeds the rate on the mortgage the seller must book a capital loss equal to the full present value of the supplementary interest payment committed to the buyer, but the association's president did not understand this and did not book the loss. (His view was that since he reinvested the proceeds of the sale at a yield above the yield paid the buyer, he was making a profit rather than a loss.) When the examiner pointed out the error in his thinking and showed him the magnitude of the book loss that would be charged against his net worth, the president asked for an opportunity to reverse the sale transactions. Alas, the examiner was forced to explain that reversal would constitute a new transaction and could not erase the loss. The conversion of book value into market value was irreversible and fatal. Soon thereafter the association was terminated through a supervisory merger.

¹In a 1980 study for the Federal Home Loan Bank Board Guttentag proposed several accounting conventions that would have the effect of allowing institutions to write off book losses on mortgage sales over a period of time. See "The Conventional Passthrough Market: Trickle or Flood?", in Savings and Loan Asset Management Under Deregulation, Proceedings of the 6th Annual Conference of the Federal Home Loan Bank of San Francisco, December 1980. In September 1981 the Board adopted such a rule for regulatory purposes though it has not been accepted into GAAP.

B. Dysfunctional Behavior

The association in the illustration above was atypical. Most thrift institutions know that they must protect their bnw at all costs, and if bnw is under pressure they may engage in dysfunctional behavior; they may increase bnw at the expense of ENW.¹ The change in ENW is:

$$\Delta ENW_t = R_t - E_t + \Delta A_t - \Delta D_t$$

In contrast, the change in the bnw is:

$$\Delta bnw_t = R_t - E_t + \bar{\Delta} A_t^{sr},$$

where $\bar{\Delta} A_t^{sr}$ is the portion of the change in the market value of the bank's assets between the acquisition date and t+1 that are realized during the accounting period from t to t+1. If the initial value of bnw was so low that it attracted regulatory attention or if the bank's managers expect that Δbnw_t will reduce bnw_{t+1} to zero, they will have a powerful incentive to make Δbnw_t as large as possible in order to avoid supervisory intervention. They can increase operating revenue, or they can increase realized capital gains while deferring capital losses. Such actions are simply harmless balance sheet cosmetics so long as they merely involve trading future revenues for current revenues at market rates; however, such behavior becomes dysfunctional when increases in book net worth are achieved at the expense of decreases in economic net worth.

Some indication of the range of methods available to increase bnw, even at the expense of ENW, is suggested by the following examples of thrift

¹In White's terminology (1980, p. 552), the bnw criterion leads to ex ante inefficiency in that the bank's managers make decisions which are not socially efficient.

institution behavior in 1980-81.

a. An institution that customarily retains a $\frac{1}{4}\%$ servicing fee on mortgages it sells reduced the servicing fee to $\frac{1}{8}\%$ in order to obtain a higher price.

b. An institution, 97% of whose portfolio was being carried above market value, sold the 3% that was being carried below market value, recording the capital gain as income in the current period.

c. An institution failed to realize capital losses on its portfolio that could have reduced its tax liabilities to zero.

d. An institution provided a developer with mortgage commitments below the going market rate in exchange for an equity participation, taking its share of profits on property sales in the current year.

e. An institution sold its banking offices to a real estate company and leased them back in order to realize a capital gain in the current period.

f. An institution with an opportunity to acquire assets in its local market above market rates passed up the opportunity because in order to obtain the necessary funds it would have been obliged to sell assets at a book loss.

All of these practices have in common that they shifted recorded income from the future to the present. They are dysfunctional when the trade-off rate between current and future income exceeds the market rate, which must occur frequently if an entire industry is under pressure to make such tradeoffs. Examiners are aware of most of these devices and when they find them they may recalculate income before making net worth projections, but in many cases they do not find them.

Adoption of an economic net worth standard would go a long way toward eliminating dysfunctional behavior. For example, if a firm with \$100 book value of mortgage loans can sell them at \$73 to yield 15% and reinvest the

proceeds in 16% loans in its local market, the present value of the new loans (discounted at 15%) would be \$77. This transaction would increase ENW by \$4, but it would cause bnw to fall by \$27. The option would be attractive if an ENW standard were used, but not if a bnw standard is used.

In short, intervention decisions based on the book value of net worth are inefficient. The bnw standard leads to errors in identifying which banks should be continued and which should be closed. Moreover, the criterion gives rise to dysfunctional behavior by problem banks.

C. Assessing ENW in a World of Volatile Interest Rates

One implication of adopting an ENW yardstick for assessing solvency in a world of volatile interest rates is that the stochastic element, which is always present in solvency determinations, looms much larger than in the past.

When insolvency determinations are based largely on asset defaults, the stochastic element is relatively small. A portion of the substandard assets that examiners force a bank to write off will in fact be recovered later, and this portion will be larger if business conditions in the future are favorable, but the differences are small and it is unlikely that many serious misjudgments of solvency arise because of this. When an insolvency determination is based on past changes in market interest rates, the supervisor is tempted to consider that future changes in market interest rates could just as readily reverse the judgment.

Our view, however, is that this temptation to forbear in the hope that rates will move in the right direction should be resisted. Assuming that valuations have been properly determined, the possibility that unexpected, future changes in market interest rates could convert an insolvent firm into a

solvent one should not in fact enter the supervisory decision.¹ Policy makers should view the probability of a future rise in rates as identical to the probability of a future decline, so that the expected present value of changes in ENW from future changes in rates is zero. (On the other hand, as noted below, if a decision is made to continue an insolvent firm under the Insurer's control, the possibility of a reversal in market interest rates makes the firm's existing management more trustworthy.)

Yet adoption of an ENW yardstick for assessing solvency does not imply that portfolios should be valued every second, or every day, or even every month. There would be no point in having recorded ENW bounce around in response to market noise. Developing a manageable market valuation system in a world of volatile interest rates is not a trivial undertaking.

An insolvency arising from changes in market rates does have a special significance under some circumstances. If it has been Government policy not to allow firms to protect themselves against interest rate risk, which was the case until very recently for thrift institutions in the U.S., then this type of insolvency does not carry the implication of managerial incompetence, nor does it imply that going concern value A^g would be less than that of a solvent firm. Insolvencies from credit losses and related causes often do carry these implications. If going concern values of insolvent firms are relatively large, and especially if the number of such firms is also large, which is the case today, great importance attaches to the disposition decision.

¹Interest rate changes that are expected by the market will be reflected in the existing term structure. If future cash flows are discounted at market rates on securities of the same duration as the flow, current valuations will automatically take account of rate changes anticipated by the market.

VII. The Disposition Decision

Once the insolvency decision has been made, under what circumstances should a bank be liquidated and under what circumstances should it be continued? And if a bank is to be continued, under what circumstances should it be merged and under what circumstances should it be continued with aid from the insurer? These are the questions to which we now turn.

A. Liquidation versus Continuance

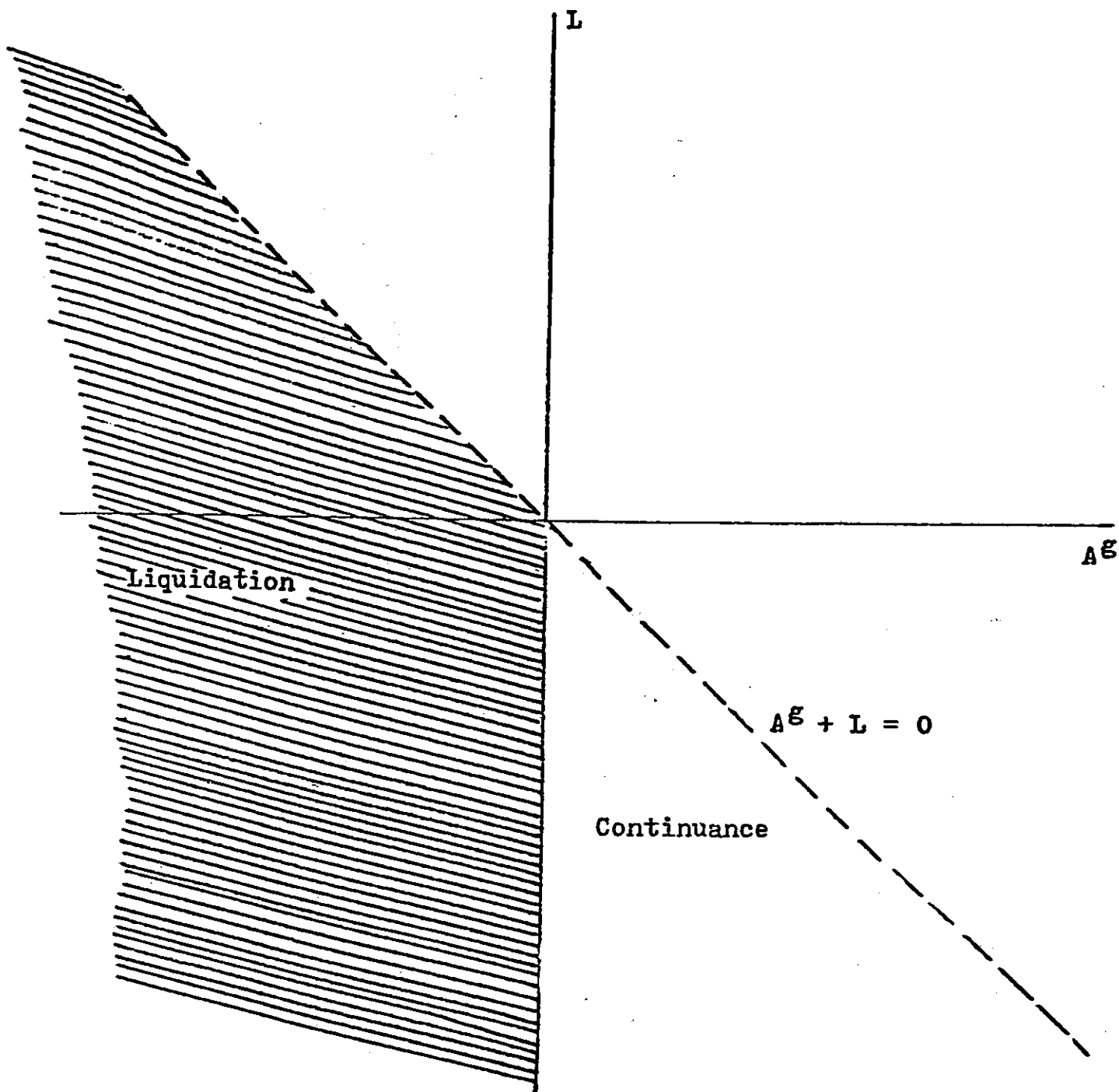
When the bank is liquidated it will have a value L where:

$$L = A - D - A^g = ENW - A^g$$

The difference between the liquidation value of the bank and the net economic value of the bank is its value as a going concern, A^g ; when a bank is liquidated, its value as a going concern is lost. Conceptually A^g is the present value of the net income the bank would be expected to earn on new business if it were to retain only its offices, employees, and customers. A^g depends on the bank's authorized powers including power to do business within specified areas, the market structure in these areas, the expertise of the bank's employees and the customer relationships it has developed.

Appropriate intervention and continuance decisions depend on the relationship between L and A^g , as illustrated in Figure II. The dashed line indicates all combinations of L and A^g that sum to a zero ENW. Supervisory intervention is appropriate at all points on and to the southwest of that line. In this area ENW is zero or less and the interest of the bank's shareholders and managers diverge from those of the bank's creditors, insurers and society.

FIGURE II
Net Worth, Liquidation Value and Going Concern Value



Given intervention, liquidation is the appropriate disposition if A^G is negative. If A^G is positive losses can be reduced by continuing the bank. Negative liquidation value L is irrelevant to the disposition decision because it is a sunk loss to the insurer; regardless of disposition the loss cannot be avoided. Thus, A^G is the principal determinant of the appropriate disposition of an insolvent bank.¹

Liquidation involves a much larger immediate cash drain on the Insurer than continuance even when A^G is negative. This should not, but under existing institutional arrangements might well, influence the agency against liquidation. It is not difficult to envision a scenario where potential claims on the funds from past and impending interventions are so large that the insuring agency opts to continue a firm with negative A^G , or perhaps to avoid any intervention at all if the market permits it. This would constitute dysfunctional behavior analogous to that of thrift institutions who pay an exorbitant price to shift recorded income into the current accounting period.

B. Loss to the Insurer and Loss to Society

The intervention and disposition criteria formulated above assume that by minimizing financial loss to itself the insuring agency also minimizes the loss to society. This may or may not be the case.

¹An interesting question pertains to firms to the left of the vertical axis but above the zero net worth line--banks with negative going concern value, but positive economic net worth. Should such banks also be subject to intervention to prevent erosion of economic net worth? In these circumstances the shareholders will have strong incentives to liquidate the banks or replace the management and until ENW falls to zero, the shareholders bear the costs of inaction. If shareholders can be depended on to pursue their interests, supervisory intervention would not be necessary. If the firm is a mutual institution, however, there may be no adequate mechanism to prevent an erosion of net worth, and supervisory intervention may be appropriate.

A^g can be disaggregated into two components:

$$A^g = A^e + A^c$$

A^e is the present value of the expertise of the bank's employees and the present value of its stock of customer relationships. A^c is the present value of the bank's charter, the right to perform banking functions in its present offices. (In principle the charter is a marketable asset, but in practice its marketability is severely restricted by the chartering agency.) To the extent that A^c represents monopoly power or barriers to entry in a particular market, its social value may be nil. This would suggest that positive A^e rather than A^g should be the criteria for continuance. On the other hand, the bank's monopoly power might be construed as the result of a careful tradeoff, presumed to be socially optimal, between the competitiveness of markets and the risk of bank failure. The importance of this issue is illustrated by the recently adopted practice of FSLIC of entertaining merger bids from out-of-state associations which are willing to pay significant premiums to enter attractive markets from which they are otherwise barred. The presumption underlying this policy is that existing restrictions on entry are not optimal, and we concur.

A question also arises regarding the extent to which the loss of the bank's expertise and customer relationships is a social loss. Some of this value of an insolvent bank may be transferable to other banks as individuals find jobs with other banks. Both of these questions deserve more careful examination.

C. Mergers versus Control with Financial Assistance

If continuance is warranted, the Insurer may choose to merge the bank with another institution or it may choose to assist the bank while imposing conditions that restrict the capacity of the existing management to run up additional losses. The conditions are the quid pro quo for financial assistance.

In general the Insurer will prefer to merge the problem institution if there is a qualified bidder that is willing to pay for the going concern value of the problem institution (A^G). The Insurer must, however, consider the impact of the proposed merger on bank competitiveness in the market in question. In some instances the value of the charter of the problem institution may be very high to one bidder largely because it increases the bidding institution's monopoly power. Insuring agencies in the U.S. are required to consider the impact of a merger on market structure.

Because of legal or regulatory limitations on branching across state lines, and on mergers between banks and thrift institutions, the agencies may be faced with the problem that the only available merger partners are the strongest firms within the insolvent bank's own market area. These rules were recently relaxed for savings and loan associations as noted above, and pending legislation would extend the exception to bank-thrift institution mergers across state lines.

When no qualified bidder is willing to pay a sufficient amount for the insolvent institution's going concern value, the Insurer should continue the problem institution under the Insurer's control with financial assistance. Such control requires first that the Insurer have confidence in the firm's management. There is usually a presumption that the management of a bank with negative net worth has behaved badly, but if the firm's plight can be

attributed to exogenous forces outside of management's control, this presumption may be unwarranted. As noted earlier, the current plight of the thrift industry is largely attributable to the effects of rising interest rates on unbalanced portfolios, and since these institutions were prevented as a matter of public policy from protecting themselves, the typical firm's problems do not necessarily carry an implication of management incompetence and culpability. The management of thrift institutions that have become insolvent because of rising interest rates, furthermore, may be less inclined to adopt go-for-broke policies because their situation is inherently reversible if interest rates decline. (Historically, most financial institutions have become insolvent because of credit losses, which are generally not reversible.) The possibility of a general market reversal may appear more promising than a gamble in the markets.

The Insurer's judgment regarding the management should take account not only of the usual factors that examiners look for (competence, absence of self-dealing transactions, etc.) but also compensation arrangements which can have an important bearing on management behavior. Bonus plans tied to current income, for example, should be viewed with suspicion because in a firm with negative L they create incentive to adopt go-for-broke portfolio strategies and to make dysfunctional shifts of income from the future to the present.

Control measures can take a variety of forms, including placing persons of the Insurer's own choice on the board of directors, requiring the submission of regular operating plans and reports, limiting the volume or size of some types of borrowing, specifying "unusual" transactions that require the Insurer's approval, and prohibiting or severely restricting interest rate futures transactions.

The last restriction could severely hamper the firm but is hard to avoid. The development of the GNMA futures market provided all thrift institution managers with an opportunity to play go-for-broke through a prima facie legitimate market tool. So long as operations in this market cannot be fully monitored and controlled, all managers of problem institutions are "less trustworthy," in the sense that a hungry boy faced with an unlocked candy jar is less trustworthy than one not so tempted.

Variable insurance premiums would be even less effective in controlling the risk exposure of an insolvent firm under Insurer control than it would be in influencing a problem firm before insolvency (see above). The ultimate deterrent for management misbehavior of an Insurer-controlled firm is replacement of the management.

A possible approach toward controlling the risk exposure of an insolvent bank without reducing the effectiveness of management in operating the bank is to divide the bank into liquidating and going concern components. The separation would be for accounting rather than organizational purposes, although some organizational changes might be appropriate. (Complete organizational separation would prevent cost sharing and therefore be very inefficient). The performance of the management would be assessed mainly in terms of the going concern component where go-for-broke incentives would not exist. Monitoring would focus on the liquidating component (the insuring agency could even take it over) while management would be free to develop the going concern component without crippling constraints.

Making this separation between a liquidating component and a going concern component is not difficult in principle. All assets, liabilities and commitments on a base date are "tagged" and thenceforth separate accounts would be maintained for them. Cash flows on the assets would be used to

retire liabilities, and new liabilities would be issued only as needed to replace maturing liabilities. New assets, liabilities and commitments would belong to the going concern component for which separate accounting records would be maintained. The major problem is cost allocation but acceptable conventions could be developed for that purpose.

IX. The Need for Capital Assistance

It can be expected that the supervisory agencies, becoming aware of the deficiencies in the bnw criteria for determining solvency, will move gradually toward an ENW criteria. In specific cases they are trying already to do this. Market perceptions, however, may continue to be based on bnw, if only because the market has even less factual basis than the agencies for estimating ENW. The accounting profession, furthermore, has been reluctant to adjust GAAP to meet the problems addressed in this paper, so that financial statements offered the public are likely to follow the traditional formats and may differ significantly from those used by the supervisory agencies.

This raises the possibility that a firm with positive ENW but negative bnw that is viewed by the insuring agency as solvent will be perceived by the market as insolvent, which could lead to a "walk" by uninsured creditors. This creates a need for a type of "capital assistance" analogous to the credit assistance traditionally offered by LLRs. In both cases the assisted firm is solvent but suspected of insolvency by the market, and in neither case is there a need nor intention to provide a subsidy. While in principle a solvent firm with negative bnw could be saved by an LLR alone, the LLR would be obliged to replace all the uninsured liabilities of the firm for an indefinite period, and this runs counter to the short-run nature of LLR assistance. Such firms require longer-term assistance.

The simplest way to do this is for the firm to sell non-interest bearing subordinated debentures to the insuring agency in exchange for non-interest bearing notes of the agency. No cash would change hands. If note sales were allowed in amounts equal to current losses when bnw reached some base level (say 2%), then bnw would never fall below that base level.

The sale of subordinated debentures to the insuring agencies would calm uninsured creditors for two reasons. First, the erosion of bnw would be halted. Second, in the event of liquidation the subordinated debt increases the insuring agency's loss and correspondingly reduces that of uninsured creditors.¹

This underscores the important point that even though no cash changes hands between the thrift institution and the insuring agency, the subordinated debt provides a real benefit to uninsured creditors. From their standpoint, the debt represents "capital" in the sense of a buffer against loss.² While the insuring agency's potential risk exposure is increased, the agency will

¹Every dollar of debentures sold to the Insurer would shift loss from uninsured creditors to the Insurer by one dollar times the ratio of uninsured liabilities to total liabilities (excluding subordinated debentures). Indeed if subordinated debentures came to equal the difference between the institution's total liabilities and the liquidation value of assets, the liquidation loss to uninsured creditors would be zero.

Let: G = Insured deposits;
 S = Subordinated debentures;
 A = Liquidation value of assets;
 U = Uninsured liabilities;
 Q = Total loss = $G + U - A$;
 Q_g = Insurer's loss = $(G+U-A)G/(G+U) + S(U/(G+U))$
 $= G + (SU-AG)/(G+U)$;
 Q_u = Uninsured creditors' loss = $Q - Q_g = U - (A+S)U/(G+U)$.

Then if $S = G+U-A$, $Q_u = 0$. Of course, uninsured creditors would not be able to calculate Q_u without information on A which is not now available.

²As we noted in section IV, however, subordinated debt should not be regarded as part of the bank's capital for regulatory purposes.

not lose anything if its judgment regarding the firm's solvency is correct. Even if the agency errs in this judgment its loss will not increase unless the firm ultimately is liquidated and the uninsured creditors lay claim to the agency's notes. If the insuring agency knows that a specific firm would never be liquidated because its A^g is positive, capital assistance is riskless.

The above proposal was developed and circulated at FSLIC in June 1981. In September 1981 FSLIC adopted a modified version which at this writing has been applied to two cases and a number of others are in the offing. The modification is that both the FSLIC notes and the firm's subordinated debentures pay interest, the first on a current basis, the second on a cumulative deferred basis awaiting a return to profitability. (The note rate is tied to short term market rates while the debenture rate is tied to a longer term market rate.) Thus, the modified plan involves much more of a subsidy element than our proposal and has the unfortunate effect of muddying the distinction between the treatment of solvent and insolvent firms. Evidently the only operational distinction that will be made is that solvent firms will be subjected to fewer, and perhaps no, Insurer controls.

A potential problem that may arise out of failure to distinguish solvent and insolvent firms receiving assistance from the insuring agency pertains to mergers between assisted firms. The Insurer is in a position to dictate such a merger without having to negotiate compensation to the surviving bank for absorbing the losses of the other bank. If both banks are insolvent, this is appropriate. If one bank is solvent, on the other hand, the temptation to minimize cash outlays by refusing compensation should be resisted, since it may jeopardize the bank's solvency, creating a control problem that would not otherwise exist.

VIII. Implementation of Improved Solvency Criteria

An interesting aspect of the proposed criterion for evaluating troubled institutions is that the insuring agencies in the U.S. now come close to an estimate of both A^G and L in considering the most appropriate disposition of a firm already marked for intervention. In other words, they assemble the basic information that should be used to determine whether a bank is solvent after a decision of insolvency has been made.

The law requires that any disposition of a firm that involves insuring agency assistance be less costly to the agency than liquidation. Hence, the liquidation cost to the agency is calculated for every disposition and this differs from L only by the amount of the loss that would be borne by uninsured creditors, which is easily broken out.

The agencies do not attempt to measure A^G as such but the procedures used in putting a firm up for bids have the effect of isolating A^G . In a purchase and assumption, which is the clearest case, the agency takes over the assets, and the bidders offer a "premium" to take over the existing offices and liabilities. (In a straight merger the bidders retain the assets under a reimbursement agreement to cover losses.) This premium reflects the value of the existing and future deposit base of the defunct bank, as well as any value attaching to the right to do a lending business in the areas serviced by the bank's existing offices with the staff of the defunct bank that the bidder hopes to retain. If the conditions for a perfect auction were met,¹ the winning premium would be the firm's A^G . Because these conditions are not met, the winning premium is likely to be less than A^G , by an amount which no doubt

¹This would require that every financial institution can bid, that the agency can assemble all the relevant information required by potential bidders, and that there is ample time for potential bidders to assess the value of the firm to them.

varies from case to case. While the insuring agencies cannot place a bank up for bids merely to determine its A^g , it could use the same procedure now used by bidders in calculating how large a premium they are prepared to pay. Indeed, the insuring agencies should be able to improve on the procedure since unlike the typical bidder they would perform such evaluations on a systematic rather than an ad hoc basis. As an additional bonus, when a bank did come up for intervention, the insuring agency would be in a much stronger position to negotiate if it had its own estimate of the firm's A^g .

We are aware that a proposal for the insuring agencies to change their evaluation methods cannot properly be viewed as a short-run strategy. Implementation would require changes in data collection formats and information systems, and probably organizational changes within the agencies as well. Unfortunately, the need to change the evaluation system has become acute at the same time as the agencies (especially FSLIC) are swamped with work. Still, no progress can be made without knowing where one should go.

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