

Deposit Insurance Policy

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THIS ESSAY EXPLORES a few basic questions in deposit insurance policy. I approach this issue from two different directions. First, I assume that deposit insurance is essential and examine how an insurance system with some desirable attributes can be implemented. After this, I explore alternatives to the existing deposit insurance system and ask whether deposit insurance is really desirable in light of the implementation difficulties identified in the first half of the paper.

IMPLEMENTING A DESIRABLE DEPOSIT INSURANCE SCHEME: PRIVATE INFORMATION AND MORAL HAZARD

The recent, well-publicized distress among depository institutions has revitalized debate about deposit insurance reform. Much of the discussion has centered on how deposit insurance should be priced to cope with two major problems: private information and moral hazard. The private information problem arises because insured institutions are typically better informed than the deposit insurer about the risks on their asset portfolios and may attempt to exploit this informational advantage to obtain more favorable insurance pricing.² It is natural to expect that banks which have originated and underwritten loans, and are responsible for their ongoing monitoring, know considerably more than bank examiners about the risk characteristics of these loans. The moral-hazard problem stems from the possibility that insured

institutions may have a tendency to skew their asset choices in favor of more risk to increase the value of deposit insurance and increase the insurer's liability. Reform packages with a variety of institutional designs have been proposed with the aim of reducing the severity of these two problems.

Private Information and Deposit Insurance Pricing

An insurer that recognizes the incentives for insured institutions to exploit private information about their assets may adopt one or both of the following regulatory approaches: (1) direct auditing of insured institutions' assets and (2) designing a risk-sensitive insurance pricing scheme that is incentive compatible. Direct auditing is an attempt to bridge the informational gap between the insurer and the insured by on-site examination of banks' assets. This sort of scheme for eliciting information suffers from two notable drawbacks. First, it can be quite costly to administer. Second, window-dressing by insured institutions may make it ineffective. The history of regulatory supervision and auditing in the United States is blemished with repeated failures: insured institutions seem to have consistently managed to subvert the process by withholding key pieces of financial information. The costs of implementing a direct auditing scheme, moreover, can be expected to rise steeply with the desired effectiveness of the auditing. Chan, Greenbaum and Thakor [CGT (1992)] argue that if the banking industry is perfectly competitive, these costs are unsustainable without subsidies

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²Private information problems can be quite severe. For ex-

ample, in the case of the recent merger between the Citizens and Southern (C&S) and Sovran banks, it was revealed that one of the institutions involved in the merger was unaware of loan problems at the other institution.

from the government because without subsidies, regulatory auditing costs must be paid out of the economic profits generated by the banking industry and under perfect competition these surplus profits are zero.

The other alternative for resolving the private information problem is more sophisticated. It recognizes that it may be more cost-effective to adopt deposit insurance pricing schemes that are *incentive compatible*. These schemes try to make the incentives of privately informed banks regarding disclosure of their information compatible with the regulator's desire that the banks reveal this information truthfully. In other words, can we design a risk-sensitive deposit insurance pricing scheme that will lead a bank to reveal its private information, tacitly but truthfully, by its choice of a contract from a menu of contracts? CGT show that under certain conditions the answer is yes.

CGT propose tying banks' deposit insurance premiums to their capital requirements. To see how this can elicit truthful revelation by banks, we can construct a stylized example. Suppose that banks invest in projects that have only two possible outcomes: success and a relatively high return, or failure with no return whatsoever. Suppose further that there are two types of banks that invest in assets with different payoff distributions but appear identical to outside observers. Type-A banks invest in low-risk projects, and type-B banks invest in high-risk projects. The probability that a type-A bank's project will succeed, which we will denote p_A , is higher than p_B , the corresponding probability that a type-B bank's project will succeed, but the return on a successful type-B project is larger than the return on a successful type-A project. Assuming that banks would prefer to finance their investments with deposits instead of equity capital, CGT propose that regulators offer banks a choice between two distinct deposit insurance contracts: one with a low insurance premium (per dollar of deposits) and a high capital requirement and one with a high insurance premium and a low capital requirement. This sort of scheme can be incentive compatible—that is, type-A banks voluntarily choose the low premium-high capital requirement combination, and type-B banks voluntarily choose the opposite combination. Because this sort of self-selection is

predictable, the regulator can infer each bank's private information (its type of assets) from the nature of the contract it chooses.

The logic behind this result goes roughly as follows. Each type of bank wants a low insurance premium. To obtain a lower premium, however, a bank must maintain more equity capital. Because a bank that becomes insolvent loses its capital, high capital requirements are more onerous to banks whose assets are relatively risky—that is, type-B banks. Thus the low premium-high capital requirement combination is more attractive to type-A banks than to type-B banks, and vice versa. Each type of bank selects the combination it prefers, and its choice tacitly reveals its private information. Because the deposit insurer/regulator knows the combination each type of bank will select, it can set the premiums so that deposit insurance is *fairly priced*, that is, so that each bank is charged a premium that covers the average loss a bank of its type will impose on the insurance fund.

A key observation made by CGT is that the preceding scheme for eliciting information will work only if banks earn rents (economic profits) from issuing deposits. These rents cause banks to prefer deposit finance to equity finance—a preference that is crucial to the success of this scheme for revealing information. Where do these rents come from? CGT present a variety of arguments that suggest that such rents can exist only if barriers to entry into banking sustain oligopolistic levels of profits for banks. Thus incentive-compatible, risk-sensitive deposit insurance pricing seems unattainable in a completely deregulated, perfectly competitive banking system unless the government is willing to provide subsidies to banks.

Moral Hazard and Deposit Insurance Pricing

Ever since Merton's (1977) recognition that deposit insurance is equivalent to a common put stock option, it has been repeatedly emphasized that deposit insurance creates potentially powerful incentives for banks to pursue excessive risk.³ This incentive to exploit the insurer is referred to as *moral hazard*. CGT show, however, that moral hazard can be eliminated if the value of a bank's charter—the present value of its expected future profits—is sufficiently high.

³By increased risk, I mean not only increased credit risk, but also possibly greater liquidity and interest rate risks.

In this case a bank may not wish to exploit the deposit insurer by maximizing risk; doing so would also maximize the probability that the bank would become insolvent, and insolvency would lead to closure and loss of the valuable charter.⁴ Banks with valuable charters would then face high bankruptcy costs associated with risk-taking, and these costs would counteract their tendency to take measures that would increase the market value of their deposit insurance put option. CGT observe that if banks have sufficiently valuable charters, regulators can optimally control moral hazard by adjusting the probability that a bank in financial distress will be closed.

Under what circumstances can banks be expected to have valuable charters? Once again, if entry barriers are high enough to make banking a profitable business, we can expect bank charters to be valuable enough to ameliorate moral hazard. CGT therefore conclude that, absent government subsidies, neither the private-information nor the moral-hazard problems associated with deposit insurance can be resolved effectively in a perfectly competitive banking system. With the ever-heightening focus on increasing competition in banking, the prospect of overcoming these two problems in implementing an effective deposit insurance scheme seems remote.

OTHER IMPLEMENTATION PROBLEMS

Thus far I have discussed pricing and monitoring (auditing) problems associated with deposit insurance. The problems don't end there, however. Even when it is fairly priced, deposit insurance may create a surplus for the banking system because it provides superior risk sharing or eliminates the possibility of bank runs.⁵ The government's recognition of this surplus can lead it to demand that banks behave in ways consistent with the attainment of its social and economic goals. Some suggest that this situation may explain the proliferation of consumer protection and welfare legislation such as the Community Reinvestment Act, the Bank Secrecy Act, and the Real Estate Procedures Settlement Act.⁶ Thus deposit insurance has the potential to ex-

pand the *scope* of regulation to cover a wide range of activities that have little to do with the safety-net aspects of deposit insurance *per se*. Moreover, safety-net concerns—attempts to limit moral hazard—related distortions—can induce regulators to restrict banking activities. This can interfere with the exploitation of natural economies of scale and scope, as Glass-Steagall restrictions have allegedly done in the United States.

In addition to these difficulties, deposit insurance may encourage distortionary bank closure and liquidation practices conducted by self-interested regulators who wish to enhance their own reputations.⁷ Under deposit insurance, regulators have the task both of monitoring banks' asset choices and of determining when distressed banks should be closed. When a bank is revealed to be in financial distress, the bank's regulators come under suspicion for laxity or inefficiency in monitoring its asset choices—a suspicion that damages their reputation as capable monitors. This gives regulators an incentive to suppress the information that a bank is in trouble. Suppressing this information often results in delayed closing of a bank that, from a social-efficiency standpoint, should have been shut down sooner. Because the bank whose closing is delayed is likely to have low or even negative net worth, these delays can be very damaging: low-net-worth banks have a well-known propensity to pursue excessive risk.

ALTERNATIVES TO THE PRESENT SYSTEM

It appears that deposit insurance leads to a variety of problems that do not have easy solutions. Many alternatives to insurance have been proposed. Two of the most prominent are the elimination of deposit insurance and the creation of two distinct classes of banks. I will discuss each of these alternatives briefly.

The contemporary rationale for deposit insurance is that it eliminates bank runs. This rationale is based on the Diamond-Dybvig model of banking and liquidity.⁸ However, bank runs can occur in the Diamond-Dybvig framework because a sequential service constraint (SSC) is as-

⁴Keeley (1990) provides empirical support for the hypothesis that a higher charter value induces a bank to take lower risk.

⁵See Chan, Greenbaum and Thakor (1992), who suggest that the government may be able to provide risk sharing that the private sector cannot. See also Diamond and Dybvig (1983).

⁶See Greenbaum and Thakor (forthcoming).

⁷See Boot and Thakor (forthcoming) and Kane (1990).

⁸See Diamond and Dybvig (1983).

sociated with demand deposit contracts. This has led some analysts to suggest that it may be efficient to replace demand deposits with equity claims against diversified portfolios of low-risk assets.⁹ Because these claims would not be bound by the SSC, they would be immune to runs, and the need for deposit insurance would be eliminated. Clearly, it would not be difficult to endow such claims with all the transactions attributes of a standard demand deposit contract. I believe this is a simple and compelling solution that should be considered seriously.

One possible criticism of this alternative is that equity claims carry with them the risk of market price changes, whereas insured demand deposit contracts are safe claims to fixed nominal (money) amounts. There may be some investors who would like to have access to risk-free nominal claims. A simple way to meet this need would be to create two types of banks. One type would be a narrow bank funded with federally-insured deposits and permitted to invest these deposits only in a very limited set of

assets, such as Treasury bills and bankers' acceptances. The other type of bank would be a universal bank funded by uninsured liabilities but virtually unrestricted in its permissible investments. A universal bank could provide insurance and engage in securities underwriting and investment banking. This system would accommodate bankers' desire to be allowed to expand the scope of their activities but would also avoid the pitfalls of expanding the deposit insurance safety net.

CONCLUSION

In this essay, I have briefly examined some key issues related to deposit insurance. I am pessimistic about the possibility of tinkering with the existing deposit insurance system to improve it. Real progress is likely only if fundamental reforms are undertaken, perhaps along the lines of those suggested in the last section.

⁹See, for example, Gorton and Penacchi (1991).