

Banking On the Market: Relying On Depositors to Control Bank Risks

Helen A. Garten†

The idea of market discipline¹ is currently very much in vogue in banking law reform circles.² The notion that bank depositors can be encouraged to evaluate the risk posture of banks³ in the same way that securities investors choose stocks⁴ borrows heavily from modern financial theory that has demonstrated that the market for corporate securities is remarkably efficient in reflecting investors' risk preferences.⁵ In order to attract deposits, bank management would be forced to limit risk-taking,

† Associate Professor, Rutgers University School of Law at Newark. A.B. 1975, Princeton University; J.D. 1978, Harvard Law School.

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1. The term "market discipline" is commonly used as shorthand for the complex process by which suppliers of capital—here, bank depositors—are believed to make decisions as to their allocation of funds among investment opportunities. Suppliers of capital will assess alternative investments with a view to both their expected return—the amount of profits the investment is likely to generate—and their risk—the probability that such profits will in fact materialize. The greater the risk associated with a particular investment, the less attractive it becomes to investors, and the higher the return it must offer in order to tempt anyone to invest. Put another way, depositors should "discipline" banks that exhibit too much risk by demanding higher returns, or "risk premiums," or by refusing to invest at all; such banks in turn should be forced to reduce their risk-taking in order to attract and keep deposits.

2. See, e.g., G. BENSTON, R. EISENBEIS, P. HORVITZ, E. KANE & G. KAUFMAN, PERSPECTIVES ON SAFE AND SOUND BANKING: PAST, PRESENT AND FUTURE 314 (1986) [hereinafter ABA STUDY] (study commissioned by the American Bankers Association recommending increased reliance on market discipline). Even bank regulators have suggested the efficacy of greater reliance on market forces to control bank risk. See Office of the Comptroller of the Currency, Disclosure of Financial and Other Information Regarding National Banks, [1984-1985 Transfer Binder] Fed. Banking L. Rep. (CCH) ¶ 86,011 (July 16, 1984) [hereinafter Comptroller Statement] (calling for greater disclosure to assist depositors in making more responsible investment decisions).

3. A bank's risk posture is the degree of risk associated with a depositor's investment in that bank. This risk arises from the bank's subsequent investment of depositors' funds in loans, securities, and other ventures. Any increase in the variation of return on the bank's own investment portfolio has a direct effect on the income prospects of the bank's investors. Thus, depositors have a reason to be attentive to bank management's risk-taking in order to assess their own risk. See *infra* text accompanying notes 32-34.

4. Bank depositors have been selected as candidates rather than bank securities holders because banks rely primarily on deposits for funding; moreover, theoretically at least, bank securities holders are already exerting discipline. See *infra* note 29.

5. See generally Lintner, *A Model of a Perfectly Functioning Securities Market*, in ECONOMIC POLICY AND THE REGULATION OF CORPORATE SECURITIES 143 (H. Manne ed. 1969); W. LLEWELLEN, THE COST OF CAPITAL 8-18 (1969).

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thereby voluntarily achieving what fifty years of government regulation have failed to produce—a safer banking system.⁶

Most recent discussion of market discipline has concerned its implementation. Thus, proponents of market discipline have proposed increased public disclosure by banks about their financial condition to enable depositors to make informed decisions about bank risk.⁷ Opponents have voiced concern that more disclosure about banking problems may interfere with the efforts of bank regulators to maintain public confidence in the banking industry.⁸

Curiously, neither proponents nor opponents of market discipline have questioned whether, in fact, market discipline by depositors will work in practice as it is supposed to work in theory⁹ and as it is thought to occur in the corporate securities market.¹⁰ It is assumed that depositors will demand high risk premiums from or avoid those banks that incur too much risk, thus creating a system of rewards and penalties for risk management that will affect banks' future behavior. Although observers may disagree as to whether reliance on the deposit market is the best way to

6. See, e.g., Mathewson, *From Confidential Supervision to Market Discipline: The Role of Disclosure in the Regulation of Commercial Banks*, 11 J. CORP. L. 139, 141 (1986) (discussing market discipline as an alternative to government regulation of banks). The recent popularity of market discipline reflects concern over burgeoning risk at banking institutions that traditional bank regulation seems unable to harness. Reports of bank failures, poor industry earnings, and bad loans have fed the perception that banking risk is out of control. See, e.g., Luke, *BankAmerica Suspends Common Dividend As Loss Pushes 1985 Deficit to \$337 Million*, Am. Banker, Jan. 22, 1986, at 1, col. 2; *BancTexas Takes \$35.4 Million Loss in 1985*, Am. Banker, Jan. 22, 1986, at 3, col. 2. In 1985 alone, more than 110 of the nation's 15,000 banks failed, the largest annual number since 1937. Schiffrin, *Banks and Thrifts*, FORBES, Jan. 13, 1986, at 73.

7. See Comptroller Statement, *supra* note 2; Murphy, *Bank Supervision and Regulation in the Sunshine: Issues Regarding the Increased Disclosure of Information on Individual Banks*, in FEDERAL RESERVE POLICIES AND PUBLIC DISCLOSURE 83, 86-87 (R. Erb ed. 1978).

8. Fears have been expressed that depositors may misunderstand certain bank disclosures and overreact to negative news. See Mathewson, *supra* note 6, at 174-77.

9. Of course, proponents of market discipline admit that depositors do not now exert this discipline, but they blame the intervention of regulatory devices such as deposit insurance and federally assisted mergers of failed banks for dulling depositors' incentives. See ABA STUDY, *supra* note 2, at 175. This Article argues, however, that the blame is misplaced. Even now, few—if any—depositors count on the protection afforded by federal intervention to prevent bank failure, as is vividly demonstrated by the frequency of bank runs; moreover, even without this protection, depositor discipline still will not produce the salutary effects its proponents claim for it. See *infra* text accompanying notes 131-76.

10. See sources cited *supra* note 5.

police bank risk,¹¹ no one has doubted the ability of depositors to exert this pressure.¹²

This Article examines and ultimately rejects the assumption that depositor discipline will cause banks to control their risk-taking. In order for such a process to occur, three preconditions must exist that, although present in the corporate securities market, are not now present in the deposit market. First, there must be a group of investors for whom risk is the primary consideration in choosing an investment. Part I demonstrates that most bank depositors are not investors in this sense at all, but are concerned with factors other than risk when they select a bank.¹³ Those depositors who do meet this definition of an investor are a relatively small group concentrated in only the very largest banks.¹⁴

Second, investors must have access to the information they deem relevant to their investment decisions. Part II demonstrates that the market already generates sufficient information about banks' financial condition to permit the interested depositor to evaluate the present risk posture of at least the major banking institutions.¹⁵ Moreover, there is considerable evidence that investors in bank deposits do in fact use this information.¹⁶ Nevertheless, investors are equally concerned about the final disposition of their bank in the event of unanticipated failure.¹⁷ Determining whether a bank is more likely to be liquidated, resulting in losses for its uninsured depositors, or to be saved through a federally assisted merger or capital injection, insuring protection in full of all depositors,¹⁸ is essential to evaluating the risks associated with an investment.¹⁹ Yet this determination

11. Most attacks on market discipline have focused on the cost of implementation to the banking system, including the expense of additional mandatory disclosure and the likelihood of additional bank failure, at least in the short run. See ABA STUDY, *supra* note 2, at 199-200. Moreover, some reformers have suggested that depositor discipline must be supplemented by alternative sources of market discipline such as risk-based deposit insurance premiums or mandatory subordinated capital. Nevertheless, depositor discipline remains a popular suggestion, both because it would require fewer legislative changes than these other alternatives and because, without pressure from the deposit market, other forms of discipline may be too weak to affect bank behavior.

12. This certainty is puzzling in view of the paucity of empirical and other academic studies of the likely effects of depositor discipline. See Forrestal, *Bank Safety: Risks and Responsibilities*, FED. RESERVE BANK OF ATLANTA ECON. REV., Aug. 1985, at 5, 10 (suggesting need for further study); ABA STUDY, *supra* note 2, at 184-85 (describing limitations of empirical research into depositor behavior).

13. See *infra* text accompanying notes 39-43.

14. See *infra* text accompanying notes 48-56.

15. See *infra* text accompanying notes 70-79.

16. See *infra* text accompanying notes 84-95.

17. See *infra* text accompanying notes 111-21.

18. For a description of the various possible regulatory dispositions of failed banks and the factors that currently determine the regulators' choices, see *infra* text accompanying notes 113-16.

19. See *infra* text accompanying notes 122-29.

cannot be made solely on the basis of disclosure about the bank's current financial position.²⁰

Third, market discipline must be severe enough to be felt by bank management and investors but not so severe that there is no opportunity to respond to the market's preferences. If the consequence of any misreading of the market is always immediate failure, market discipline is counterproductive, resulting not in safer banks, but simply in fewer banks. Part III explains why in the market for deposits, sudden and devastating bank runs are the only form of discipline that is likely to occur.²¹ Although proponents of market discipline contemplate some bank failure to serve as a warning to other banks of the power of the market, bank runs have precisely the opposite effect, actually discouraging both bank depositors and management from expending any energy in the ongoing monitoring of risk.²²

Finally, Part IV considers whether there is any way to alter these conditions in the deposit market to enable market discipline to play a positive role in controlling bank risk²³ and concludes that depositors actually will be more attentive to their bank's financial condition if they do not have to worry constantly about the risk of bank runs and failure.²⁴ Thus, the deposit market must be able to identify which banks will be saved in the event of failure.²⁵ Moreover, the choice of banks to be saved should be based on specific factors relating to the financial condition of the bank that investors can predict long in advance of failure.²⁶ Since depositors will have a reason to favor those banks whose ultimate protection is assured, they will be more likely to be attentive to the financial condition of their banks before actual failure is threatened.²⁷

I. Depositors As Candidates to Exert Market Discipline

In theory, bank depositors appear particularly well positioned to impose market discipline on bank management. First, unlike some industrial companies that may resort to the public capital markets infrequently,²⁸ all

20. See *infra* text accompanying notes 117-21.

21. See *infra* text accompanying notes 133-44.

22. See *infra* text accompanying notes 142-61.

23. See *infra* text accompanying notes 177-82.

24. See *infra* text accompanying notes 183-91.

25. See *infra* text accompanying notes 192-93.

26. See *infra* text accompanying notes 194-200.

27. See *infra* text accompanying notes 201-08.

28. Compare Berle, *Modern Functions of the Corporate System*, 62 COLUM. L. REV. 433, 444 (1962) (in average corporation, most new funds come from internal capital generation, so management is not bound to follow preferences of capital markets) with Manne, *The "Higher Criticism" of the Modern Corporation*, 62 COLUM. L. REV. 399, 410-11 (1962) (investors dissatisfied with management will sell their shares, leading to decline in market price and change in management through

banks must seek new deposits as an ongoing source of funds, insuring that market discipline is constantly felt.²⁹ Second, there is no reason to think that depositors are insensitive to the risks associated with banks. Surveys have revealed that depositors are increasingly aware of the financial difficulties that have beset banks,³⁰ and publicity about banking problems and failures will only augment this awareness.³¹ Moreover, the occurrence of bank runs demonstrates that depositors do react to perceived increases in bank risk.³²

Nevertheless, to conclude that depositors are sensitive to bank risk (and that banks are sensitive to the supply of deposits) is very different from assuming that market discipline will be effective in controlling bank risk. Proponents of market discipline as a means of reducing bank risk expect depositors to react to increases in bank risk by requiring a risk premium to compensate them for the additional risk associated with their deposits.³³ This in turn will have two consequences for banks with higher than average levels of risk. If the risks associated with a bank become so great that few depositors are willing to invest even at a high rate of return, the institution will be unable to fund its risky activities. Additionally, even if some depositors can be tempted to invest, the risk premium the bank must pay on its deposits may exceed the return it can derive from its risky activities.³⁴ In either case the bank will be forced either to reduce its risk-taking or to risk failure.

takeover).

29. The unique importance of deposits as a funding source makes other forms of public capital such as bank stock or debt relatively less significant, which may explain why bank securities holders do not now exert adequate discipline on bank risk-taking.

30. A recent poll of depositors found that 58% had lost confidence in the safety and stability of banks. See Blundell, *As Basic Institutions Like Phones and Banks Change, Public Chafes*, Wall St. J., Feb. 5, 1985, at 1, col. 6.

31. See Gross, *Greater Awareness of Problems Affecting the Banking Industry Would Lower Public Assessment of Its Health, Survey Reveals*, Am. Banker, Oct. 20, 1984, at 2, col. 1 (respondents who were aware of banks undergoing government bailouts and banks lending to developing countries were twice as likely to consider banking system unhealthy as those who were unaware of these problems).

32. Depositors have joined bank runs even when their deposits have been fully protected by deposit insurance. See Sudo, *Chinatown Run Ends, Bringing Sighs of Relief*, Am. Banker, Nov. 9, 1984, at 3, col. 1.

33. See Lintner, *supra* note 5, at 152.

34. As the level of risk increases, the preferences of the bank and its depositors as to risk-taking by the bank begin to diverge. For example, a bank invests all its deposits, consisting of \$1000, in a risky venture the bank expects will yield a profit of \$100. If the venture actually yields \$200, the depositors will not share in the windfall but will receive only the return they negotiated with the bank, say \$75. On the other hand, if the venture fails, the bank will be indifferent as to whether it recovers \$5 or \$50 of its principal investment, since all of the recovery must go to repay the depositors a portion of their claims. Nevertheless, the size of the bank's loss will be very significant to those depositors. See Guttentag & Herring, *Credit Rationing and Financial Disorder*, 39 J. FIN. 1359, 1369 (1984). Therefore, depositors may require a \$100 premium before they will provide funds to allow their bank to invest in this venture. Since the bank itself expects to earn only \$100 from the venture, it will no longer have any incentive to take the risk.

Even proponents of market discipline would admit that depositors are not now allocating their funds in this fashion.³⁵ Since it is plain that depositors do care about risk, why is their concern imperfectly translated by the market for deposits? One answer may be that risk is not always the only factor influencing many depositors' choice of banks. The efficacy of market discipline presupposes the presence of true investors—those who make risk and return the most important considerations affecting their choice among investment opportunities. If factors such as the convenient location of bank offices, personal relationships with bank officers, or the high cost of changing banks are more important to a depositor than risk, they will determine that depositor's allocation of funds regardless of the relative risks associated with different institutions. Such a depositor is not necessarily oblivious to risk, but he cannot afford to make risk his primary consideration in choosing a deposit relationship.

Thus, in order for market discipline to be effective, depositors must view their bank accounts as investments, in which case risk and return are the primary considerations in choosing a bank. Yet for most depositors, a deposit account is less an investment than a product purchased for reasons that have little to do with either risk or return. These "involuntary depositors" are not just small unsophisticated depositors, who are now protected by deposit insurance;³⁶ they may be large uninsured depositors who use their accounts for other than investment purposes.³⁷ Thus, the presence or absence of deposit insurance has little to do with whether a depositor is likely to exert market discipline.

Of course, there are bank depositors who are investors concerned principally with the risk and return associated with their deposits. But these investor-depositors are concentrated in the large national banks, making market discipline a possibility only for this relatively small group of institutions.³⁸ Moreover, ironically, the only banks that depend heavily enough on these investor-depositors for funding to feel their clout are often already experiencing serious financial difficulty.³⁹

A. *The Involuntary Depositor*

Suppose my employer has an arrangement with Bank A whereby its payroll checks can be automatically deposited in its employees' checking

35. See *supra* note 9.

36. The insurance fund protects deposits in insured banks up to \$100,000. 12 U.S.C. § 1813(m)(1) (1982). Approximately 80% of all deposits in insured banks are presently covered by deposit insurance. 50 Fed. Reg. 19,089 (1985).

37. See *infra* text accompanying notes 42-43.

38. See *infra* text accompanying notes 49-52.

39. See *infra* text accompanying notes 53-56.

accounts. I may prefer Bank B's risk posture, but because my employer has no similar arrangement with Bank B, I maintain my checking account with Bank A. Moreover, even if it were convenient for me to move my business, my account may be so small that I may not be willing to spend the money and time to acquaint myself with the relative risks associated with all the banks in my neighborhood.

Likewise, my employer may have originally chosen Bank A for its payroll account because Bank A was conveniently located. As my employer's business has expanded, its payroll account has grown to a size that ordinarily would justify the cost of shopping for a less risky institution. Nevertheless, it may not be willing to cause the disruption to its employees involved in severing its present relationship.

Both my employer and I are involuntary depositors—neither of us can afford to react to changes in the risk posture of Bank A as a true investor would. Moreover, our failure to respond to changes in risk cannot be explained simply by the relatively small size of our deposits. A payroll account of half a million dollars is subject to the same risk of loss in the event of bank failure as a negotiable certificate of deposit in the same amount. The difference is that while the holder of the certificate of deposit may be able to insist on adequate compensation for increased investment risk, the payroll customer must be concerned with such non-risk-related factors as the familiarity of bank personnel with its account or the availability of the package of services it requires.⁴⁰ More significantly, the holder of a certificate of deposit can react to adverse changes in his bank's financial condition by selling his investment and buying a deposit from a healthier institution. In fact, he has an incentive to do so quickly before the market price of his deposit instrument declines. In contrast, the payroll depositor will be reluctant to begin the lengthy process of changing banks until it is forced to act by the imminent failure of its institution.

Many involuntary depositors—those with deposit accounts under \$100,000—are currently protected from having to make decisions about risk by the existence of deposit insurance.⁴¹ But deposit size is an imperfect indicator of a depositor's sensitivity to risk. Uninsured deposits may be large payroll or corporate transaction accounts that are established in order to obtain other bank services, as an alternative to holding cash in a

40. Although banks do compete for non-interest-bearing deposits by offering special bonuses or services, the payroll customer does not view services as a form of risk premium but as a necessary part of the product it purchases from a bank. Likewise, bonus incentives to open retail deposit accounts—from lower monthly charges to toasters—hardly reflect the degree of risk associated with different banks.

41. See *supra* note 36.

vault, or for other reasons having nothing to do with investment.⁴² As these depositors are no more likely to react to changes in risk than insured depositors, there seems little reason to expect them to exercise market discipline.⁴³

This does not mean that involuntary depositors never respond to increased risk. If the risks associated with a bank become so great that an involuntary depositor faces the loss of his funds, this danger may outweigh other considerations tying the depositor to his bank. Nevertheless, for several reasons, the involuntary depositor's reaction is not likely to produce the beneficial effects expected of market discipline. First, the involuntary depositor probably will not have invested the time and money required to monitor the financial condition of his bank. Therefore, the news that will finally prompt a reaction from this depositor is apt to be a report of imminent failure or disaster. At that point, bank management does not have the luxury of being able to respond to market pressure, but has already failed to solve the bank's problems.

Second, as the involuntary depositor is not familiar with bank disclosure, he may not be able to discriminate between accurate and inaccurate information.⁴⁴ Thus, he may act on the basis of incomplete or false information, rumors, or hysteria. Discipline may be visited on an undeserving bank.

Finally, the involuntary depositor is likely to have a demand or short-term deposit account that can be withdrawn with little or no advance warning. The sudden withdrawal of a large volume of deposits in a very short space of time itself creates a new danger for a bank unable to convert its assets quickly into cash to satisfy depositors' demands.⁴⁵ Unless the

42. Conversely, the current \$100,000 ceiling on deposit insurance permits a family of four to invest up to \$400,000 in interest-bearing deposits that are fully insured, even though the family may view their deposits as pure investments. Moreover, large depositors may obtain deposit insurance protection by splitting their funds into \$100,000 portions to be spread among several banks. Protection of these "investors" does eliminate potential candidates for market discipline and may be an abuse of the deposit insurance system. *But see* FAIC Sec., Inc. v. United States, 595 F. Supp. 73 (D.D.C. 1984), *aff'd*, 753 F.2d 166 (D.C. Cir. 1985) (requiring a literal interpretation of federal deposit insurance statute). Nevertheless, despite the existence of these few insured "investors," the vast majority of insured depositors could not exert effective market discipline even if deposit insurance coverage were reduced or eliminated.

43. To the contrary, a strong argument can be made that, because they will never exert meaningful discipline, all involuntary depositors should be protected by deposit insurance. Even some proponents of market discipline have suggested that deposit insurance should cover all transaction accounts, which would include most checking and payroll accounts. *See* ABA STUDY, *supra* note 2, at 189.

44. Although some large involuntary depositors may have the skills necessary to distinguish fact from rumor, they will view the publicity itself as highly negative news, since it is certain to scare less sophisticated involuntary depositors. For further consideration of the impact of the behavior of less informed depositors on their more sophisticated brethren, *see infra* text accompanying notes 142-44.

45. For a discussion of this liquidity risk, *see* W. MELTON, *INSIDE THE FED: MAKING MONETARY POLICY* 153-54 (1985).

bank has an unusually large volume of liquid assets, even a small bank run can pose a serious risk to any bank, even a healthy one.⁴⁶

Thus, a core deposit run, in which small savers, corporate treasurers, and other holders of transaction accounts rush to salvage their money before the bank closes its doors, differs in cause and effect from ideal market discipline. An illustration of the kind of market discipline involuntary depositors inflict on a bank was provided by the week-long run on United Orient Bank, a small bank located in New York City's Chinatown. The run followed rumors that a bank officer had been identified at an organized crime hearing as the "godfather" of Chinatown's underworld. Despite public assurances that the rumor was false and that the bank's financial condition was strong, five million dollars in largely insured deposits was withdrawn in three days. Only the bank's extraordinary liquidity enabled it to weather the run without help from bank regulators.⁴⁷

B. *The Investor-Depositor*

Are there any depositors who realistically might be expected to exercise effective market discipline? Such depositors must view their deposits primarily as investments, so that risk and return are the primary considerations guiding their investment decisions.⁴⁸ Three groups of depositors potentially fit this description. First, purchasers of large negotiable certificates of deposit, mainly financial intermediaries such as mutual funds and pension funds, but also some individuals and corporate investors, are primarily concerned with the risk and return on their funds.⁴⁹ They view bank deposits as short-term investment alternatives to government securities, commercial paper, or other money market instruments, and they are willing and able to shop around for the best return on their investment. Two other groups of depositors that are sensitive primarily to risk and return are other depository institutions that purchase funds in the interbank market⁵⁰ and Eurodollar depositors, principally foreign banks and financial institutions, that maintain deposits at foreign branches of United States banks.⁵¹

46. See *infra* text accompanying notes 135-37.

47. See Sudo, *supra* note 32, at 3, col. 1.

48. See *supra* text accompanying notes 35-36.

49. Large negotiable certificates of deposit (CDs) differ from insured retail certificates and other deposit accounts in two ways. First, the rates of interest payable on negotiable CDs are competitive with other short-term investments such as treasury bills and commercial paper; second, the holder can sell the instrument in the secondary CD market. See W. MELTON, *supra* note 45, at 26.

50. Banks purchase funds from other banks in the interbank market on a daily basis to cover changes in their reserve positions. For a description of the workings of the interbank market, see M. STIGUM, *THE MONEY MARKET* 366-70 (rev. ed. 1983).

51. See *id.* at 34-35. Eurodollar deposits are not insured by the Federal Deposit Insurance Corporation (FDIC).

Although these investors in the wholesale deposit market are better candidates to exert market discipline than a bank's involuntary depositors, the number of banks likely to be affected by this discipline is relatively small. Not all banks are able or willing to rely heavily on the wholesale deposit market for funding. First, only relatively large, nationally prominent banks have meaningful access to the domestic and international markets for large certificates of deposit. Approximately three-quarters of all uninsured deposits are concentrated in the one percent of insured commercial banks, approximately 150 in number, with assets in excess of one billion dollars.⁵²

Second, wholesale deposits are both more expensive than retail deposits, as banks must pay market rates of interest in order to compete for funds, and more volatile, as the average wholesale depositor is willing and able to liquidate its investment quickly should changes occur in the issuer's financial position or reputation.⁵³ A corporate treasurer purchasing a large certificate of deposit as a short-term investment for excess cash will not feel constrained to choose a particular bank because of prior business relationships or convenience but will simply choose the institution offering the best return. Likewise, the treasurer will have no inclination to leave his funds in an institution experiencing financial difficulties because of his loyalty to the institution or concern about the effect of the bank's failure on the local community.

For these reasons, wholesale deposits on balance are a less desirable source of funding than retail deposits. Thus, even large banks prefer not to rely too heavily on wholesale deposits, lessening the potential impact of discipline by these depositors. Ironically, the banks that are forced to depend substantially on wholesale deposits are those that are already experiencing funding difficulties in their core deposit market.⁵⁴ Moreover, unusually heavy reliance on wholesale deposits is itself perceived by the market as additional negative information about the bank.⁵⁵ Therefore,

52. See Gilbert, *Disclosure and Market Discipline: Issues and Evidence*, FED. RESERVE BANK OF ATLANTA ECON. REV., Nov. 1983, at 70. In general, bank deposits are highly concentrated, with 26 cents of every dollar of deposits held by the 25 largest deposit-taking institutions. Cacace, *25 Institutions Hold 25% Deposits*, Am. Banker, Apr. 9, 1984, at 1, col. 3.

53. This, of course, is exactly what proponents of market discipline would expect. See *supra* text accompanying notes 33-34.

54. For example, for almost a decade prior to the federal bailout, 70% of Continental Illinois' total liabilities consisted of wholesale deposits. *Inquiry into Continental Illinois Corp. and Continental Illinois National Bank: Hearings Before the Subcomm. on Financial Institutions Supervision, Regulation and Insurance of the House Comm. on Banking, Finance and Urban Affairs*, 98th Cong., 2d Sess. 236 (1984) [hereinafter *Continental Hearings*] (Statement of C.T. Conover, Comptroller of the Currency). At first, Continental was forced to rely on purchased funds because of the unavailability of sufficient retail deposits in its home market; later on, the bank had difficulty attracting any funds. See *infra* note 56.

55. See *infra* text accompanying notes 109-10.

the banks that are most likely to be affected by the market discipline of investor-depositors are those that are already subject to increased funding risks that may reflect other more serious problems. For these banks, market discipline may come too late.⁵⁶

II. Depositors' Access to Information About Bank Risk

The previous Part has demonstrated that only a few depositors at a small group of banks are likely candidates for market discipline. But even having depositors who are willing and able to exert market discipline is not enough to insure its success. In order for market discipline to work, depositors also must have access to adequate information about their bank to make accurate determinations concerning risk.

Most proponents of market discipline regard the lack of information about banks as the major stumbling block to effective discipline today.⁵⁷ It has been generally assumed that the operations of banks, unlike other firms, are protected from public scrutiny by a veil of secrecy created by statutory design,⁵⁸ supported by the regulators, and jealously guarded by the industry.⁵⁹ As evidence of this tradition of secrecy, critics point to the puzzling exemption of banks from various parts of the federal securities laws⁶⁰ and the seeming lack of candor of bank regulators concerning their

56. Continental Illinois is a prime example. When the bank's serious asset problems became front page news, the wholesale depositors who earlier had been happy to earn the high returns Continental was forced to offer fled from the bank en masse. See *infra* text accompanying note 108. Perhaps bank management should view any increase in the bank's dependence on wholesale deposits as a warning signal that it must take steps to reduce its risk-taking. Yet even Continental's dependence on wholesale deposits at first was due to its rapid growth beyond the funding capacity of its local market, a phenomenon that may be experienced by sound banks that effectively manage their increased cost of funding. In any case, market discipline presupposes that the depositors must exercise the restraint, since bank management will go on taking risks so long as it can profitably fund its risky ventures. See *infra* text accompanying notes 150-61.

57. See Comptroller Statement, *supra* note 2; Murphy, *supra* note 7, at 86-87.

58. For a discussion of the legal basis for confidentiality in bank regulation, see Mathewson, *supra* note 6, at 146-50.

59. See, e.g., Kane, *Foreword* to J. SINKEY, *PROBLEM AND FAILED INSTITUTIONS IN THE COMMERCIAL BANKING INDUSTRY* at xxi (1979) (criticizing bank financial disclosures as "exercises in cosmetic accounting").

60. Section 3(a)(2) of the Securities Act of 1933, 15 U.S.C. § 77c(a)(2) (1982), exempts from registration with the Securities and Exchange Commission (SEC) new issues of securities by banks supervised by federal or state authorities. The sketchy legislative history of the exemption suggests that it was motivated not by any desire to insulate banks from disclosure but by the assumption that disclosure requirements would be included in the federal banking legislation that was simultaneously under consideration by Congress. Butera, *Bank Exemption From the Securities Act*, 93 *BANKING L.J.* 432, 447 (1976). But cf. Note, *SEC Regulation of American Depositary Receipts: Disclosure, Ltd.*, 65 *YALE L.J.* 861, 870 n.49 (1956) (speculating that the exemption was designed to prevent bank runs produced by negative disclosure). Although banks were not originally exempted from the periodic disclosure requirements of the Securities Exchange Act of 1934 (Exchange Act), the SEC by rule created a temporary exemption for bank securities until a special form, never actually adopted, could be developed. 1 Fed. Reg. 2117 (1936) (codified at 17 C.F.R. § 240.12a-1 (1964), *repealed* 1982, 47 Fed. Reg. 29,651). After finding that bank disclosure fell short of the SEC's standards, see SEC,

assistance to or disposition of failing institutions.⁶¹

Therefore, proponents of market discipline have urged both expansion and improvement of public disclosure by and about banking organizations.⁶² Although they admit that additional revelations about the dark underside of banking may lead to diminished confidence in banks and even more bank runs in the short term, they counter that more reliable information will prevent the market from acting on the basis of rumors and half-truths.⁶³ Moreover, the long-term effect of disclosure will be to deter banks from taking risks that may require negative disclosure.⁶⁴

The recent calls for more bank disclosure ignore the fact that information about the operations and financial condition of banks, particularly large institutions, already is surprisingly comprehensive, readily available, and, in the view of the professional analysts who use it, equal to or better than disclosure currently available about other industries.⁶⁵ Most important, this public disclosure provides all the information necessary for depositors to make accurate judgments as to the financial risks associated with their banks.⁶⁶ If investors in bank deposits⁶⁷ do not make use of this information, it is not because the information is inaccessible or inadequate.

Rather, depositors may not use such information because it is

REPORT OF SPECIAL STUDY OF SECURITIES MARKETS, H.R. DOC. NO. 95, 88th Cong., 1st Sess. 35-39 (1963), Congress in 1964 explicitly subjected banks to the periodic disclosure requirements of the Exchange Act, although administration was left to the federal bank regulators. In 1974, Congress required the regulators to adopt disclosure rules and regulations substantially similar to those of the SEC. See Exchange Act § 12(i), 15 U.S.C. § 78l(i) (1982). For a discussion of the history of § 12(i), see L. LOSS, FUNDAMENTALS OF SECURITIES REGULATION 469-71 (1983).

61. See Evans, *Disclosure Through a Glass Darkly*, 27 AD. L. REV. 357, 359 (1975) (SEC insisted, over objections of bank regulators, on disclosure of problems at U.S. National Bank and Franklin National Bank); SEC v. Youmans, 543 F. Supp. 1292 (E.D. Tenn. 1982) (securities law requirement to disclose material adverse changes included terms of written agreement between failing bank and its regulator). Whatever their earlier attitude, the bank regulators recently have required timely disclosure of certain problems experienced by banks, including supervisory agreements and enforcement actions. See Garsson & Trigaux, *Comptroller Steps Up Pressure on Big Bank Capital Adequacy*, Am. Banker, Nov. 19, 1984, at 17, col. 1 (disclosure of formal agreements between Comptroller of the Currency and Bank of America and First Chicago to increase capital and correct irregularities).

62. See *supra* note 2.

63. See Mathewson, *supra* note 6, at 176.

64. See *id.* at 164-65.

65. See, e.g., Coulson, *Full Disclosure: The SEC's Requirements Relating to Bank Holding Companies*, FED. RESERVE BANK OF ATLANTA ECON. REV., Nov. 1983, at 62, 69 (SEC accountant asserts that bank holding company disclosure is more comprehensive and sophisticated than that of most industries); Wooden & Paluszek, *Disclosure Needs of Financial Analysts: Large Bank Holding Companies*, FED. RESERVE BANK OF ATLANTA ECON. REV., Nov. 1983, at 77, 79 (bank analysts note recent improvement in quality and uniformity of information).

66. See *infra* text accompanying notes 84-95.

67. As only investor-depositors can be expected to make effective use of ongoing information about bank risk, see *supra* text accompanying notes 39-43, only they shall be considered in this discussion of bank disclosure.

incomplete in one important respect. Although public disclosure is helpful in assessing the financial risks associated with investments in banks as going concerns, it is of no help in evaluating the risks associated with investments in banks once they have failed. After a bank has failed, the fate of its depositors is entirely subject to the discretion of the bank regulators, who have the option either to liquidate the bank or to keep it alive with federal financial assistance. Ironically, depending on the regulators' choice as to the appropriate handling of a failed bank, the bank's depositors may either lose all or part of their investments or be guaranteed complete protection.⁶⁸ In view of the vastly different consequences for the bank's depositors, the probable regulatory disposition of a bank upon failure is understandably a very significant element of a depositor's assessment of the risks associated with his investment. Yet, as will be demonstrated,⁶⁹ bank financial disclosure is not very helpful in assisting depositors to predict which of these two possibilities will occur.

A. *Assessing Financial Risk*

1. *Mandatory Disclosure*

The principal sources of continuous information about bank financial condition, particularly for large publicly held institutions,⁷⁰ are the reports prepared by banks pursuant to the patchwork of mandatory disclosure requirements imposed by the securities and banking laws.⁷¹ Although most of this disclosure is directed to investors in bank securities, the financial information it contains is equally useful to depositors in assessing the risks associated with their banks.⁷² Moreover, the recent development of

68. For a description of the regulatory alternatives, see *infra* text accompanying notes 113-16.

69. See *infra* text accompanying notes 116-21.

70. As of 1983, approximately 18% of insured banks were owned by public bank holding companies and an additional 5% were themselves publicly held. See FEDERAL DEPOSIT INSURANCE CORPORATION, DEPOSIT INSURANCE IN A CHANGING ENVIRONMENT C-10, C-11 (April 15, 1983). Disclosure by smaller privately held banks, particularly those not subject to federal bank regulation, is less comprehensive. Nevertheless, these banks attract so few wholesale deposits that there is little need for additional disclosure.

71. This disclosure includes periodic disclosure by publicly held bank holding companies and banks under the Exchange Act, 15 U.S.C. § 78m(a) (annual, quarterly and special reports), § 78n(a) (proxy statements), and § 78n(d) (tender offer statements) (1982); year-end consolidated reports of income and quarterly consolidated reports of condition submitted by all federally regulated banks under the banking laws, 12 U.S.C. § 161 (national banks), § 324 (state member banks), and § 1817 (insured banks) (1982); and special disclosure under the banking laws concerning areas of particular supervisory concern, such as insider loans, 12 C.F.R. § 304.4 (1986), and foreign loan concentrations, 12 U.S.C.A. § 3906 (West Supp. 1984).

72. Criticism of current mandatory disclosure generally focuses on discrepancies between format and presentation of financial statements prepared for the SEC and for the bank regulators; the latter are prepared in accordance with certain regulatory accounting standards that vary from generally accepted accounting principles. See Federal Financial Institutions Examination Council, *General Instructions for the Preparation of Call Reports*, 5 Fed. Banking L. Rep. (CCH) ¶ 60,980A, at 38,928

professional analysis and private sector rating firms which translate available data into the form that is most useful to depositors' needs provides an efficient method of disseminating information to depositors.⁷³

Banks also have an incentive to supplement mandatory disclosure voluntarily in order to improve their competitive positions, particularly in areas such as foreign lending where publicity about banks generally has been negative. For example, a bank with significant foreign loans may choose to disclose more details about its portfolio than is required by disclosure rules in order to show that its foreign loans are relatively short-term or otherwise less risky than those of its competitors.⁷⁴ If other banks are thereby forced to make similar disclosures in order to reassure the market that their foreign exposure also is not significantly worse than average, the quality of industry disclosure is improved.⁷⁵ Although some firms may ignore industry practice and simply comply with the minimum mandatory disclosure standards, they risk creating the impression that they have something to hide.

A possible objection to the adequacy of current mandatory disclosure concerns its accessibility to all depositors. Depositors whose accounts are relatively small may not seek out information on their own or hire expensive bank analysts because the cost of obtaining information exceeds any possible benefit they will derive from the additional knowledge. Yet, as suggested above,⁷⁶ most small depositors do not view their deposit accounts as investments and would not use financial information even if it were available to them at no cost. Moreover, so long as some large investors are willing to pay for the best available information, that information should be reflected rapidly in the price structure for deposits when those depositors insist on adequate risk premiums from their banks.⁷⁷

(Nov. 14, 1983). As most large banks are subject to both requirements, however, investors are able to obtain comparable data concerning different banks.

73. See, e.g., Cates, *Disciplined Bank Management Can Turn Risk to Its Advantage*, Am. Banker, Nov. 20, 1984, at 4, col. 1 (growing market for private sector bank credit rating and analysis).

74. At present, banks are required to disclose only the aggregate level of foreign outstandings by country and in some cases by category of borrower. See generally Coombe & Lopic, *Problem Loans, Foreign Outstandings, and Other Developments in Bank Disclosure*, 40 BUS. LAW. 485, 496 (1985).

75. See Benston, *Required Periodic Disclosure Under the Securities Acts and the Proposed Federal Securities Code*, 33 U. MIAMI L. REV. 1471, 1473 (1979) (firms have incentives to disclose information voluntarily up to the point where marginal benefits to investors equal or exceed costs of producing and disseminating information). Mandatory disclosure requirements are still necessary to insure that the industry as a whole produces information in a form that is sufficiently intelligible and standardized to permit comparative judgments. See Coffee, *Market Failure and the Economic Case for a Mandatory Disclosure System*, 70 VA. L. REV. 717, 722 (1984).

76. See *supra* text accompanying notes 39-47.

77. Cf. Gilson & Kraakman, *The Mechanisms of Market Efficiency*, 70 VA. L. REV. 549, 569-72 (1984) (subgroups of informed traders can cause stock prices to reflect information by trading at premium over "uninformed" price levels).

This process may work less efficiently to the extent that the market for deposits is fragmented into a number of submarkets populated by different groups of investors that rarely overlap. For example, the market for small retail deposits is unlikely to reflect informed trading in the separate market for negotiable certificates of deposit.⁷⁸ Nevertheless, depositors will be sensitive to strong signals given by other submarkets. Thus, if a bank suddenly offers above-market premiums to attract large deposits, all depositors who hear this information may suspect that the institution is experiencing some financial difficulty. Likewise, a deposit run by involuntary depositors will immediately affect the behavior of investors in the wholesale deposit market.⁷⁹ Information, particularly negative information, can be disseminated extremely quickly in the deposit market.

2. *The Significance of Regulator Data*

Despite the availability of information about bank financial condition that is comparable to that available about other companies, market discipline will still not be possible if some additional data essential to an accurate assessment of risk are consistently withheld from the market. The information collected by bank regulators during bank examinations,⁸⁰ as well as their internal assessments of the health of examined institutions,⁸¹ are not revealed to investors.⁸² If this information is required for depositors to make informed investment decisions, its unavailability may explain the failure of depositors adequately to discipline banks. That one of the major justifications for withholding such data from the market is the regulators' fear that depositors will overreact to a negative assessment⁸³ suggests the potential significance of regulator data to the deposit market.

Nevertheless, the fact that depositors would consider the regulators' views significant does not mean that such data are essential to judge the financial condition of a bank. Despite the regulators' relatively greater

78. For a description of the different characteristics of these two kinds of deposits, see *supra* note 49.

79. See *infra* text accompanying notes 142-43.

80. Regulators rely on periodic on-site examinations to identify areas of concern that, if uncorrected, could lead to future problems. 12 U.S.C. §§ 325, 481, 1820(b) (1982).

81. Following the examination, a report is prepared summarizing the examiner's findings and making recommendations for corrective action. The bank is assigned a rating pursuant to an internal numerical rating system for financial condition (CAMEL) and the bank may be placed on an internal problem bank list. See Federal Financial Institutions Examination Council, *Uniform Financial Rating System*, [1979-1980 Transfer Binder] Fed. Banking L. Rep. (CCH) ¶ 98,110 (Nov. 21, 1979).

82. See, e.g., *First State Bank of Hudson County v. United States*, 599 F.2d 558, 563 (3d Cir. 1979) (as examinations are intended to prevent losses resulting in claims against insurance fund and not to "ring the alarm bell to arouse drowsy directors and misguided shareholders," regulators had no duty to disclose irregularities discovered during examination).

83. See *Consumers Union v. Heimann*, 589 F.2d 531, 534 (D.C. Cir. 1978) (affirming exemption of examination reports from disclosure under Freedom of Information Act on this basis).

access to information about bank condition, their record in predicting which banks will experience financial difficulty has been no better than that of the market on the basis of public information.⁸⁴ Although mandatory disclosure by banks may not assist investors in discovering insider fraud, illegality, or other forms of misconduct which are responsible for a large percentage of bank failures,⁸⁵ even the regulators have been unsuccessful in uncovering such abuses before they caused serious financial problems.⁸⁶ Moreover, despite the regulators' policy of confidentiality, the market is adept at finding clues to their assessment of individual banks in regulatory actions on routine administrative matters such as applications for new offices or activities.⁸⁷

An opportunity to measure the importance the market for bank stocks attaches to regulators' internal assessments of individual banks arose in early 1976, when two problem bank lists were leaked to the press.⁸⁸ A study of stock price movements of banks on the lists found that the stocks experienced only a temporary decline in price following disclosure of the lists, and no spillover effect was observed among bank stocks generally.⁸⁹ Moreover, market perception of the risk characteristics of the problem group was unaffected.⁹⁰ A second study found no significant market

84. A study comparing the relative accuracy of three bank failure prediction models, one using only publicly available data and the other two incorporating variables based on examiners' confidential classifications, concluded that the usefulness of examination data in predicting failure declined relative to public data as the interval between the date of the information and the year of failure increased. Bovenzi, Marino & McFadden, *Commercial Bank Failure Prediction Models*, FED. RESERVE BANK OF ATLANTA ECON. REV., Nov. 1983, at 14. See also J. SINKEY, *supra* note 59, at 185 (early warning system relying exclusively on public data could have predicted problems at Franklin National Bank as early as two years prior to failure).

85. See HOUSE COMM. ON GOVERNMENT OPERATIONS, FEDERAL RESPONSE TO CRIMINAL MISCONDUCT AND INSIDER ABUSE IN THE NATION'S FINANCIAL INSTITUTIONS, H.R. REP. NO. 1137, 98th Cong., 2d Sess. 9 (1984) (undetected criminal misconduct by insiders may have been major contributing factor in at least 45% of 75 commercial bank failures between January 1980 and June 1983).

86. *Id.* Professional analysts may actually be better than bank regulators at evaluating risk because of the greater capacity of the private sector to fund sophisticated analytic techniques. See Cates, *supra* note 73, at 4, col. 4 (superiority of private sector bank analysis).

87. For example, although the Comptroller did not disclose that as a result of its examination of Franklin National Bank in early 1974 it had recommended a one billion dollar retrenchment program, the subsequent denial by the Federal Reserve Board of an application by Franklin's holding company to acquire a nonbank subsidiary on the ground that such an acquisition would interfere with the company's efforts to improve Franklin's internal structure and asset composition was viewed by the market as a sign of the regulators' concerns about Franklin's viability and triggered the first serious deposit run. See J. SINKEY, *supra* note 59, at 148.

88. On January 11, 1976, the names of two banks on the Comptroller's problem bank list were leaked to the *Washington Post* and the *Los Angeles Times*. On January 22, a Federal Reserve Board list of 35 troubled bank holding companies was obtained by the *New York Times*. See Murphy, *Disclosure of the Problem Bank Lists: A Test of the Impact*, 10 J. BANK RES., Summer 1979, at 88, 89.

89. *Id.* at 92.

90. *Id.* at 95.

reaction to the disclosure.⁹¹ The results suggest that the stock market may already have been aware of the problems that led to the banks' inclusion on the lists.⁹²

Another study of stock price movements of twenty-five bank holding companies whose subsidiary banks experienced a major change in financial condition found that the stock prices began to decline an average of fifteen months before the regulators recognized the problems and lowered their internal ratings⁹³ of the banks.⁹⁴ These studies suggest that the market for bank stocks is using publicly available information to make accurate judgments about bank risk. Since investors in bank deposits rely on exactly the same information,⁹⁵ they should in theory be equally successful.

3. *Using Size As a Proxy for Risk*

If public information about bank financial condition is good enough to enable the deposit market to be even better than the regulators at predicting which banks are likely to experience financial difficulty, why is it that market discipline is not already felt, at least by those banks that purchase wholesale deposits? We would expect investors to demand risk premiums on deposits in banks whose financial condition is risky, and to avoid banks on the brink of financial disaster. Bank management would then be forced to respond to changes in the demand for its deposits, reducing its risk-taking in order to lower its cost of funding.

In fact, there is evidence in the wholesale deposit market that this process does occur to some extent. Large depositors demand higher rates before investing in certain banks. Apart from instances when as a result of unusual adverse publicity particular banks have been penalized by the market,⁹⁶ however, the differentials in rates paid on comparable deposits appear to reflect size rather than the actual degree of risk associated with individual institutions. For example, an analysis of the rates quoted by major dealers for short-term certificates of deposit offered by twenty-four banks revealed that the seven largest institutions (by total deposits) paid approximately the same rate for funds, while smaller banks consistently

91. Johnson & Weber, *The Impact of the Problem Bank Disclosure on Bank Share Prices*, 8 J. BANK RES., Autumn 1977, at 179-80.

92. *See id.* at 182 (disclosure of lists viewed as irrelevant or redundant).

93. *See supra* note 81.

94. *See* Schick & Sherman, *Bank Stock Prices as an Early Warning System for Changes in Condition*, 11 J. BANK RES., Autumn 1980, at 136-46.

95. *See supra* text accompanying note 72.

96. For example, for a four month period after the failure of Penn Square Bank, the wholesale CD market penalized Continental Illinois, which was identified as a major purchaser of loan participations from Penn Square. *See* Gilbert, *supra* note 52, at 72.

paid a premium over the large bank rate.⁹⁷ Moreover, deposit size was a more important variable affecting rates than traditional risk measures, such as earnings variability and debt-equity ratios, that determine rate spreads in the corporate bond market.⁹⁸

One explanation frequently given for the deposit market's bias in favor of large banks is that it reflects the widely held perception that some banks are too big to fail. When a large bank becomes insolvent, the potential cost to the insurance fund to reimburse its insured depositors is so high⁹⁹ that the regulators are virtually forced to arrange a merger or even to provide direct financial assistance to keep the bank solvent until a permanent solution can be found.¹⁰⁰ To date, only one bank (Penn Square Bank) with assets in excess of \$100 million has been liquidated.¹⁰¹ The giant Continental Illinois, at the time the nation's seventh largest bank, was not closed despite the inability of the regulators to find an acceptable merger partner.¹⁰² Thus, the larger the bank, the less likely it appears that even uninsured depositors will experience any losses in the event of failure.¹⁰³

If this perception is accurate, holding an uninsured deposit in a large bank is a relatively safe gamble. There is no need for depositors to spend time analyzing bank financial data if the solvency of certain banks is virtually guaranteed by the government. Depositors can simply limit their investments to the fifty or so banks that are too big to fail.¹⁰⁴

Although the belief that some banks are too big to fail is frequently voiced by the press and by small banks,¹⁰⁵ it is very doubtful whether any participant in the wholesale deposit market would dare to bet on it with his own or his clients' funds. Recent experiences with several large failures or near-failures have demonstrated that the larger a bank becomes,

97. See Crane, *A Study of Interest Rate Spreads in the 1974 CD Market*, 5 J. BANK RES., Autumn 1974, at 213-17.

98. *Id.* at 223.

99. At the end of 1983, total deposits of 13 banks insured by the FDIC exceeded the size of the insurance fund. WORKING GROUP OF THE CABINET COUNCIL ON ECONOMIC AFFAIRS, RECOMMENDATIONS FOR CHANGE IN THE FEDERAL DEPOSIT INSURANCE SYSTEM 20 (1985).

100. For a discussion of the regulators' options in handling a failed bank, see *infra* text accompanying notes 113-16.

101. Gilbert, *supra* note 52, at 70.

102. Morris & Weiner, *U.S. Rescues Continental Illinois Corp.*, Am. Banker, May 18, 1984, at 1, col. 2 (\$7.3 billion bailout).

103. See Trigaux, *Isaac, in a Shift, Warns Convention on Nationalization*, Am. Banker, Oct. 23, 1984, at 3, col. 1 (FDIC Chairman accused large banks of having become "addicted" to *de facto* 100% deposit insurance).

104. See Gilbert, *supra* note 52, at 71 (institutional investors use size and performance criteria that effectively limit their investments to the 50 largest banks).

105. See, e.g., Ringer & Albert, *Small Banks Complain of Double Standard*, Am. Banker, May 21, 1984, at 30, col. 1 (large multinational banks will not be allowed to fail even when a merger cannot be arranged).

the more difficult it is for the regulators either to find another bank that can afford to buy it or to justify the amount of direct assistance required to keep the bank alive.¹⁰⁶ Sooner or later, a bank will fail that is so large that liquidation may be inevitable.¹⁰⁷ Moreover, even if a merger ultimately can be arranged for a large bank, prolonged uncertainty surrounding the fate of the bank will disrupt the secondary trading market for its wholesale deposits. Uninsured depositors concerned about the liquidity of their investments cannot afford to wait months for the regulators to find a merger partner.

Ironically, the very example that usually is cited as evidence that some banks are too big to fail actually provides the proof that investors in bank deposits do not rely on this assumption. Even after all three federal bank regulators announced that all depositors and other creditors in Continental Illinois would be protected in full,¹⁰⁸ wholesale depositors, principally foreign banks, continued to withdraw their funds. These depositors apparently were not even sure that the regulators could honor an explicit guarantee. Thus, depositors are unlikely to rely simply on the past record of the regulators in successfully arranging mergers.

Why then does the deposit market favor large banks? The preference may simply reflect the generally accurate assumption that large banks are on the whole safer than smaller banks. Large banks issue more certificates of deposit than smaller banks, so the secondary trading market in their instruments is more active. The largest banks, which tend to be located in high population areas, also usually have access to a large and stable customer base of involuntary depositors,¹⁰⁹ making their relative dependence on wholesale deposits actually less than that of smaller banks with fewer core deposits.¹¹⁰ For these reasons, size may be a logical and fairly accurate proxy for bank risk. Therefore, as investors apparently do discriminate among banks on the basis of risk, we return to our original question:

106. For example, when Franklin National Bank, the nation's twentieth largest bank, failed, the only potential merger partners were foreign banks and California's Bank of America, which was precluded from acquiring a New York bank under existing state and federal banking laws. Franklin's ultimate sale to European-American Bank and Trust Company followed five months of negotiations, during which the bank was kept solvent by large loans from the Federal Reserve Bank, and ultimately required shrinking the bank to a digestible size. See Barr, *The Last Days of Franklin National Bank*, 27 AD. L. REV. 301, 311 (1975).

107. This was the case on a smaller scale in the Penn Square Bank failure, when no buyer could be found for the bank at an acceptable price. See *supra* text accompanying note 101.

108. *Comprehensive Financial Assistance Program Set for Continental Illinois National Bank*, [1983-1984 Transfer Binder] Fed. Banking L. Rep. (CCH) ¶ 99,972 (May 17, 1984).

109. This is not true of all money center banks. For example, restrictive branching statutes in Illinois impeded Continental Illinois' ability to establish a broad base of retail deposit customers. See *Continental Hearings*, *supra* note 54, at 206.

110. See *supra* text accompanying notes 53-56.

Why is it that market discipline is not already working to affect bank behavior?

B. *Assessing Liquidation Risk*

1. *Measuring Liquidation Risk*

Disclosure about bank financial condition is reliable, accessible, and widely used by bank investors who will demand a risk premium for investing in certain banks. Nevertheless, a depositor's assessment of the risks associated with individual investments may still be incomplete. Assume that an investor is choosing between two institutions offering \$200,000 certificates of deposit with identical terms and rates of interest. Based on his analysis of public financial data, the investor predicts that Bank A has a twenty percent chance of failure while Bank B's chances are eighty percent. The investor therefore buys a certificate of deposit from Bank A. Six months later, both banks fail. Bank A is liquidated, and our depositor loses the uninsured portion of his investment.¹¹¹ In contrast, Bank B is purchased by Bank C, which assumes all of Bank B's deposit liabilities.¹¹² As a result, Bank B's depositors, who were less prudent investors, experience no losses.

No additional information about Bank A's financial condition would have assisted our investor in predicting his risk of loss more accurately. Moreover, at the time he made his investment, even the regulators did not know which institution would be liquidated and which merged. Although the regulators will attempt to arrange an assumption of a failed bank's deposits by a healthy institution whenever the cost to the insurance fund will thereby be less than the cost of paying off all insured depositors,¹¹³ this choice depends on the willingness of a healthy bank to acquire the failed institution at an acceptable price. Although Bank C may be willing to pay a premium to obtain Bank B's valuable assets and deposits, it will

111. When a bank is liquidated, insured depositors are generally reimbursed out of the insurance fund within five to seven days. Uninsured depositors are treated as unsecured creditors who share in the proceeds of the liquidation pro rata with other general creditors, including the insurance fund, which is subrogated to the claims of the insured depositors. 12 U.S.C. § 1821(g) (1982). In the past, uninsured depositors ultimately have recovered most or all of their investment in the liquidation proceedings. As of the end of 1983, 99.1% of all depositors were reimbursed in full. FDIC ANN. REP. 1983 at 14. Nevertheless, depositors have lost post-failure interest and the use of their funds for long periods.

112. Bank C cannot pick and choose among Bank B's deposits. As the sale of a closed bank involves a distribution of receivership assets to the acquiring bank, provisions for pro rata treatment of creditors under national and many state laws governing bank liquidations require the purchaser to assume all liabilities on an equal basis. See *First Empire Bank v. Fed. Deposit Ins. Corp.*, 572 F.2d 1361 (9th Cir.), cert. denied, 439 U.S. 919 (1978).

113. See FDIC ANN. REP. 1974 at 3.

still require financial assistance from the insurance fund,¹¹⁴ as well as indemnification against contingent liabilities,¹¹⁵ before it will assume Bank B's liabilities. If this financial assistance had exceeded the cost of reimbursing Bank B's insured depositors and liquidating its assets, the regulators would not have been able to arrange the merger.¹¹⁶

How then can depositors assess liquidation risk? Some of the currently available financial information about bank condition may provide depositors with a few guideposts. Thus, a failed bank is more likely to be an attractive candidate for acquisition if it has a large inventory of performing loans or valuable securities, a strong core deposit base, an attractive location, or other qualities for which bidding firms are willing to pay a premium. Conversely, failed banks with poor asset quality or large contingent liabilities are less likely to attract bidders, resulting in a long period of protracted negotiation before a merger can be arranged or, as a last resort, a deposit payoff.

Moreover, the value of the failed bank's assets will in part determine whether a merger is a feasible solution from the point of view of the regulators, since the more a purchaser is willing to pay for those assets, the less federal financial assistance will be needed to arrange a merger.¹¹⁷ Nevertheless, the regulators' ability to arrange a merger ultimately depends on the amount and composition of the failed bank's deposits at the time of failure. The more deposits the purchaser must assume in the merger, the more financial assistance will be necessary, which must be offset against the premium the purchaser is willing to pay for the bank's assets.¹¹⁸ The required assistance must also be less than the value of the bank's insured deposits, which the regulators would otherwise have to reimburse out of the insurance fund. Thus, application of the current

114. The amount of federal assistance required to arrange the merger of a failed bank, FA , equals the amount of assumed liabilities, AL , less any clean assets, CA , less the premium (if any) that the acquiring firm is willing to pay for the failed bank's franchise, P : $FA = AL - CA - P$. See J. SINKEY, *supra* note 59, at 36-37. In other words, the lower the quality of the failed bank's valuable attributes, such as performing loans, stable sources of deposits or other factors for which an acquiring bank will pay a premium, the more federal financial assistance will be required to arrange a merger, increasing the likelihood that liquidation and payoff of insured depositors will be the cheaper alternative.

115. See *Penn Square Bank Failure: Hearings Before the House Comm. on Banking, Finance and Urban Affairs, Part I*, 97th Cong., 2d Sess. 51-52 (1982) (Statement of FDIC Chairman Isaac) (possibility of large contingent claims requiring indemnification of a purchaser by FDIC made merger of Penn Square Bank unfeasible).

116. Alternatively, the regulators may provide direct financial assistance to prevent a failing bank from closing, to reopen a closed bank, or to prevent extraordinary risk to the insurance fund. 12 U.S.C. § 1823(c)(1) (1982). In order to provide such assistance, however, the regulators must find that such assistance is the least costly alternative or that keeping the bank open is essential to provide adequate banking services to the community. 12 U.S.C. § 1823(c)(4) (1982). This authority was relied upon to provide capital assistance to Continental Illinois in lieu of a liquidation or merger.

117. See *supra* note 114.

118. See *supra* note 114.

regulatory formula may require different dispositions of banks with very similar asset values.¹¹⁹

Further, the attractiveness of a failed bank as an acquisition for other banks may not always reflect its asset value. The desire to evade interstate banking restrictions often may be a more important motive for some bids than the intrinsic worth of a failed bank.¹²⁰ Conversely, the post-failure acquisition market may undervalue a failed bank with valuable assets if it happens to be located in a state that is already open to out-of-state banks.¹²¹ Thus, extraneous and unpredictable factors currently enter the bidding process, making prediction of the outcome virtually impossible for either depositors or the regulators.

2. *Avoiding Liquidation Risk*

The previous discussion has demonstrated that, from the point of view of the depositor, evaluation of the risks associated with an investment in a bank involves an assessment not only of the probability that the firm will encounter serious financial difficulty but also of the likely fate of the institution should these problems cause it to fail. Yet, if this latter assessment will inevitably be inexact, how then can depositors protect themselves from the uncertainty of liquidation risk?

Of course, if a bank never fails, its ultimate regulatory disposition is irrelevant. Depositors could shield themselves from the uncertainty created by liquidation risk by choosing conservative institutions that do not pose a risk of failure. Moreover, even if a failed bank is saved, depositors may still pay some price, such as the interrupted liquidity of their investments or lost interest.¹²² So why don't depositors simply select safe banks that will not fail?

One problem is that today there are no "safe" banks that are guaranteed never to suffer a financial crisis that may lead to failure. Few analysts anticipated the widespread failures and problems that have beset the agricultural banks of the Midwest when several years ago these banks

119. A simple illustration will suffice, using the equation set forth in note 114 *supra*. Assume that Bank A and Bank B each have identical assets, valued at \$10, and command an identical acquisition premium of \$2. Bank A has deposit liabilities of \$20, of which \$5 are insured. Bank B has deposit liabilities of \$21, of which \$10 are insured. In the case of Bank A, liquidation will be less costly than a federally assisted merger, since total liabilities (\$20) less assets (\$10) less premium (\$2) equals \$8 of required federal assistance, which is more than the cost of paying off Bank A's insured depositors. In the case of Bank B, liabilities (\$21) less assets (\$10) less premium (\$2) equals \$9 of required federal assistance, more than is required for Bank A, yet less than the cost of reimbursing Bank B's insured depositors. Thus, a merger is the less costly alternative for Bank B.

120. See *infra* text accompanying notes 155-58.

121. Recently, the popularity of other methods of obtaining a foothold in another state has lessened the attractiveness of all failed banks to potential buyers. See *infra* text accompanying note 160.

122. These costs however will not be as severe as in the event of liquidation. See *supra* note 111.

appeared to be making safe and profitable loans.¹²³ Although in hindsight these banks may be faulted for making too many loans to a single industry or area,¹²⁴ most banks are affected by changes in the economic conditions of their region. Moreover, all banks are vulnerable to unpredictable risks such as fluctuating interest rates and unexpected demands for liquidity.¹²⁵ Ironically, banks have discovered that attempts to shield themselves from these risks by maintaining very conservative or liquid portfolios may themselves be counterproductive, simply reducing bank earnings and thereby discouraging depositors.¹²⁶

Thus, although there are banks that clearly can be labelled riskier than average, a completely safe bank is hard to find. Moreover, even if depositors at least try to avoid banks on the brink of failure, they may have trouble deciding when an institution is considered to be failing. Bank regulators have considerable discretion to determine when a receiver should be appointed in order to protect creditors even if, technically, the bank's liabilities do not yet exceed its assets.¹²⁷ Alternatively, a failing bank may be kept open through federal lending and other assistance for as long as the regulators deem necessary to permit an orderly disposition.¹²⁸

Present regulatory treatment of failed banks also gives depositors more reason to try to predict liquidation risk than to try to predict bank failure. Under existing law, when a bank fails, the regulators have no intermediate step between preserving the bank as a going concern through merger or direct financial assistance, in which case all depositors are protected in full, and liquidating the bank, in which case only insured depositors are guaranteed full recovery. When an investor must choose between two banks with comparable levels of risk, this difference in possible outcomes in the event of failure becomes very significant. Thus, the investor will not incur substantial additional expense to determine which bank is marginally more likely to fail, but will be more interested in fathoming

123. See Bennett, *Farm Banks Anguished by Fall from Pedestal*, Am. Banker, Feb. 4, 1985, at 1, col. 2 (reporting that 10 out of 27 bank failures between June and September of 1984 involved agricultural banks).

124. See *Regulator Says Many Failed Farm Banks Have Themselves to Blame For Results of Mismanagement, Insider Abuse*, Am. Banker, Mar. 26, 1985, at 3, col. 1 (FDIC study of farm bank failures concluded that none had been due to adverse economic conditions alone; in many cases mismanagement was primary cause).

125. See *supra* text accompanying notes 45-46.

126. For further discussion of this problem, see *infra* text accompanying notes 147-49. Theoretically, the safest bank would have a portfolio consisting exclusively of cash, but it would still be vulnerable to theft and inflation, and would be unable to pay depositors a return on their funds.

127. *United States Sav. Bank v. Morgenthau*, 85 F.2d 811 (D.C. Cir.), *cert. denied*, 299 U.S. 605 (1936); *In re Franklin Nat'l Bank*, 381 F. Supp. 1390 (E.D.N.Y. 1974).

128. Although Franklin National Bank might have been declared insolvent and closed any time after May 1974, it was kept open by loans from the Federal Reserve Bank in order to give the regulators time to arrange a federally assisted merger. See J. SINKEY, *supra* note 59, at 154-58.

which one will be saved. The greater the risks associated with both banks, and hence the greater the chance of failure, the more important assessing liquidation risk will become.

Thus, to investors in bank deposits, liquidation risk is as significant as, and in some cases more significant than, the current financial condition of their banks. Nevertheless, it seems highly unlikely that depositors are so busy trying to guess the fates of their banks in the event of failure that they completely ignore present financial condition. Hence, it is puzzling why market discipline apparently has so little effect on the deposit market. Perhaps depositors do not worry about liquidation risk after all but assume that the odds are that their bank will be rescued.¹²⁹ Yet, as discussed earlier, investors in bank deposits tend to be a suspicious lot who do not count on the ability of the regulators to save every bank.¹³⁰ As will be explored in Part III, the failure of market discipline has another explanation.

III. Consequences of Market Discipline

The previous Parts have suggested two significant problems with encouraging market discipline by bank depositors. First, very few depositors are interested in or capable of exerting that discipline by choosing banks primarily on the basis of risk. Second, although sufficient information about the financial condition of banks is presently produced to enable those depositors to predict which banks are most likely to incur financial difficulties, depositors still may be less concerned about the chance of failure than about the ultimate disposition of failed institutions by bank regulators.

Proponents of market discipline would have two responses to these objections. First, they would argue, if regulatory intervention to prevent bank failure interferes with the incentives for depositors to exert market discipline, the appropriate solution is for the regulators simply to let all banks fail, thus forcing depositors to assume financial responsibility for their investment decisions.¹³¹ Second, since saving failing banks only encourages both bank depositors and management to take too many risks, allowing more banks to fail ultimately will produce more risk-averse

129. Although many critics complain that all failed banks are bailed out, the record reveals that this is not the case: from 1933 through 1983, 328 failed banks were liquidated and 340 merged. See FDIC ANN. REP. 1983 at 14.

130. See *supra* text accompanying note 108.

131. Some might also suggest the removal or reduction of deposit insurance to increase the pool of depositors who might be at risk and, therefore, exert market discipline. See ABA STUDY, *supra* note 2, at 187; but see *supra* text accompanying note 42.

banks, resulting in fewer bank failures and less need for any regulatory intervention.

The problem with these responses is that the current failure of market discipline is not the result of government bailouts of failed banks. In reality, depositors do not behave as if they feel assured of government protection from losses. If federally assisted dispositions of failed banks really have made depositors complacent about bank risk, one would not expect the bank runs by sophisticated depositors that routinely take place.¹³²

Why then doesn't market discipline in the deposit market work as well in practice as in theory? As will be demonstrated, the problem is not the failure of depositors to exert discipline but the form that their discipline takes. Effective market discipline requires more than that depositors punish erring banks by causing them to fail. More important, market discipline must create positive incentives for all banks to limit their risk-taking to acceptable levels. If the reaction of the deposit market to any negative information is always a sudden and drastic reduction in bank funding—a bank run—neither the target bank's management nor its remaining depositors will have much opportunity to react to the market's negative assessment by reducing their risk-taking. As will be elaborated in this Part, the tendency of the deposit market to react precipitously to certain negative information has disastrous consequences for both the victims of market discipline and the deposit market itself.

A. *Effect on Depositors*

1. *Liquidity and Bank Runs*

Effective market discipline depends upon the ability of depositors to respond to changes in bank risk. If depositors were prevented from reacting to increased risk, the preferences of the deposit market would not be felt by bank management. Yet, ironically, the very ability of depositors to respond quickly may itself be responsible for their failure to exert effective discipline. If it is too easy for a depositor to react to negative news, he has no reason to try to predict bank problems in advance. He can afford to wait until the fire has spread throughout the entire building before taking his leave. In fact, for adequate compensation he may even enter the burning building, knowing that he can easily escape before the roof collapses.

Most depositors fit this description. As deposits are withdrawable upon demand or have short maturities, depositors can always retrieve their funds quickly when problems appear at a particular bank without incurring brokerage fees or other charges. Thus, unlike stockholders or

132. See *supra* text accompanying note 108.

long-term creditors who in order to liquidate their investments are dependent on a trading market that reflects current information,¹³³ depositors need not expend any effort to identify risk before it leads to serious financial problems. Moreover, because of their ability to protect themselves easily when risk-taking does not pay off, depositors are not deterred from investing by the aggressive behavior of bank management.

Of course, this characteristic of deposit liabilities is not unique. Commercial paper and short-term treasury securities are also very liquid, and both have more active secondary trading markets than bank deposits. Moreover, at times the liquidity of deposits may be more apparent than real. If all depositors attempt to retrieve their deposits at the same time, their bank will run out of funds, and some deposits, including those of relatively sophisticated investors, will be stuck in a closed bank.¹³⁴

The real distinction between deposits and most other corporate borrowings is not how the liquidity of deposits affects the depositor but how it affects the bank. As a bank's own liquidity depends almost exclusively on access to new deposits,¹³⁵ sudden withdrawals of deposits or failure to renew deposit liabilities at their maturities can leave the bank without funds to support its current operations.¹³⁶ Such withdrawals may occur as a result of many factors other than excessive risk-taking—false rumors, market jitters caused by recent bank failures, or even unusual cyclical demands for cash.¹³⁷ In some cases, the bank may be prepared and weather a temporary deposit drain, or it may cover its loss of liquidity through borrowing from other banks or the Federal Reserve. In other cases, the outflow may be so severe or unpredictable that a previously safe bank suddenly faces a serious liquidity crisis.

This unpredictable liquidity risk is a consideration that bank investors must take into account in assessing the overall risk posture of their bank. Nevertheless, depositors react to liquidity risk in a different way than they respond to poor assets or bad management. For example, suppose a depositor hears a rumor that his bank has serious management problems.

133. A holder of unsecured long-term debt of a company with financial problems has three choices. It can sell the liability at a loss, it can call the debt and possibly push the borrower into bankruptcy, or it can allow the borrower time to solve its problems. In the absence of a market for the debt, a lender may have no choice but to continue its relationship with the borrower, for example, by renegotiating the terms of its loan, in order to salvage any of its original investment.

134. When Penn Square Bank failed, its uninsured depositors included 139 credit unions with total uninsured deposits of \$111.5 million and 14 thrifts with total uninsured deposits of \$15.6 million. *Failure of Penn Square Bank: Hearing Before the Senate Comm. on Banking, Housing, and Urban Affairs*, 97th Cong., 2d Sess. 49, 70 (1982) (Statements of Edgar F. Callahan, Chairman, National Credit Union Administration Board, and Thomas P. Vartanian, General Counsel, Federal Home Loan Bank Board).

135. See *supra* note 29 and accompanying text.

136. See *supra* text accompanying notes 45-46.

137. See *supra* text accompanying note 47.

The depositor could investigate the truth of the rumor in order to make a judgment as to its probable effect on the bank's solvency. Nevertheless, he must also consider the likelihood that his fellow depositors may not investigate the rumor but simply withdraw their funds, which they can do easily without significant cost.¹³⁸ If a sufficient number of depositors do withdraw their funds, at some point the bank will suffer a liquidity crisis, which may itself threaten the bank's survival. Therefore, our depositor has little reason to discover whether the rumor is true and every reason to recover his own funds, joining the bank run.

Some other short-term investments also are vulnerable to runs. Holders of commercial paper, like bank depositors, have little or nothing to lose by reacting to rumors, and to the extent that many firms rely heavily on commercial paper for funding, a similar snowball effect may occur.¹³⁹ But this lack of incentive on the part of commercial paper holders to investigate the issuing firm has led to the development of arrangements through which investors can assure themselves of quality without verification, such as back-up lines of bank credit and the willingness of commercial paper dealers to repurchase the paper they sell.¹⁴⁰ No similar arrangements are generally available to depositors.¹⁴¹

Further, the commercial paper market tends to be limited to a relatively small group of sophisticated corporate investors.¹⁴² In contrast, it is important to remember that not all participants in the deposit market are true investors. Although involuntary depositors will not exert market discipline, their behavior does affect their bank, thus influencing the risk assessments of better informed depositors. A sophisticated depositor must be concerned not only with accurate information about bank risk but also with the reactions of involuntary depositors to false information and rumors.¹⁴³ Thus, ironically, well informed depositors are forced to pay attention to the judgments of less informed depositors, often reluctantly following them to the doors of the bank. Unlike in the corporate securities

138. See *supra* text accompanying note 133.

139. See W. Melton, *supra* note 45, at 157-58 (bankruptcy of Penn Central Transportation Company, which had \$82 million of commercial paper outstanding, led to general run on commercial paper market, threatening solvency of several other firms).

140. For a discussion of the role of these and other information intermediaries in lowering verification costs in the market for corporate securities, see generally Gilson & Kraakman, *supra* note 77, at 604-05.

141. A few deposit brokers have committed to repurchase certificates of deposit at the prevailing market price, see *Gary Plastic Packaging Corp. v. Merrill Lynch, Pierce, Fenner & Smith, Inc.*, 756 F.2d 230 (2d Cir. 1985), (describing Merrill Lynch's insured certificate of deposit program), but this is still far from usual.

142. The vast majority of investors in commercial paper used to be large corporations; more recently, they have been replaced by money market funds and other investment companies. M. STIGUM, *supra* note 50, at 631.

143. See *supra* text accompanying notes 43-47.

market, in the deposit market bad information tends to crowd out good information, giving depositors little reason to invest in the best possible information about their banks.

Thus, the liquidity of deposits has several related negative implications for market discipline. Even well informed depositors have no need to react early to increases in bank risk, since they can pull out when imminent disaster is threatened. Moreover, the vulnerability of banks to sudden withdrawals of deposits requires depositors to be attentive even to erroneous information if it is likely to cause other less sophisticated depositors to withdraw their funds.

This suggests that the discipline that the deposit market will impose will take the form of sudden and devastating bank runs in response to real or perceived threats of failure. Bank runs, however, are hardly an effective way to achieve market discipline. First, rather than encouraging depositors to be more careful in their choice of banks, bank runs force depositors to act upon the most unreliable forms of information. Moreover, although effective market discipline requires that some investors bear the costs of bank failure as punishment for excessive risk-taking, bank runs do not even insure that the right depositors are punished. The depositors remaining in a failed bank are not necessarily those who voluntarily chose to incur risk for a higher return or even those who made no investment analysis at all, but those unlucky enough to have been at the back of the line when the bank ran out of money.¹⁴⁴

2. *Avoiding Bank Runs*

Bank runs are undesirable from the point of view of both the target bank and depositors, since they add another unpredictable risk to their investment. Nevertheless, although there are several ways in which depositors could protect themselves from the more devastating consequences of bank runs, these reactions will be counterproductive in the long run. For example, if a depositor fears the tendency of uninformed depositors to react hastily to rumors, he might choose a bank with few involuntary depositors. Yet this depositor would be increasing his risk in the long run, since involuntary deposits ordinarily are far more stable than wholesale deposits.¹⁴⁵ Moreover, given the ease with which most deposits can be withdrawn from and returned to banks, even sophisticated depositors may be more inclined to react to rumors than to investigate them. Thus, ironically, a depositor seeking to minimize the possibility of bank runs may be

144. This may have been the explanation for the substantial volume of deposits of very sophisticated investors that were caught in Penn Square Bank when it closed. *See supra* note 134.

145. *See supra* text accompanying notes 53-54.

better off in a bank with substantial involuntary deposits, which may explain the preference of many investors for large banks.¹⁴⁶

Alternatively, a depositor could choose a bank whose assets consist primarily of cash and short-term government treasury bonds that can be liquidated rapidly should a sudden bank run occur. But, as suggested earlier, in the long run such a bank may not be as “safe” as it appears.¹⁴⁷ The return it can offer on its deposits is limited to the yield on its portfolio of treasury securities, yet it must compete for funds not only with other more aggressive banks but with all money market investments that offer a premium over the treasury rate. If it cannot attract sufficient deposits, even this “safe” bank is vulnerable to a liquidity crisis. The depositor would be better off purchasing a portfolio of government securities himself than investing in this bank.

Moreover, although some depositors may be willing to sacrifice return for the sake of reduced vulnerability to bank runs, it is unclear how high a price depositors will pay for safety. For example, uninsured money market mutual funds offered by brokerage houses, which paid higher rates than ordinary bank transaction accounts, were enormously successful in luring insured deposits away from banks.¹⁴⁸ Many depositors deliberately choose to invest in banks that take substantial risks in order to earn higher returns than safer banks can offer. A depositor may even choose to invest in a bank whose failure is probable so long as it offers a return commensurate with the risk. For example, a deposit paying twelve percent per annum in a bank that is expected to fail in ten years is a relatively safe gamble.¹⁴⁹ Therefore, there is no reason to believe that, if left to their own devices, depositors will avoid the devastating consequences of bank runs by choosing the least risky banks even if such banks are more likely to survive a run. Hence, bank runs are an inevitable part of the deposit market.

B. *Effect on Bank Management*

Market discipline requires more than simply that depositors take risk into account in making investment decisions. It also requires that bank management perceives and responds to depositors’ risk preferences. If

146. See *supra* text accompanying notes 109-10.

147. See *supra* text accompanying note 126.

148. See McCue, *Is Deposit Insurance Necessary?*, Am. Banker, Apr. 15, 1982, at 14, col. 1 (discussing success of unregulated money market funds).

149. Alternatively, our depositor can minimize his risk of loss without sacrificing return simply by diversifying his investments. If he allocates his funds among ten different banks offering different mixes of risk and return, even if two of the banks fail, he may still receive a higher net return than if he invests in a single “safe” bank. See generally J. LORIE & M. HAMILTON, *THE STOCK MARKET: THEORIES AND EVIDENCE*, 171-97 (1973).

banks can remain indifferent to depositors' preferences, the level of risk-taking by banks will not be affected by depositors' allocation of funds. Therefore, adequate incentives must exist for banks to be aware of and react to the market's assessment of their performance. On the other hand, if its negative effects are too severe, market discipline may do little but increase the risks to which banks are subject. Banks cannot be so sensitive to a shift in depositors' preferences that they have no effective opportunity to respond to the market's signals.

1. *Registering Risk Preferences Through the Capital Pricing Mechanism*

In a competitive capital market, the incentive for banks to respond to depositors' risk preferences seems clear. A firm that consistently ignores market signals should rapidly lose deposits to other institutions, resulting in higher funding costs and eventual failure. Therefore, at least in the case of firms that regularly use the wholesale deposit market,¹⁵⁰ management may already have a reason to limit its risk-taking to a level acceptable to depositors.

In practice, however, the very dependence of banks on the deposit market suggests that when the signals sent by the market are strong enough to be recognized by management,¹⁵¹ they already may be too strong to permit an effective response. For example, the market learns that a bank that sells wholesale certificates of deposit on a weekly basis has made a high risk loan. The following week, purchasers of deposits demand a risk premium. If management cannot afford this increase in its cost of funds, it may decide to alter its lending practices, but in the meantime it must satisfy its ongoing funding needs. It cannot simply withdraw from the wholesale deposit market until it has improved its loan portfolio. Moreover, to the extent that the unusually high premium it must now pay for deposits affects its earnings, the market will perceive that the risks associated with the bank have increased further and will penalize it accordingly. If the market's reaction becomes too severe, the bank may be unable to meet its funding needs.

Thus, the more sensitive a bank is to changes in the price and availability of funds, the more likely it becomes that even mild market discipline

150. The total number of these banks may be relatively small. See *supra* text accompanying note 52.

151. Every increase in funding costs will not necessarily be perceived by management as a sign of the market's displeasure. Rate variations may also reflect the frequency with which the bank sells deposits, returns on competitive investments, and market conditions. Moreover, higher funding costs will not hurt the bank so long as it can employ those funds profitably without incurring greatly increased risk.

may lead to a liquidity crisis. Moreover, as the deposit market tends to react to bad news not by demanding gradual rate increases but by sudden bank runs,¹⁵² management has less incentive to improve its market image than to find ways to shield itself from the devastating effects of market pressure. A firm already facing a liquidity risk due to increased funding costs will not have the time to convert its risky portfolio into safer investments, thereby eventually winning back its lost capital suppliers. Instead, it may be forced to subsidize its expensive deposits by incurring even more risk, either finding increasingly speculative uses for its funds to produce higher yields or buying even more costly deposits.¹⁵³

2. *The Market for Control*

If the pricing structure of the wholesale deposit market does not create incentives for management to control risk-taking, is there any other market mechanism that can bring about the proper degree of discipline? In the corporate securities market, management's performance may be disciplined by the threat of a hostile takeover by an outsider that believes it can improve the market value of the firm's shares by more efficient management.¹⁵⁴ Therefore, we might expect that a bank that ignores the market's risk preferences and thereby experiences difficulty in obtaining deposits would be vulnerable to a takeover by another firm that could make a profit by reducing the target's funding costs.

This pressure on management can be effective only if the possibility of a hostile takeover is real. Since banks are protected against takeover by state and federal laws limiting the concentration of banking resources¹⁵⁵ and preventing cross-industry acquisitions,¹⁵⁶ the threat of a change in control is virtually nonexistent for many banks.¹⁵⁷ Bank regulators are

152. See *supra* text accompanying notes 133-44.

153. For example, the bank may employ money brokers to sell its deposits, thereby incurring a brokerage fee as well as the high interest rates paid in the wholesale market. See Harless, *Brokered Deposits: Issues and Alternatives*, FED. RESERVE BANK OF ATLANTA ECON. REV., Mar. 1984, at 14.

154. See Easterbrook & Fischel, *The Proper Role of a Target's Management in Responding to a Tender Offer*, 94 HARV. L. REV. 1161, 1173 (1981). But see Coffee, *Regulating the Market for Corporate Control: A Critical Assessment of the Tender Offer's Role in Corporate Governance*, 84 COLUM. L. REV. 1145, 1204 (1984) (arguing that value of this discipline is limited when current management's inefficiency is either not extreme enough to justify a tender offer premium or too extreme to satisfy a bidder's level of risk aversion).

155. Restrictions on interstate acquisitions by bank holding companies with some exceptions limit potential bidders to in-state institutions. See Bank Holding Company Act of 1956 § 3(d), 12 U.S.C. § 1842(d) (1982).

156. See, e.g., 12 U.S.C. § 377 (1982) (restrictions on affiliations between banks and securities firms); 12 U.S.C. § 1843(a)(2) (1982) (limits on permissible activities of nonbank affiliates of bank holding companies).

157. In addition, the requirement of prior regulatory approval for the acquisition of a controlling block of shares makes hostile takeovers more difficult in banking than in other industries. See *Midland Bank, Inc.*, 70 FED. RESERVE BULL. 776 (1984).

occasionally willing to ignore these restrictions in order to facilitate the acquisition of a failing bank,¹⁵⁸ but the risks associated with such an acquisition may be too high to attract a bidder interested solely in profit maximization. Although acquisition of a failed bank's franchise traditionally has been a way for a healthy bank to obtain a foothold in another state,¹⁵⁹ the existence of other less costly ways to evade the restrictions on interstate banking, such as loan production offices, consumer banks, and shared electronic teller networks, has reduced the demand for failed banks among buyers.¹⁶⁰ Moreover, as the bank has already failed, the threat of a change in control at this point has come too late to have any disciplinary effect on the bank's management.¹⁶¹

C. *Effect on the Banking System*

The ultimate goal of market discipline is to encourage more effective risk management by banks, which in turn should lead to fewer bank failures and safer banks. Yet market discipline has a down side: Some banks must fail in order to demonstrate the effectiveness of the discipline. Occasional bank failure may be a small price to pay for encouraging more responsible decision-making at the majority of banks. Yet market discipline by depositors will have precisely the opposite effect, actually making the banking system as a whole less safe. This will occur because the effects of bank failure cannot be confined to the erring bank and its investors. The punishment is visited on innocent banks and their depositors as well.

The systemic or external¹⁶² effects of bank failure have frequently been asserted,¹⁶³ but it is useful to review them in order to demonstrate how they interfere with effective market discipline by depositors. Of course, all business failure imposes certain external costs on parties other than the firm and its investors. Although bank failure may result in substantial dislocation for local customers who depended on the bank for credit and other services, this effect is no more severe than the consequences of

158. See 12 U.S.C. §§ 1730a(m), 1785(h)(i), 1823(f) (1982) (permitting federally assisted interstate and cross-industry acquisitions of failing insured depository institutions).

159. See *supra* text accompanying notes 120-21.

160. See Dunn, *Merger Outlook: Subsidiaries Are Hot; Some Other Deals Are Not*, Am. Banker, Jan. 10, 1985, at 4, col. 1.

161. Although rarely used, the regulators' broad power to remove bank management for engaging in unsafe and unsound practices or for breach of fiduciary duty is potentially a more significant incentive to management to improve its performance than the threat of takeover. See *Brickner v. Fed. Deposit Ins. Corp.*, 747 F. 2d 1198 (8th Cir. 1984) (upholding removal power).

162. For a discussion of the cause and effects of externalities in the marketplace, see generally Coase, *The Problem of Social Cost*, 3 J.L. & ECON. 1 (1960).

163. See, e.g., Corrigan, *Are Banks Special?*, FED. RESERVE BANK OF MINNEAPOLIS ANN. REP. 1982 at 9-11.

failure of any business that is central to a particular community. Although peculiar restrictions on entry¹⁶⁴ mean that the closing of one bank may result in a net loss of services in its market, this problem is not unique to banking¹⁶⁵ and might be addressed by improving the competitiveness of the industry. Moreover, banking skills are sufficiently transferable that the failure of one bank will not deprive the market of a unique service.¹⁶⁶ Finally, the administrative costs of closing and liquidating banks are high, but so are the expenses associated with corporate bankruptcy and reorganization proceedings.¹⁶⁷

Nevertheless, the most significant cost associated with bank failures is not their impact on the individual bank's own customers or community, but their broader effect on the liquidity of the banking system as a whole. If a corporation defaults on its bond payments, the bondholders have been deprived of access to their funds to the same extent as depositors in a failed bank. Nevertheless, even if this default has raised questions about the creditworthiness of every other corporate borrower, alternative sources of funds, such as bank deposits, have not been eliminated either for bondholders in need of cash or other corporate issuers temporarily unable to raise funds in the debt markets. Even if some bondholders default on payments to their own creditors, precipitating further failures, so long as banks remain as back-up sources of liquidity, a financial panic can be contained.¹⁶⁸

In contrast, default by a bank results in a net loss of a source of liquidity for which no alternative exists except other banks. These remaining banks must themselves weather the sudden increased demand for liquidity either by liquidating assets or by selling new deposits.¹⁶⁹ Since the only way to stem the domino effect of credit withdrawal caused by any business failure is to have at least some firms that remain ready and willing to provide liquidity,¹⁷⁰ it is essential that these sources of funding be secured. Although the repercussions of individual bank failure can be tolerated if a sufficient number of healthy banks remain in operation, as the liquidity

164. See *supra* note 155 (restrictions on interstate banking).

165. For example, a similar argument could be made with respect to such significant industrial firms as Chrysler and Conrail.

166. Competition by nonbanking firms offering bank-like products such as money market funds has created a new market for bankers' skills.

167. See Roe, *Bankruptcy and Debt: A New Model for Corporate Reorganization*, 83 COLUM. L. REV. 527, 529 (1983).

168. See Corrigan, *supra* note 163, at 10.

169. See *supra* text accompanying notes 45-46.

170. This idea was first expressed by Walter Bagehot, who in his 1873 work *Lombard Street* proposed that the Bank of England should be ready to lend freely (albeit at high interest rates) in times of financial panic. See W. MELTON, *supra* note 45, at 155.

crisis spreads, each successive failure puts additional strain on the rest of the banking system.

The possibility of a systemic liquidity crisis resulting from a single bank failure is not a cost that depositors will take into account in assessing the risks associated with individual banks. No depositor will exhibit sufficient altruism to risk losing his investment by leaving his funds in a failing bank in order to prevent a bank run from spreading to other institutions. Such a reaction might be expected only from a depositor who is either ignorant or insensitive to risk. To the contrary, effective market discipline would require such a depositor to respond to the increased risk at his bank by joining the run.

Further, the vulnerability of all banks to liquidity woes makes it impossible for depositors to identify and avoid banks whose failure will pose a special threat to the banking system. Recent experience has demonstrated that neither the size of an institution nor the volume of its deposits determines the impact of its failure on other banks. The uncontrollable demand for liquidity that leads to systemic liquidity crises is caused by general uncertainty about the solvency of the banking system¹⁷¹ and, in particular, the guarantee of uninterrupted liquidity that banks provide. This uncertainty may follow the failure of a large bank because of its importance as a supplier of liquidity to a number of smaller banks.¹⁷² On the other hand, interdependence works the other way as well: The failure of a small bank may have a serious impact on much larger institutions with which it has significant business relationships, such as loan participations or lines of credit.¹⁷³ Moreover, a local banking crisis, although relatively insignificant in terms of actual losses, may have repercussions in the national and international financial markets if uncertainty exists about the regulators' ability to prevent the crisis from spreading.¹⁷⁴

Thus, bank runs and failures create risks not only for the individual bank and its investors but for other banks as well. Although in theory the possibility of spillover effects might have the beneficial effect of forcing banks to be more discriminating in their choice of correspondent banks,¹⁷⁵ the connection between a failed bank and other banks experiencing

171. As one observer noted, the solvency of banks largely depends on "make believe": the maintenance of public confidence in the banking system. R. MOLEY, *THE FIRST NEW DEAL* 171 (1966).

172. For example, 66 banks had an exposure to Continental Illinois in the form of deposits or other investments in excess of 100% of their capital. See *Continental Hearings*, *supra* note 54, at 434 (FDIC Staff Report).

173. This is illustrated by the impact of the failure of Penn Square Bank on its much larger correspondents, especially Continental Illinois. See *supra* note 96.

174. See, e.g., Kilborn, *World Markets Reacting to Ills of U.S. Banks*, N.Y. Times, Mar. 26, 1985, at A1, col. 1 (closing of state-insured Ohio thrifts, raising questions about solvency of all state insurance funds, blamed for instability and decline of dollar in foreign markets).

175. See *supra* text accompanying notes 172-73.

liquidity crises may be more tenuous, such as a similarity of names or location. Thus, spillover effects are too unfocused to have any impact on bank risk-taking, except in some cases to increase it.¹⁷⁶ Moreover, depositors facing still another unpredictable risk associated with bank deposits may now be convinced of the futility of any attempt to predict the future of individual banks and may simply shop for high rates, relying on their liquidity to protect them in the event of trouble.

IV. Making Market Discipline Work

The foregoing discussion has illustrated that uncertainty is the principal enemy of market discipline. Effective market discipline presumes the ability of depositors to make accurate judgments about bank risk that will be reflected in their investment decisions and recognized by bank management. Yet the deposit market is fraught with uncertainty about the risks associated with banks. First, the market must take into account the uncertainty surrounding the regulatory disposition of banks in the event of failure.¹⁷⁷ Second, the market must deal with the uncertainty that accurate or inaccurate news about a bank's financial condition could spark a bank run, producing a wholly new threat to the bank that bears little relation to the original risk.¹⁷⁸ Finally, the market must accept the uncertainty created by the spillover effects of one bank's failure on other healthy institutions.¹⁷⁹

All of this uncertainty discourages depositors from engaging in sustained financial analysis of banks. Because a bank's condition can change so quickly, a depositor has more incentive to monitor rumors than to expend any effort to predict in advance the financial prospects of his bank. Likewise, bank management looking for a way to reduce this uncertainty will be less inclined to control its risk-taking over the long term than to find ways to limit the bank's sensitivity to the market in the short term, even if that means incurring greater risk in the long run.¹⁸⁰

Thus, the discipline presently exerted by the deposit market increases the risk of bank runs without causing either bank depositors or management to decrease their risk-taking. If the purpose of relying on market discipline is to reduce bank risk, it will not achieve its intended goal. In fact, the very purpose of current regulatory intervention to save failed

176. If as a result of one bank failure banks generally are perceived to be more risky, they will have to pay higher rates to attract funds away from nonbank competitors, which itself will increase bank risk. *See supra* note 153.

177. *See supra* text accompanying notes 111-21 (liquidation risk).

178. *See supra* text accompanying notes 133-44 (liquidity risk).

179. *See supra* text accompanying notes 162-76 (systemic risk).

180. *See supra* text accompanying notes 151-53.

banks is to soften the consequences of the harsh discipline visited upon banks by the deposit market.¹⁸¹ Abolishing this protective regulation, thereby returning to a state of nature, is not a solution to the problem of increased bank risk.

Although market discipline is no substitute for regulation to control bank risk, market discipline and regulation need not be mutually exclusive approaches. Thus, regulatory intervention can be tailored to reduce some of the uncertainty that currently interferes with effective market discipline. Regulation designed to make market discipline work would have two beneficial effects. First, such regulation might encourage depositors to exert some pressure on bank management to control risk. Second, and perhaps more significantly, such regulation might make the task of the bank regulators to identify, control, and dispose of troubled banks somewhat easier by reducing the current tendency of depositors actually to contribute to bank risk by ignoring financial condition in choosing their banks.¹⁸²

How then can bank regulation be crafted to reduce the uncertainty that presently discourages depositors from evaluating the financial condition of their banks? The most effective and simple approach would be simply to prevent bank failure. If no banks failed, depositors would have no reason to join bank runs and systemic liquidity crises could be prevented.

Of course, if no bank failure meant that no depositor ever suffered any losses, depositors would still have no reason to be attentive to any information about the financial condition of their banks. Yet prevention of bank failure does not necessarily mean that depositors and bank management will pay no price for taking risks. Even now, depositors pay some price in the form of lost liquidity or interest when their bank is saved through a federally assisted merger.¹⁸³ Thus, the process by which failed banks are saved can be designed to incorporate certain risks and rewards for risk-taking. This Part will propose one such system of incentives the regulators might employ in disposing of failed banks that would encourage depositors to pay more attention to financial condition when choosing banks.

181. Discouraging bank runs was one of the original goals of the deposit insurance system, including the provisions permitting federally assisted mergers of failed banks. *See* M. FRIEDMAN & A. SCHWARTZ, *A MONETARY HISTORY OF THE UNITED STATES 1867-1960* 435-36 n.14 (1963).

182. Depositors' inattention to financial condition leads them to put money in risky banks, actually enabling such banks to grow even bigger. When such banks eventually fail, their inflated size may make their ultimate disposition much more difficult and expensive for the regulators. *See supra* text accompanying notes 105-08.

183. *See supra* text accompanying note 122.

A. *Current Disposition of Failed Banks*

As noted earlier, the regulators' choice when faced with a failing bank is threefold: they may attempt to keep the bank alive through direct assistance,¹⁸⁴ they may close the bank and liquidate its assets, paying off insured depositors,¹⁸⁵ or they may arrange a merger with a healthy bank.¹⁸⁶ The choice of alternatives presently rests primarily on the cost to the insurance fund of paying off insured depositors as opposed to providing federal assistance to the failing bank or to another firm to facilitate an acquisition.¹⁸⁷ Nevertheless, within this framework, the regulators have exercised considerable discretion in handling failing banks. Banks have been kept open through government lending so that a merger might ultimately be arranged.¹⁸⁸ Novel forms of direct assistance, including capital injections, have been provided.¹⁸⁹ In several failures the regulators have experimented with modified payoffs whereby only insured deposits and selected assets of the failed bank have been sold to an acquiring firm.¹⁹⁰

Thus, a great deal of uncertainty surrounds the disposition of failed banks because of the inability of the market to predict either which solution will be the least costly or how the regulators will react to individual bank failures. This uncertainty contributes to the already powerful incentives in the deposit market for investors to monitor rumors. As previously demonstrated,¹⁹¹ bank runs make a depositor's analysis of the actual financial condition of his bank irrelevant the moment the bank's liquidity is threatened. At that point, the depositor's risk of loss depends on the magnitude of the run, the bank's ability to withstand the run, and the possibility that the regulators will provide some assistance that will protect all depositors. The inability to predict accurately any of these three variables, coupled with the ease with which deposits can be liquidated, provide a good reason for a depositor simply to join the bank run. In fact, under the circumstances it is puzzling why depositors ever engage in any financial analysis of their banks.

184. *See supra* note 116.

185. *See supra* text accompanying note 111.

186. *See supra* text accompanying note 112.

187. *See supra* text accompanying notes 113-16.

188. *See supra* note 106 (Franklin National Bank).

189. *See supra* note 116 (Continental Illinois).

190. Uninsured depositors have received an advance payment of a portion of their claims from the government based on the regulators' estimate of their recovery after liquidation of the bank's unsold assets. *See* Rosenstein, *FDIC's Handling of Two Failures Underlines Policy*, *Am. Banker*, Mar. 20, 1984, at 3, col. 3.

191. *See supra* text accompanying notes 135-38.

Bank runs themselves are the inevitable by-products of the liquidity of deposits.¹⁹² Yet the uncertainty surrounding the disposition of failed banks is regulator-made. Current regulatory policy regarding failed banks encourages depositors to ignore financial condition and gamble on government protection. Nevertheless, this gambling occurs not because in fact some banks are saved, but because depositors realize that they cannot predict which banks will be saved.

Of course, depositors would no longer be able to gamble on government protection if no banks were saved. Yet, as this Article has argued, such a policy would not lead to effective market discipline. Depositors would be even less likely to pay attention to financial information about their banks in a market without any protection from unpredictable bank runs.¹⁹³ On the other hand, depositors also would have no reason to gamble if regulatory policy as to which banks will be saved were based on predictable factors. The disposition of the bank in the event of failure would simply be an element in a depositor's analysis of the risks associated with his bank. Moreover, such an analysis could be performed at the time the depositor made his investment rather than in the heat of a bank run. Depositors would simply choose those banks that are candidates for government rescue in the event of failure.

The regulatory criteria for saving failed banks not only must be clear and predictable but must bear some relation to the financial condition of the failed bank. For example, were the regulators simply to rescue all banks with assets over \$100 million, uncertainty would be reduced, but depositors would not engage in more financial analysis of their banks; they would simply favor large banks regardless of their condition. Thus, in order to encourage depositors to be more attentive to the current financial condition of their banks, the same factors that determine the financial strength of a bank as a going concern should also affect its disposition in the event of failure. Just because a bank fails does not mean that it is completely worthless. It may still have performing loans, a good location, or a potentially valuable base of core deposits. As these are the same qualities investors should look to in evaluating the risk posture of solvent banks, reliance on these factors in determining the fate of a bank upon failure would give depositors another reason to be attentive to financial condition even in a market vulnerable to unpredictable bank runs and failures.

192. See *supra* text accompanying notes 138-44.

193. See *supra* text accompanying notes 180-81.

B. *Market-Based Criteria*

The previous discussion has suggested that the best way to encourage depositors to pay attention to the financial health of banks in a market in which deposit runs and failures discourage financial analysis is to base regulatory dispositions of failed banks on clear and predictable factors that relate to financial condition. In other words, attentive investors should be rewarded for paying attention to the financial condition of their banks, while inattentive investors should bear the losses that follow from investing in a risky bank. Implementation of this approach, however, may prove difficult in the majority of bank failures. Although occasionally some “good” banks may fail due entirely to external causes such as the spillover effects of other bank failures,¹⁹⁴ ordinarily bank failure is the result of a combination of factors, such as troubled loans, poor management decisions, and liquidity problems, which may or may not have been apparent while the bank was a going concern. How then can the regulators devise a system for the disposition of failed banks that will take account of their financial condition prior to the final crisis that leads to failure, at the time when investors have the opportunity to choose among banks on the basis of the banks’ risk postures?

I suggest that the most predictable and reliable criterion by which to distinguish among failed banks is the value of their assets. Unlike many factors that affect a bank’s financial health, asset value can be monitored by depositors long in advance of failure on the basis of public information.¹⁹⁵ In contrast to liquidity difficulties, specific problems in a bank’s loan portfolio reveal themselves sufficiently early that the bank can be recognized and avoided by investors. Moreover, the overall composition of a healthy bank’s assets is itself a significant predictor of the bank’s future prospects. For example, if a bank’s loan portfolio is so concentrated in a particular region or industry that an economic downturn could lead to substantial loan losses, the risks associated with that bank should be apparent long before a crisis occurs that causes the bank’s failure.¹⁹⁶

In addition, unlike such variables as the level of a bank’s deposits, a bank’s asset value will remain relatively constant from the time a bank run begins until such time as the regulators decide to close the bank’s doors. Thus, the market’s valuation of the bank’s assets before failure will bear some relationship to the actual value of its assets after failure. The

194. See *supra* text accompanying notes 175-76.

195. See *supra* text accompanying notes 70-75.

196. For example, the difference between those agricultural banks that have failed and those that have weathered their loan losses may have been the latter banks’ more diversified portfolios. See *supra* note 124.

value of the failed bank's assets also can be estimated quickly by the regulators as soon as the bank is closed. In fact, such post-failure valuations are already made by the regulators in order to determine whether a federally assisted merger is a feasible solution.¹⁹⁷

Thus, asset value is a predictable and accurate indicator of a bank's financial position prior to failure. How then can it be used by the regulators to determine the fate of a failed bank? I propose three changes in the regulators' current method of handling failed banks that would make asset value the primary factor in the disposition of failed institutions. First, the regulators must adopt a clear threshold test based on asset value that will initially determine when a failed bank is eligible for any federal assistance. The regulators would arrange a merger for or provide direct assistance to a failed bank only if its asset value at the time of closing met certain minimum criteria for banks of its size and market position.¹⁹⁸ Banks falling below this threshold would automatically be liquidated.¹⁹⁹

Ideally, such a threshold should encourage depositors to monitor the condition of their bank's assets on an ongoing basis to insure that they continue to meet the regulators' criteria for banks of their size. If asset value drops below the threshold, attentive depositors will seek alternative investments for their funds. Of course, investors' estimates of their bank's asset value may not always turn out to be accurate. Often the precise value of a failed bank's assets cannot be confirmed even by the regulators until a careful audit is performed after the bank is closed. This suggests that any threshold must be set relatively low in order to give depositors some margin for error in their estimates of asset value.²⁰⁰ Nevertheless, the purpose of the floor is not to limit the number of banks that are saved but simply to make the initial decision to save or liquidate a failed bank more predictable, encouraging depositors to monitor the asset value of their banks and avoid those of truly poor quality.

197. See *supra* text accompanying notes 116-17.

198. In setting the thresholds for banks of different sizes, the regulators should not only look to the absolute value of performing assets but also take into account overall risk composition and profile and loan concentrations. The regulators have recently proposed such a weighting system for bank assets in connection with their proposal to establish a risk-based test for capital adequacy. See Board of Governors of the Federal Reserve System, Proposed Rulemaking: Bank Holding Companies and Change in Bank Control; Capital Maintenance; Supplemental Adjusted Capital Measure, 51 Fed. Reg. 3976 (to be codified at 12 C.F.R. pt. 225) (proposed Jan. 31, 1986). However the threshold is determined, the criteria must be made public so that depositors can use the same standards in assessing their banks.

199. Alternatively, the regulators could arrange a modified payoff in which only insured deposits were assumed by another bank. See *supra* text accompanying note 190. In either case, the intended result would be to relegate all uninsured investors to liquidation proceedings.

200. A low threshold would also lessen the possibility that a policy of too frequent liquidations will lead to more systemic liquidity crises. See *supra* text accompanying notes 171-75.

If the floor is low, then, as is presently the practice, the regulators will be committed in the majority of cases to arranging a merger or providing direct assistance to those banks that do not attract bidders. But this should no longer mean that all depositors are automatically guaranteed full recovery. Thus, even if a bank is saved, depositors who have assumed the risk of investing in a bank that has failed should pay some price for their protection from the full consequences of their risk-taking.

Ideally, these depositors, like beneficiaries of private insurance, should be charged a higher premium for protection the next time they seek the safety of deposits. As that is not feasible, they should at least expect to lose any risk premium they were paid to invest in the failed bank. This could be accomplished by limiting uninsured depositors' withdrawals from a failing bank after such time as the regulators determine that it might be closed,²⁰¹ as well as their recovery in a subsequent merger or other disposition, to the principal amount of their investment after deduction of any interest payments or other return they have already received on their deposits.²⁰²

For example, assume the prevailing market rate of interest on one-year \$100,000 deposits is ten percent. Bank A, because of its risky loan portfolio, must pay its depositors eleven percent, while Bank B pays the market rate. If both banks fail, a \$100,000 depositor in either bank will be entitled to recover only \$100,000 less any interest he already has received on his deposit. Nevertheless, Bank A's depositor will suffer the greater loss on his investment, giving up \$11,000 of expected return as opposed to \$10,000 for Bank B's depositor. Thus, the price an uninsured depositor will pay for protection will depend on the degree of risk originally associated with the investment as reflected in its risk premium.²⁰³

Finally, some provision has to be made for the possibility that the failed bank's assets turn out to be of poorer quality than the regulators' preliminary estimate, making a merger or direct assistance more expensive to

201. See *supra* text accompanying note 127 (regulators' discretion to determine when a failing bank can be closed). Such a provision will enable the regulators to catch depositors who try to protect their profits by withdrawing their funds just before the bank is closed.

202. Of course, as previously demonstrated, involuntary depositors cannot be expected to engage in additional financial analysis of banks; hence, penalizing them for taking risks is pointless. See *supra* text accompanying notes 41-47. Thus, fully insured depositors should at least continue to receive the same protection in a federally assisted merger or disposition of a failed bank that they would receive in a liquidation, namely, complete recovery. Although some uninsured depositors also qualify as involuntary depositors, their deposits tend to be either non-interest or low interest-bearing transaction accounts such as checking or payroll accounts. See *supra* text accompanying note 45. These depositors therefore would not risk significant losses under my proposal for forfeiture of interest.

203. Since denying one group of creditors—uninsured depositors—in a closed bank any part of their claims may violate the requirement in many bank liquidation statutes for pro rata distribution of bank assets to all creditors, see *supra* note 112, implementation of this part of my proposal may require Congressional action. Moreover, any interference with depositors' expectations under their deposit contracts would necessitate clear advance notice and consent.

arrange than anticipated. Under the current system, in these cases the regulators are forced to liquidate the bank or delay disposition until a less costly solution can be devised.²⁰⁴ Such delays have the negative effect of increasing the uncertainty surrounding regulatory dispositions of failed banks. Therefore, once the decision is made that a bank passes the threshold test for federal intervention, a merger or assistance must be arranged promptly. In exchange for this certainty, however, any unexpected costs incurred in arranging this disposition should be borne by the uninsured depositors, not by the government.²⁰⁵

This could be accomplished in the following way. Based on their own initial valuation of the failed bank's assets and liabilities, the regulators would determine the amount of federal assistance they anticipate will be required to arrange a merger or to keep the bank open.²⁰⁶ If the financial assistance ultimately required to arrange a merger or other disposition turns out to exceed this estimate, the right of uninsured depositors to have their total investment assumed by an acquiring bank or otherwise protected would be reduced correspondingly on a pro rata basis.

For example, the regulators initially value failed Bank A's assets at \$10. If Bank A has liabilities of \$20, the regulators will provide financial assistance to arrange a merger up to a maximum of \$10. If the only offer for Bank A requires federal assistance of \$12, the regulators will reduce the total amount of uninsured deposits which the bidder must assume by \$2, thereby also reducing the assistance required by the bidder by \$2.²⁰⁷

Adoption of my approach to the disposition of failed banks has the virtue of requiring very few changes to the existing regulatory system. The regulators will go through the same process of valuing a failed bank's assets and arranging a merger. Moreover, because most depositors will no longer automatically be entitled to reimbursement in full in the resulting merger, disposition of failed banks will not become more costly even if as many or more banks are saved as under the current system.

In fact, under my proposed system, the cost of handling bank failures should actually decline in the long run as incentives are restored for depositors to monitor the asset values of their banks. These incentives inevitably will be strongest for depositors at the margin: those who are faced with the real possibility of a bank run and who must decide whether to

204. See *supra* text accompanying notes 106-07.

205. Again, there is reason to provide complete protection for fully insured depositors. See *supra* note 202.

206. In order to comply with existing law, this should not exceed the cost of paying off insured depositors. See *supra* note 114.

207. In exchange for any unpaid portion of their liabilities, uninsured depositors will participate along with the insurance fund in the proceeds of liquidation of any assets not purchased by the acquiring bank.

withdraw their funds or to weather the run. These depositors are most likely to be concerned about the uncertainty surrounding the disposition of failed banks under the current regulatory system. Hence, more certainty as to the likely disposition of their bank in the event of failure should affect these depositors' behavior.

For example, assume that a bank with strong assets is threatened by a bank run. A depositor deciding whether to join the run will be able to determine through an evaluation of the bank's asset position that the bank will be rescued if it ultimately fails. The depositor therefore can rest assured that in the event of failure his losses will be limited. In fact, the more valuable his bank's assets are, the less likely it becomes that he will suffer any loss upon failure apart from lost interest on his investment.²⁰⁸ Yet if he withdraws his funds, he may not find an alternative investment that offers a return comparable to that expected on his deposit even assuming his bank does fail. Under these circumstances, depositors may no longer conclude that the cost of joining a bank run is always less than that of investing in information about the financial condition of their bank.

In addition, my approach should curb the depositor's inclination to react to what he thinks will be the probable response of other depositors to the threat of a bank run. Unlike under the current system, the depositor can be certain that, so long as his bank meets the threshold test for asset value, his losses will be limited no matter how many other depositors withdraw their funds. Thus, the depositor is under less pressure to hurry to recover his money before other less sophisticated depositors panic. To the contrary, as suggested above, he may decide to risk the loss of interest and leave his money in the bank. Most important, the depositor knows that if enough of his fellow depositors make a similar decision, his bank will actually weather the run and depositors will suffer no loss of either money or convenience. The cost to both the depositors and the banking system of a bank failure can be completely avoided.

The assessment by a depositor in a bank with poor quality assets will be different. Such a depositor may have deliberately chosen the bank because it offered high rates, gambling on the liquidity of his deposit or the chance of government intervention to protect himself in the event of failure. Under my approach, however, such a depositor cannot count on receiving any federal assistance at all if the value of the bank's assets falls below the threshold. Moreover, even if the bank does qualify for assistance, the depositor will lose the very profits that caused him to invest in

208. A bank with valuable assets is likely to attract such high bids from potential merger partners that the regulators will not be forced to prorate the amount of deposits that must be assumed by the acquiring bank. See *supra* text accompanying notes 204-07.

this bank. These risks should persuade some depositors to avoid low quality banks. To the extent that depositors can be discouraged from putting money in such banks, the ultimate cost to the insurance fund of liquidation and paying off insured depositors upon failure may be significantly reduced.

Conclusion

As more banks fail, the debate over market discipline will continue. This Article has argued that greater reliance on market discipline to reduce bank risk is likely to prove counterproductive. Bank runs and failures are proof that market discipline of a sort already takes place. Depositors already react to the unpredictable risks associated with their banks by quickly liquidating their investments.

Moreover, bank risk is increasing. Fiercer competition in the banking industry, in part produced by recent deregulation, inevitably will lead to more bank failures. It also will result in greater interdependence among banks as existing banks fail or are acquired by other banks.²⁰⁹ In a banking system with fewer and more interdependent banks, it is all the more likely that any single failure will have a significant impact on the remaining institutions. The consequence for the deposit market will be greater risk, more uncertainty, and more frequent bank runs.

In view of this increasing risk, there is little point in discussing how market discipline might work in theory when in practice it will do nothing to achieve a safer banking system. Instead, more attention should be given to improving existing regulatory tools to control bank risk. Nevertheless, understanding how risk affects the deposit market does have some bearing on this task. Although market discipline cannot replace regulation, the deposit market should be enlisted to assist the regulators rather than making their effort to control bank risk more difficult. My proposal would restructure the existing regulatory approach to failed banks with the goal of encouraging depositors to favor those banks that impose the lowest costs on the government in the event a rescue becomes necessary. In this way, the regulators could bank on depositors to assist them in fighting the growing cost of living with bank risk.

209. Some estimates suggest that through mergers and failures one in three independent banks will disappear by 1990. See W. MELTON, *supra* note 45, at 198.