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by

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Abstract

This paper examines alternative approaches to the reform of deposit insurance in the U.S. where various incentive problems have led to escalating failures with unprecedented losses being sustained by the taxpayer. Two feasible approaches are identified, indirect and direct. The indirect approach relies on price and non-price incentives to elicit desired bank behavior. Informational demands of this approach are formidable and when not met the approach naturally turns to a reliance on discretionary and ambiguous regulation to control untoward incentives. The reliance on discretion and ambiguity increases sovereign risk and elevates the cost of human and financial capital, directly undermining the competitiveness of the banking industry.

The alternative direct approach to regulation requires that insured deposits be secured with duration-matched "safe" assets, where safe takes on a variety of possible interpretations ranging from risk-free to "tradeable" or "investment grade." The direct approach sharply reduces the need for regulation, discretionary or otherwise, in the insured part of the bank, and virtually eliminates the need for regulation in uninsured parts of the bank. Other features of the direct approach to regulation are examined in detail.

DISCRETION IN THE REGULATION OF U.S. BANKING

I. Introduction

Bank failures and attendant taxpayer losses have reached alarming levels in the U.S. With the near exhaustion of the FDIC's Bank Insurance Fund, a sense of urgency has gripped the banking community and the government too. Many believe that the current regulatory structure, including the deposit insurance system, is obsolete. This has prompted a plethora of reform proposals.

Most agree that the deposit insurance system encourages asset risk and financial leverage among depository institutions (DIs). Boot and Greenbaum (1992) explain that this inclination toward risk was restrained for almost a half century by economic rents earned in banking. However, the erosion of these rents in recent decades, traceable to a decade-long inflation, financial innovation, and technological advances, exposed the latent design flaws of deposit insurance.[1]

As mandated by the FIRREA legislation of 1989, the U.S. Treasury published Modernizing The Financial System: Recommendations for Safer, More Competitive Banks (1991), a proposal for reform that could become the basis for the most fundamental banking legislation since the 1930s. To be sure, the Treasury's proposal is but one of many. The Congressional Budget Office (1990) summarized a non-exhaustive list of 22 competing recent reform proposals. Most of these can be classified according to their reliance on *indirect* or *direct* forms of regulation. Indirect regulation does *not* explicitly prescribe permissible bank activities, but rather establishes

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[1] See also Economic Report of the President, 1991, chapter 5, and Y. S. Chan, S. I. Greenbaum and A. V. Thakor (1992).

incremental price and non-price incentives designed to elicit socially desired choices by DIs. Direct regulation, on the other hand, explicitly restricts activities.

Indirect regulation seeks to influence a DI's choices by altering prices *just enough* to prompt the desired behavior. Direct controls, on the other hand, categorically proscribe undesirable behavior. To illustrate, the indirect approach would sensitize deposit insurance premia to risk in order to encourage low-risk strategies, whereas the direct approach would prohibit high-risk strategies funded with insured deposits.

Existing bank regulatory practices incorporate both direct and indirect elements. Glass-Steagall's separation of investment and commercial banking, branching and insurance restrictions and bank holding company limitations illustrate direct restrictions, whereas risk-based capital requirements, risk-based examination and supervision, and risk-based deposit insurance premia illustrate indirect controls.[2] The former approach "brute-forces" the desired behavior. The latter seeks the desired outcome by pricing which would provide a superior outcome, provided the regulator is sufficiently informed to price correctly. However, it could be costly and distortive if informational deficiencies loom large enough. In addition, indirect regulation typically provides regulators with considerable discretion in order to address pricing errors, while direct restrictions would eliminate the need for regulator

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[2] The Glass-Steagall Act, officially known as the Banking Act of 1933, consisted of three elements. First, it created the Federal Deposit Insurance Corporation (FDIC). Second, it restricted the operations of insured banks. The restrictions included limitations on interest payments on deposits and a strict separation between investment and commercial banks that prohibited commercial banks from originating, trading or holding securities other than those of the U.S. Government or general obligations of state and local governments. Third, together with the McFadden-Pepper Act of 1927, Glass-Steagall erected barriers to entry that restricted competition among banks.

discretion.

The existing regulatory design clearly indicates that the two approaches are not mutually exclusive. In this paper, however, we will focus on deposit insurance where the choice is between trying to price the DIs' choice of asset risk, or some form of the narrow bank wherein the DI is compelled to hold "safe" assets dollar-for-dollar as collateral for insured deposits. Hence, here the choice reduces to either/or.

The Treasury's reform proposal relies for the most part on the indirect approach. It would allow adequately capitalized DIs to branch nationally and to engage in investment banking. In addition, non-financial companies would be permitted to own banks, and vice versa, subject to restrictions that attempt to isolate the DI's depository function. Marketing and underwriting of insurance also would be permitted to adequately capitalized bank holding companies. All of these changes would increase reliance on indirect regulation. The Treasury further proposes to elevate the role of bank capital and mandate early intervention in cases of non-compliance. More specifically, the Treasury would calibrate deposit insurance premia on the basis of bank capital, and also would vary bank empowerments and the frequency of examinations on the basis of the DI's capital. A similar proposal is that of the Shadow Financial Regulatory Committee (1989).

By contrast, the direct approach would restrict the asset choices of DIs offering insured deposits. Narrow bank is the name recently attached to this proposal (see Litan (1987)). The idea goes back at least to the late 1930s when proposed as "100 percent reserve banking" by Henry Simons (1948). Many variants have been articulated. The narrowest narrow bank proposal would restrict banks to hold risk-free, duration-matched assets with the proceeds of

insured deposits. The exposure of the deposit insurer would be trivialized, and activities funded with uninsured funds would be largely unregulated.

The remainder of this paper is in three sections. Section II discusses the objectives of regulatory reform. Section III describes the Treasury's proposal as the prime example of the indirect approach. In Section IV, we address alternative reform proposals. We focus on the discretionary nature of the indirect approach and argue that regulatory discretion introduces a form of sovereign risk that undermines DI competitiveness and increases funding costs. In the concluding section, we argue that the non-discretionary nature of direct regulation offers greater promise of achieving the widely accepted objectives of reform, most especially the enhanced competitiveness of the banking industry.

II. Goals of Reform

The Treasury's (1991) stated goals are threefold: 1) to promote the global competitiveness of American banking institutions, 2) to reduce taxpayers' exposure deriving from deposit insurance, and 3) to promote the safety and soundness of American banking institutions. These goals are unexceptionable albeit more ambitious than those that motivated the creation of deposit insurance in the 1930s. Then the goals were the protection of small depositors and the elimination of bank failures.

The earlier goals were achieved with a program that increased taxpayer exposure under the deposit insurance system as part of a complex three-party contract between taxpayers, depositors, and bank owners. Depositors accepted a deposit interest rate concession in return for a governmental deposit guarantee, bank owners accepted restrictions on their activities and

regulatory intrusion in exchange for a deposit-linked subsidy and protection from potential competitors, while the taxpayer accepted a vague contingent liability in exchange for promised safety and soundness of the financial system. The taxpayers' contingent liability has become distressingly concrete in recent years with the collapse of the thrift industry, escalating bank failures, and the dissipation of the deposit insurance reserves. This denouement has distilled the felt urgency for reform.

But fixing the deposit insurance system presupposes a correct diagnosis as well as an understanding of the alternatives. The Treasury (1991) characterizes the problem in four dimensions:

1) Deposit insurance is over-extended;

2) The regulatory system is too fragmented;

3) DIs have squandered their financial strength and competitive position, both domestically and internationally; and

4) The deposit insurance fund has become under-capitalized.

The over-extension of deposit insurance seems undeniable. Since introduced in the 1930s, deposit insurance coverage has been expanded by a factor of four in real terms, and the fraction of bank deposits explicitly covered by insurance has risen from less than half to more than three-quarters. The financial markets have spawned a plethora of deposit substitutes while credit cards and other consumer credit vehicles provide unheard of liquidity. Clearly, deposit insurance is more readily available today whereas the need to protect small depositors is less compelling. Neither of these points would be noteworthy were it not for monumental taxpayer losses, both prospective and extant. Hence, the Treasury's desire to reduce taxpayer exposure.

A second (original) goal of deposit insurance was to eliminate bank failures. Recall that the decade from 1919 to 1929 saw more than six thousand mostly rural banks fail. Here too we need to draw a distinction between the goals of the 1930s and the Treasury's today. Concern about bank failures finds expression in the contemporary goal of safety and soundness. However, this goal was articulated earlier in the context of a commitment to a fragmented banking structure dominated by independent local financial institutions. This bit of populist Americana was the backdrop for the safety and soundness debate of the 1930s. To all outward appearances, such contextual considerations have become contemporary detritus. Indeed, the Treasury's proposal would establish powerful incentives to concentrate the banking industry.

The inclination toward concentration is not articulated as a goal, nor is prevailing banking structure described as a problem *per se*. However, constraints on the geographic and functional spread of banks, including the separation of commerce and finance, are all seen as hindrances to the competitiveness of American financial institutions. Indeed, it is growing global competition among banks, and the troubling loss of American prominence, measured in asset size, market capitalization or credit ratings, that has elevated competitiveness to the status of a desideratum. This concern is not without substance, since the decline of American banking reflects much misguided public regulation.

The international competitiveness of the financial services industry is a concern that should not be viewed in the narrow context of cash asset or capital requirements. Rather, the appropriate concern is *sovereign risk*. Because of informational deficiencies that result in regulatory pricing

errors, indirect regulation necessitates regulatory discretion and ambiguity that elevates investors' systematic risk. Regulatory pricing errors prompt untoward bank reactions that the regulator must address, and the regulator's response cannot be narrowly delineated *ex ante*. Hence the inevitable discretion.

In addition, regulatory ambiguity may be desirable because it can directly ameliorate the moral hazard emanating from erroneous regulatory pricing (see Boot-Thakor (1992)). Thus, the high cost of capital, both human and financial, of American DIs arguably has more to do with this sovereign risk than with capital or reserve requirements, or other well-defined restrictions on DI activities. In the U.S., regulatory discretion has given rise to fundamental and unpredictable changes in accounting practices, government attempts to renegotiate Texas thrift deals made at arm's length during late 1988, an escalation and growing uncertainty about deposit insurance fees, and exploding professional liability for directors, managers, lawyers and auditors owing to government-initiated or -inspired lawsuits. Erratic and politicized regulatory behavior elevates banks' capital cost, impairing their ability to compete. This is the most compelling argument for reducing regulatory discretion.

A counter-argument is that regulator discretion creates ambiguity that can ameliorate moral hazards as in the case of the discount window where access uncertainty may lead the DI to pursue low-risk asset strategies. But any such benefits enjoyed by the regulator must be weighed against the DIs consequent increased cost of capital which the public regulator typically fails to internalize. Thus regulatory ambiguity creates a potentially costly externality that enervates the private sector.

Contrasting the Treasury's more expansive goals of deposit insurance reform with those of their predecessors makes it clear that a return to the *status quo ante* is implausible. The founders of deposit insurance achieved their narrower goals by suppressing competition and promoting collusive deposit pricing. By adding competitiveness to the desiderata, such policies are proscribed. The broadened objectives of reform make previously unnecessary tradeoffs inescapable.

III. Remediation

The Treasury's reform proposals follow almost immediately from its diagnosis of the problem. Thus, the over-extension of deposit insurance is addressed by eliminating coverage for brokered deposits and pass-throughs, and by limiting individual coverage to two $100,000 accounts per person per bank. The fragmented regulatory structure is addressed by a reshuffling powers among the federal bank regulators and by restricting the powers of state-chartered institutions. The competitiveness and financial strength of DIs would be stimulated by eliminating geographic restrictions on branch banking, by dismantling Glass-Steagall restrictions on the securities and investment banking activities, and by permitting non-financial companies to own banks and vice versa. Sale and underwriting of insurance also would be permitted to adequately capitalized bank holding companies.

The Treasury's proposal also addresses the incentive problem of deposit insurance with two reforms: i) expanded supervision and ii) an enhanced role for bank capital (supervisory intrusion, bank empowerments and deposit insurance premia all would be indexed to the bank's capital).

Most academics agree that the central problem of deposit insurance is

the moral hazard that encourages asset risk and leverage (see Barth, Brumbaugh and Litan (1990), Benveniste, Boyd and Greenbaum (1989), Boot and Greenbaum (1992), Kane (1989, 1990), Merton (1977, 1978), Sharpe (1986), and White (1991), for examples). Regulatory restrictions on banks' leverage and asset choice and periodic examinations are designed to control the inclination of banks to profit by exposing the insurer to increased risks.[3] But these restrictions have proved too easy to circumvent; consider the episodes with LDC debt, commercial real estate and LBO financing.

The interesting question about deposit insurance is *not* why losses have escalated in recent years, but rather why they remained so low for so long. What was it that held the moral hazard problem in check? Boot and Greenbaum (1992) explain how economic rents can weaken the banks' incentives for risk taking. The erosion of economic rents in the past decade may then explain the banks' diminished aversion to risk taking (see Keeley (1990) for empirical support).

The loss of economic rents has a variety of explanations, among them rising costs of deposits and increased competition for assets. Deposit substitutes and market volatility also reduced the duration of deposits and forced banks to substitute away from fixed-rate term loans, in favor of loans with interest rates indexed to the prime rate, the commercial paper rate or LIBOR. This change denied bank customers access to the longer duration credit that hedged their own interest rate risk. As a consequence, those bank customers with access migrated to the capital markets, leaving the banks with

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[3] Boot and Greenbaum (1992) argue that regulators have failed to appropriately take into account observable differences in risk across institutions. This has aggravated the moral hazard that exploits unobservable differences in risk.

a diminished and weakened customer pool. This adverse selection was aggravated in that the remaining customers were further weakened as a result of being denied customary instruments for managing their own interest rate risk. Thus the elevation of deposit interest rates together with the shortening of deposit duration altered both the risk of DIs' assets along with their willingness to accept the increased risk.

Banking reform needs to realign the divergent incentives of the banks and the deposit insurer. The Treasury expresses the incentive problem in terms of over-extension of deposit insurance, weakened financial strength of DIs, and fragmentation of regulation, but these are merely symptoms. Clearly, reduced deposit insurance coverage could delimit the insurer's exposure, and could move currently insured depositors into an uninsured status where their heightened incentive to monitor DIs might reduce the insurer's exposure. However, the reduced coverage must be considered in light of too-big-to-fail (TBTF) policies and the proposal to let banks expand nationwide. These changes will result in a structural implosion that will almost certainly concentrate deposits in the handful of banks thought to be eligible for TBTF treatment. The result will be both a more concentrated banking system, and one in which an even greater fraction of deposits may be effectively insured.

However, the Treasury Plan offers two other proposals that could provide some amelioration of the incentive problem. These include an expanded role for bank capital and increased supervision. Let us consider each briefly. The Treasury proposes to calibrate deposit insurance premia on the basis of bank capital, and also to index bank empowerments and frequency of examinations on the basis of capital. First, note that the measurement of bank capital is imprecise. Many academics would address this problem by

replacing GAAP accounting with current value accounting (see White (1991) for example). This suggestion is, however, deceptively simple. Banks exist for the purpose of producing liquidity. This means holding infrequently traded assets. For these, current values are ill-defined. This should not be read as a defense of GAAP accounting, nor as a rejection of capital-based regulation. We merely seek to emphasize that bank capital is an inherently imprecise construct that lends itself, therefore, to various kinds of abuse. For additional skepticism regarding current-value accounting, see O'Hara (1992).

The Treasury would adjust deposit insurance premia, currently about 23 basis points, according to the DI's GAAP capital. Proposals for risk-sensitive premia would have the best-capitalized DIs pay approximately 10 basis points less than the least well capitalized but still solvent DIs. However, recent spreads between junk bonds and Treasury securities of approximately equivalent duration have been hundreds of basis points. Could capital-adjusted spreads of the magnitudes suggested have the intended deterrent effects? The linking of bank empowerments evokes similar skepticism on grounds of practicability.

If one doubts the potential for capital-related deposit insurance premia and empowerments, the inference is that the Treasury's principal weapon for controlling moral hazard will be increased supervision. However, it strains credulity to think of improved examinations and supervision as the centerpiece for a program to correct the deposit insurance incentive problem. Traditionally, bank and thrift examinations have focused narrowly on the performance, reserving and writing down of assets. Examinations have gradually adapted to the vast growth of trading, interest rate, exchange rate

and off-balance sheet risks. But in the nature of the process, examiners are forced to play informational catch-up. Examination and supervision is therefore limited in what it can achieve, and it tends to deteriorate in situations where flux is rapid. These are precisely the situations where supervision is most critical.

In any case, beyond some point the costs of regulatory monitoring can be expected to exceed the marginal benefits, and it is difficult to believe we are far from this apogee. Examination restrains excesses that moral hazard incentives motivate. The restraining influence is disjoint, often inadequately informed, and rarely as highly motivated as the counterforce. This brings us to the modest conclusion that reliance on restraint rather than on the underlying incentive is misguided.

Moreover, the total cost of monitoring transcends that of sustaining the examiner staff, even including the disruption at banks occasioned by the presence of examiners. Examination is inherently a discretionary form of regulation and as such adds systematic risk to banking. We do not question the merit of nationwide banking and branching, new securities, mutual funds and insurance powers. To the contrary, these proposals would foster a more rational structure of the financial services industry and promote the desired competitiveness of American banking institutions. However, absent a cure for the deposit insurance incentive problem, the liberalization of empowerments can be expected to aggravate the moral hazard problem.

IV. Alternatives to the Treasury's Program

The contemporary objectives of reform are more ambitious in that competitiveness is now an explicit goal. This, together with the dissipation

of economic rents that has aggravated moral hazard, heightens the need for reform. Virtually all of the extant proposals for deposit insurance reform accept the Treasury's goals. Moreover, in seeking to promote these goals each is forced to address the underlying issues, including the moral hazard problem, TBTF, and the design of regulation and supervision, the last subsuming bank empowerments.

IV(A). Moral Hazard

If deposit insurance premia could be indexed to the bank's riskiness, the moral hazard problem could be ameliorated. However, measurement problems raise the specter of practicability. Indeed, this measurement/pricing problem has led some (see U.S. Senate Bill S. 261, Dixon (1991), Ely (1990) and U.S. Treasury (1991)) to propose engaging the private sector to assist in establishing risk-rated deposit insurance prices. In this spirit, some recommend that 5 to 10 percent of exposures be protected by private insurers at competitively established prices. Such market-tested prices could then be applied to the remainder of the government's deposit insurance liability.

Engaging the private sector could work, but it raises a whole new set of issues. The governmental insurer would need to supervise and possibly regulate the private insurers. Quality standards would need to be maintained if the governmental insurer is not to be exposed to a new moral hazard. Private insurers with little capital will be the most aggressive bidders since they have little to lose. Thus, the private-insurer proposal may only displace the initial moral hazard problem.

Enhanced market discipline is another widely suggested line of attack. Many argue that even under the best of circumstances public regulation and

supervision is likely to be inadequate in restraining the moral hazard of deposit insurance, and that the private sector should be engaged as a supplementary monitor. At present, depositors have little incentive to monitor the banks, and even uninsured depositors and other debt owners are discouraged by the knowledge that TBTF policies are likely to protect their interests. The previously mentioned engagement of private insurance in a limited role could improve monitoring. Likewise, the Treasury's proposal to scale back deposit insurance coverage would enhance depositors' incentives to monitor. Others have proposed that banks be compelled to finance themselves partly with subordinated debt. High interest rates on these claims would warn regulators. Indeed, the public display of difficulty in selling the subordinated claims even disciplines the regulator in that forbearance is more clearly visible.

These proposals move the system in the right direction. Uninsured bond owners as well as other uninsured claimants will share an incentive to monitor and impose some market discipline. However, if deposit insurance continues to be widely available, monitoring efforts of uninsured creditors and depositors are likely to be negligible.

Others have suggested improved *non*-market discipline. In this realm, early intervention in deteriorating situations, and even the "taking" of institutions *before* insolvency have been suggested by Treasury and others.[4] These suggestions are often combined with calls for improved accounting and in particular with the implementation of current value accounting. The argument is alluringly simple. If capital is accurately measured and intervention is

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[4] The FDIC Improvement Act of 1991 mandates conservatorships for banks with GAAP capital of less than two percent.

timely, there is no need ever for the insurer to sustain losses. There are two points here. First, even if all banks were on-line to the regulator and all asset and liability prices were continuously updated, this would not alter the fact that the prices of most bank assets and liabilities are only infrequently observed and are therefore ill-defined. Thus, precipitous price changes (jumps) from one observation to the next will be unavoidable. This is inherent in the liquidity production of financial intermediaries.

The second point relates to forbearance, the inclination of regulators to permit weakly capitalized and insolvent institutions to continue in operation with the result that avoidable losses are imposed on the deposit insurer. This widely observed proclivity results from balancing the immediate costs of terminal sanctions against longer-run costs of procrastination. The long-run costs tend to be widely diffused, whereas the short-run costs are borne in part by the regulator. This is a "time consistency" problem. Again, the issue is *regulatory discretion*. The debate over rules versus discretion has a long history and it would be naive to suggest that simple rules could solve these inherently subtle time-consistency problems. In any case, increased monitoring and calibrated sanctions, including expeditious intervention in cases of non-compliance with capital standards, are hallmarks of the Treasury's proposal.

A third approach to the moral hazard problem would restrict the asset choices of banks offering insured deposits. If banks are limited to holding "safe" (and duration-matched) assets with the proceeds of insured deposits, there would be little risk of loss. This reform has appealed to generations of economists, but few outside the academic community. Specifically, banks would be prohibited from deploying government-insured deposits to fund risky

assets. The narrow bank has been criticized for divorcing the credit granting from the deposit creation and payments functions of banks (see Benston (1992)). Allegedly, informational synergies link the two. If such benefits exist, there need be no sacrifice if the narrow bank and the uninsured bank co-exist under the same corporate roof and the unnecessarily confining narrowest versions of the narrow bank are avoided. Various less restrictive narrow bank variants have been proposed. For example, Benston, et al. (1989) advise that the assets funded by insured deposits be limited to those that are "tradeable." These presumably would be continuously valued and this would eliminate the problem of defining capital. Banks would have well-defined capital requirements and sanctions would be calibrated to restrict regulator discretion.

Since the definition of tradeability is problematic, we recommend that banks be permitted to hold only duration-matched investment-grade assets as collateral against insured deposits. These would of course be tradeable, on plausible definitions of the term, and would be subject to losses owing to default or downgrading. Potential losses would be smaller than with a "tradeability" criterion, but capital would still be necessary, along with sanctions for non-compliance. Any drop below, say, a three percent capital requirement, would be viewed as compromising the shareholders' ownership rights. This would justify shifting control to the other residual claimant, the insurer. The shift in control would be effected by transferring board of directors' appointments to the insurer on an explicitly scheduled basis. For example, capital of less than three but greater than two percent would shift 1/3 of board appointments to the insurer. Capital between one and two percent would shift 2/3 of board appointments to the insurer. Finer gradations are

possible, but probably unnecessary.

Our proposal would establish a well-defined lower bound on the quality of assets that can be held as collateral against *insured* deposits. The modified narrow bank (MNB) recommended here will undoubtedly motivate the securitization of assets for the MNB to hold. This will necessitate credit enhancement of whole loans originated in that part of the bank funded by uninsured liabilities. Thus the capital protecting the insurer includes not only that held to satisfy the MNB minimum requirement, but also all of the credit enhancement provided to achieve an investment grade rating for the securitized claims. Under this system, the bank continues to perform all of its present functions, but will be stimulated to expand its securitization activities.

Under the MNB system, the insured bank would continue to serve the needs of the private credit market and the capital protecting the insurer would be determined endogenously, rather than being arbitrarily prescribed by government. The capital protecting the insurer would be the sum of the initially prescribed minimum plus the excess collateral and/or guarantees necessary to bring the MNB's assets to investment grade. Moreover, the synergies between deposit-taking and credit extension would remain undisturbed.

A valid concern about such a system would be the potential for subversion of the rating agencies, and the insurer would no doubt need to monitor these critically important participants. Assuming that the integrity of the rating process can be sustained at reasonable cost, this system offers the formidable advantages of a return to very low insurance premia, minimizing the role of discretionary regulation, virtually complete deregulation of the

uninsured part of the DI, while continuing to permit the use of insured deposits in the funding of private credits. Taxpayers' exposure would be reduced very considerably, but not eliminated and the cause of safety and soundness in banking would be advanced. Concern abut the payments system could be alleviated by restricting payments to transfer of insured deposits. Even absent formal requirements, one would expect the insured deposit to emerge naturally as the coin of the realm.

IV(B). TBTF and Time Consistency

TBTF is not inherently a banking problem. Rather it represents an expression of the government's reserved right to intervene when *any* dislocation is deemed sufficiently ominous. When applied to banking, the TBTF doctrine distorts the structure of the banking industry by providing advantages to the largest DIs. It also introduces an element of regulatory discretion and therefore elevates sovereign risk. All of these are seen as detrimental entailments of TBTF.

TBTF is yet another time-consistency problem. The regulator typically recognizes the untoward incentive effects of procrastination, but these considerations are often overwhelmed by the immediate costs of a large bank failure, both to the self-interested regulator and to her clientele. As long as regulators retain discretion, TBTF will remain a problem, and there are only two ways to go. Either reduce the scope of regulator discretion or weaken the conditions giving rise to TBTF. The MNB does both. Failures of insured DIs will become less numerous, and the choice among sanctions for non-compliance involves no regulator discretion in the normal course of events. The MNB would reduce the TBTF problem because intervention would not tie back

to either insured deposits or to continuity of the payments system.

The expanded empowerments proposed by the Treasury are important for the competitiveness of America's banks. However, the attendant tendency toward concentration makes it critical to address TBTF head on. The MNB proposal does this in a credible way.

IV(C). Design of Regulation/Supervision

The question is not whether to regulate/supervise, but rather how to guarantee deposits in light of the concomitant need to regulate/supervise. Moreover, given the design of the guarantee system, how are the inevitable moral hazards to be controlled at minimal *total* costs to the community. An appealing way to minimize the costs of regulation/supervision is to minimize the need, but this means minimizing the span of the safety net. Since it is unrealistic to expect that even the minimalist safety-net will entail zero government exposure, it is likewise unrealistic to believe that regulation/supervision can disappear, even under a sensibly structured financial system.

The question of regulatory design is therefore unavoidable. Here it is vital to distinguish between discretionary and non-discretionary aspects of regulation. The latter represent more or less well-defined rules such as a cash-asset reserve requirement, loans-to-one-borrower restrictions and deposit insurance premia schedules. To be sure, even well-defined rules can have ill-defined sanctions. Nevertheless, there is a distinction to be drawn between a system that stresses rules and penalties that vary only under compelling circumstances, and a system that stresses discretion, judgment in implementation, and ambiguity as an instrument of regulation.

As examples of regulatory ambiguity or discretion, consider the following:

1) the 1970 Douglas Amendment standards for bank holding company acquisitions;

2) deposit insurance coverage under current practice;

3) standards for access to the discount window;

4) standards for regulator intervention in cases of distressed institutions; and

5) accounting standards in the banking and thrift industries.

Gerald Corrigan (1990), among others, has defended "constructive ambiguity" as a weapon against the numerous moral hazards arising from the safety net. Allen and Gale (1990), Boot and Thakor (1992) and Boot, Greenbaum and Thakor (1992) demonstrate that ambiguity can serve this purpose. However, ambiguity has its costs as well, and these are often not internalized by the regulator.

As discretionary elements of regulation expand, investor uncertainty grows too, and this uncertainty is undiversifiable within the regulated part of the financial system, and perhaps more broadly as well. Since the probability of regulatory intervention can be difficult to estimate, and further since the penalties can be large, the effect on cost of capital can be dramatic. The discretionary design of U.S. bank regulation reduces the capital markets' receptivity to American banks' securities. This sovereign risk impedes American banks' ability to compete. The implied remedy is to reduce the need for regulation by scaling back the safety net insofar as this is practical. Further, to the extent that regulation is necessary, it should be as predictable as possible. Certainty should be incorporated into both the

rules of behavior and the sanctions for non-compliance.[5]

Regulatory certainty should stabilize the business environment. An inherent contradiction plagues public sector use of ambiguity to solve moral hazard problems: the safety net was instituted to promote environmental stability and predictability that the constructive ambiguity subverts.

V. Conclusion

U.S. banking is characterized by a growing conflict, aggravated by TBTF considerations, between the governmental deposit insurer and insured banks. Symptoms include taxpayer losses owing to bank failures and declining competitiveness of American banks. Bank empowerments are unduly restrictive, but it is difficult to recommend liberalization as long as regulation relies on discretion and ambiguity to correct the incentive problems associated with deposit insurance.

The conflict is approaching a severity where fundamental reform may be possible. In any case, we see four possible avenues of reform: *status-quo ante*, *laissez-faire*, *indirect asset restriction* and *direct asset restriction*.

A return to the past appeals to the nostalgic and those who benefitted from markets fragmented along functional and spatial lines. However, even if desirable, it is difficult to imagine a reinstatement of the earlier impediments to competition, or a public willingness to subsidize DIs to the extent necessary. Thus the *status-quo ante* does not seem to be among the feasible reform proposals.

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[5] Not only is the cost of ambiguity vague and diffuse, and therefore too easy to underestimate, or even ignore, but in addition, regulators are self-interested in promoting discretionary designs since these expand the scope of their own enterprises.

The *laissez faire* approach to reform represents the opposite extreme of the policy continuum. Its advocates (see Meigs and Goodman, 1990) propose the elimination of governmental deposit insurance. This proposal has merit since safe assets are more readily available today, and the lender of last resort could successfully address the liquidity problems of banks. However, counter-arguments will surely prevail. The efficiency of the discount window remains shrouded in skepticism, if only because of past ineptitude. Deposit insurance may also alleviate concerns about the payments system. In any case, since so many view deposit insurance as an entitlement, its elimination probably is politically infeasible.

The remaining two alternatives retain deposit insurance, but seek to address the underlying moral hazard problems, along with TBTF and those of regulation/supervision. The former approach narrowly restricts the assets intermediaries may finance with insured deposits. Because asset choice is circumscribed, the need for incentive-based regulation/supervision is reduced, as is the scope for discretionary regulation. Indeed, regulation can be considerably simplified under such a system. The narrow bank, in its numerous variants, fall into this category. The more restrictive, such as Simons' (1948) and Litan's (1987) provide a complete separation of the credit- and deposit-creation of DIs, but less extreme variants, such as Benston et al. (1989) and the MNB recommended here permit banks to finance higher quality private credits with insured deposits while retaining much of the certitude, both as to asset risk and regulatory practices.

According to these proposals, asset restrictions are relaxed to permit either "tradeable" or "investment grade" assets to be financed with insured deposits. Whatever synergies derive from linking private credit creation to

the payments system would be preserved, and a major stimulant to asset securitization would be provided. The latter offers an inexpensive alternative method of achieving asset diversification. Therefore, the incentive for spatial integration and concentration would be weakened. The alternative to direct asset restriction provides banks greater freedom in the use of insured deposits, but relies on more intrusive regulation (hence *indirect* asset restriction) to reconcile the misaligned incentives of the deposit insurer and the insured banks. The majority of reform proposals fall into this category.

Indirect asset restriction relies on more supervision, early intervention, risk-based capital and deposit insurance premia and empowerments, scaled-back insurance coverage, private insurance, current value accounting, and other initiatives to reduce DI risk-taking incentives. Provided that these measures work as intended, it is unnecessary to directly restrict asset choice because DIs are provided with the incentive to choose low-risk strategies, and moreover when DI choices are inappropriate early intervention limits losses to the insurer.

The indirect approach is questionable both as to its effectiveness as well as to its implications for competitiveness. Early intervention, more effective supervision and risk-based capital, deposit insurance premia, and empowerments, all require information regarding the insured's balance sheet and off-balance sheet assets and liabilities of an order and accuracy not currently, or even prospectively, available to the regulator. And if asset values are inherently ill-defined, what of the variances and covariances of their returns distributions? These are also required to assess the risk on which so many other requirements are to be conditioned! There is a

fundamental contradiction in that if these critical data were readily available we likely would have far fewer DIs to be concerned about since their *raison d'etre* is to hold assets with ill-defined values.

It is the formidable and probably unrealistic informational burden of the indirect asset restriction approach that prompts the view that this approach will ultimately deteriorate into one heavily dependent on intrusive and discretionary supervision and ambiguous regulation. Some laud the use of "constructive ambiguity." But, as we have argued, regulator discretion undermines competitiveness. Both human and financial capital are discouraged by "arbitrary and capricious" behavior of regulators. The result is a high cost to the bank interims of both human and financial capital.

The direct approach dominates on every desideratum mentioned by the Treasury. By narrowly restricting the uses of insured deposits, banks are permitted virtually unlimited freedom in their uninsured activities. This should enhance bank competitiveness. In addition, the direct approach practically eliminates the need for discretionary regulation. This should reduce the sovereign risk associated with regulator caprice. Under the MNB proposal, there would be no need to limit insured deposit coverage, and all payments could be insured. This would undoubtedly enhance safety and soundness *vis-à-vis* a system where insurance coverage is arbitrarily limited in amounts, and payments are effected with uninsured as well as insured deposits.

Furthermore, TBTF is complicated by deposit insurance and payments system considerations. The advantage of the direct approach is that it isolates payments and deposit insurance issues. Hence, intervention in the affairs of the uninsured bank can be understood as no more or less legitimate

than intervention in any other industry. The indirect approach, however, tends to mix and suffuse the issues by linking insured and uninsured facets of the banking business, and therefore imparts to the uninsured an undeserved status in TBTF considerations. The safety net is thereby broadened in a way that is both unnecessary and undesirable. By localizing TBTF, the direct asset restriction approach allows for expanded bank empowerments, both functionally and geographically. These expanded empowerments should improve bank competitiveness, but with TBTF unrestricted, as in the Treasury proposal, the disadvantages to all but the very largest institutions make expanded powers widely unacceptable.

Thus on consideration of bank competitiveness, taxpayer exposure, safety and soundness and also on consideration of TBTF, the direct asset restriction approach offers striking advantages in comparison to indirect alternatives. In the realm of banking too, a bit more restraint locally can support greater freedom globally.

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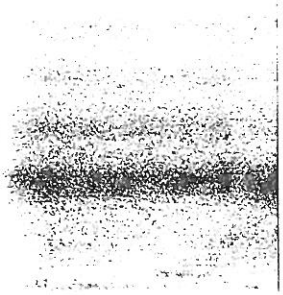
Sammandrag på svenska

Diskretionära åtgärder i det amerikanska bankväsendets reglementering

Här undersöks alternativa ansatser att reformera insättareförsäkringen i Förenta Staterna. Vissa incitamentsproblem har lett till ett ökat antal konkurser, med aldrig förut skådade förluster för skattebetalarna som följd. Två tänkbara tillvägagångssätt skärskådas, ett direkt och ett indirekt. De indirekta medlen förlitar sig på pris- och andra incitament för att stimulera till önskat bankbeteende. Men systemet skulle kräva ofantliga mängder med information och brister det på denna punkt faller det sig naturligt att den indirekta ansatsen övergår i diskretionär och godtycklig reglementering av bankincitament. Men detta leder i sin tur till att den unika risken ökar och samtidigt höjs kostnaderna för både human- och finanskapitalet, vilket direkt underminerar bankväsendets konkurrensförmåga.

Det alternativa tillvägagångssättet innebär direkt reglementering så att försäkrade insättningar uppvägs av "säkra" tillgodohavanden med samma löptid, där "säker" kan ges många olika tolkningar, allt från "riskfri" till något som lätt kan omsättas på en marknad eller har en graderad kreditvärdighet. Det direkta tillvägagångssättet minskar kraftigt behovet av reglementering, både diskretionär och annan sådan i den del av bankens verksamhet som är försäkrad. Behovet näst intill elimineras i den icke försäkrade delen. Övriga egenskaper hos det direkta tillvägagångssättet undersökes i detalj i artikeln.



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