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USING DISASTER PLANNING TO OPTIMIZE EXPENDITURES ON FINANCIAL SAFETY NETS

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ABSTRACT

Using a multiperiod model, this paper offers a benchmark standard for efficient safety-net management. This standard embodies a market-mimicking strategy for identifying, preventing, and resolving bank insolvencies. Around the world, governmental reluctance to acknowledge weaknesses in their crisis-prevention efforts supports an underinvestment in contingent plans for handling financial disaster. The model features the hypothesis that this underinvestment mis-serves taxpayers by increasing the ability of stakeholders in insolvent banks to extract implicit and explicit subsidies when and as the threat of an actual crisis intensifies. *(JEL G2, F3, K2)*

A country's safety net simultaneously protects bank stakeholders from --and exposes taxpayers to-- costs generated by bank fragility. For this reason, most economists agree that, although externalities may complicate the task of safety-net design, safety-net managers should avoid either subsidizing or taxing bank risk taking at the margin.

While all countries have at least an implicit safety net, the number of countries adopting explicit deposit-insurance systems has trended upward in recent years (Demirgüç-Kunt and Sobaci, 2000). Stock-market data indicate that many of these governments have chosen to subsidize their insurance coverages (Laeven, 2000).

Subsidizing deposit insurance is dangerous because external guarantees reduce depositor incentives to monitor and discipline bank capital and risk exposures on their own behalf. The social value of the depositor discipline displaced is part of the opportunity cost of any deposit-insurance system. Kane (2000a) and Demirgüç-Kunt and Detragiache (2000) find that the weaker a country's informational, ethical, and corporate-governance environment, the more likely it is that installing a wholly governmental system of explicit deposit guarantees will do so poor a job of replacing depositor

discipline that banking-system stability and the flow of real investment will both be impaired.

Safety-net costs have two major components: costs of crisis prevention and costs of crisis management. Economic efficiency requires that officials equalize the marginal benefits of the last dollar expended on the two activities. This paper argues that, because officials are reluctant to acknowledge residual imperfections inherent in their crisis-prevention strategies, they tend to underinvest in contingent plans for handling financial disaster. This commits them to resolving crises in ad hoc --rather than market-mimicking-- ways. The resulting underinvestment in crisis planning mis-serves taxpayers by increasing the confidence that major stakeholders in insolvent banks have in their ability to mold bank stakeholders into an effective political coalition that can extract a generous government bailout if and when a palpable crisis threatens or ensues.

Section I develops a formal model of efficient safety-net management. Sections II and III describe the central components of market-mimicking strategies of crisis prevention and management, respectively. Section IV concludes by noting that, although international negotiations have achieved broad agreement on principles of crisis prevention, negotiators have implicitly endorsed the hypothesis that national governments and international portfolio institutions should remain free to resolve actual crises in ad hoc ways.

I. Expected Present Value of Safety-Net Costs and Benefits

The benefits and costs of a government safety net unfold over a multiperiod horizon. This leads to expressing the present value of a country's safety net V_N as the present value over an appropriate horizon H of expected annual net stabilization and coordination benefits N_k to taxpayers, discounted at an appropriate interest rate r.

$$V_N = \sum_{k=0}^{H} N_k \Big/ (1+r)^k \ . \qquad (1)$$

Budgeted safety-net costs consist of annual government expenditures on crisis prevention C_P and crisis management C_M. Additional unbudgeted items are the direct stabilization benefits, B_k, the stabilization benefits indirectly surrendered, B_{DD}^k, and the

opportunity cost to depositors C_{DD}^{k} of the current depositor discipline the safety-net activity displaces. Conditioning the benefits the safety net is expected to generate between t and t+H only on decisions about current expenditures and adding in whatever fees f_k the insurer expects to collect period by period from insured institutions:

$$V_N = \sum_{k=0}^{H} (1+r)^{-k}[B_k(\overset{(+)}{C}_P, \overset{(+)}{C}_M) + C_{DD}^{k} - B_{DD}^{k}(C_{DD}^{k}) - (C_P + C_M) + f_k]. \qquad (2)$$

The innovative element in our model lies in separating the effects of different kinds of supervisory activity on depositor discipline. It assumes that depositor monitoring and policing effort declines with expenditures on crisis prevention such as enhanced regulatory surveillance and increases both with expenditures on crisis planning and with the adoption of features of safety-net design d_S aimed at preserving depositor exposure to loss:

$$C_{DD}^{k} = C_{DD}^{k}(\overset{(+)}{C}_P, \overset{(-)}{C}_M, \overset{(-)}{d}_S). \qquad (3)$$

Depositor disciplinary activity decreases with crisis-prevention expenditure because this activity directly undermines depositors' incentives to look out for themselves by gathering, analyzing, and reacting to news about changes in their banks' financial condition and risk exposure. Moreover, other things equal, the more supervisory responsibility a government accepts the more righteously depositors can plan to lobby for a government bailout by using the media to blame officials for whatever losses they propose to allocate to them. On the other hand, depositor discipline may be expected to increase with crisis planning, because planning lays down a baseline pattern of responding to bank insolvency that curtails officials' discretion. This curtailment lessens the extent to which lobbying efforts by uninsured stakeholders can be projected to extract important regulatory forbearances or highly subsidized loans if their bank becomes insolvent.

Assuming second-order conditions are met and that r, H, f_k, and d_S are all given exogenously makes it easy to analyze how fully informed safety-net managers might determine optimal amounts of the two kinds of expenditure. Officials benefit

calculations should account for the monitoring costs they spare depositors and seek to raise and spend funds until $\frac{dV_N}{dC_P}$ and $\frac{dV_N}{dC_M}$ both equal zero:

$$\frac{dV_N}{dC_P} = \sum_{k=0}^{H} (1+r)^{-k} \left[\frac{\overset{(+)}{dB_k}}{dC_P} + \left(1 - \frac{\overset{(-)}{dB_{DD}^k}}{dC_{DD}^k} \right) \frac{\overset{(+)}{dC_{DD}^k}}{dC_P} - 1 \right], \tag{4}$$

$$\frac{dV_N}{dC_M} = \sum_{k=0}^{H} (1+r)^{-k} \left[\frac{\overset{(+)}{dB_k}}{dC_M} + \left(1 - \frac{\overset{(-)}{dB_{DD}^k}}{dC_{DD}^k} \right) \frac{\overset{(-)}{dC_{DD}^k}}{dC_M} - 1 \right]. \tag{5}$$

Equations (4) and (5) disaggregate safety-net benefits and costs into direct and indirect components. The model assumes that at the margin the net direct benefits of budgeted government expenditures are positive, but that the net indirect effect of displacing depositor discipline is negative:

$$1 - \frac{dB_{DD}^k}{dC_{DD}^k} < 0 . \tag{6}$$

This implies that the indirect net marginal benefits of government expenditures on crisis prevention are negative, while the net marginal benefits of expenditures on crisis planning are reinforced by the indirect increase in depositor discipline they induce.

If indirect effects on depositor discipline are neglected or underestimated, stabilization benefits from disaster planning are likely to be underproduced and stabilization benefits from crisis prevention to be overproduced. In these circumstances, the net value of government crisis-prevention activity at the margin is likely to be negative and the net value of further planning activity is likely to be positive. Neglecting disaster planning implies that government expenditure on crisis prevention is apt to be excessive.

A Simplified Model

The model's intuitive content can be underscored by simplifying equations (4) and (5). It is convenient to restrict the analysis to a two-period horizon (k=0, 1). It is also

useful to assume that r, d_S, and f_k are given exogenously and that the benefit functions and C_{DD}^k (…) are all linear over the relevant range of expenditure decisions[1].

These simplifications reformulate safety-net benefits and costs as:

$$B_k = B_k^0 + b_{Pk}C_P + b_{Mk}C_M - b_{Dk}C_{DD}^k, \quad \text{k=1, 2.} \tag{7}$$

$$C_{DD}^k = C_D^0(d_S) + c_{Pk}C_P - c_{Mk}C_M, \quad \text{k=1, 2.} \tag{8}$$

Equations (4) and (5) then become:

$$\frac{dV_N}{dC_P} = \sum_{k=0}^{1} (1+r)^{-k}\left[b_{Pk} + (1-b_{Dk})c_{Pk} - 1\right], \text{ and} \tag{4'}$$

$$\frac{dV_N}{dC_M} = \sum_{k=0}^{1} (1+r)^{-k}\left[b_{Mk} - (1-b_{Dk})c_{Mk} - 1\right]. \tag{5'}$$

If all coefficients were time-variant, value maximization would imply that the marginal direct plus indirect benefits of the last dollar spent on each activity equals one dollar-

$$b_P + c_P\,(1 - b_D) = 1, \tag{9}$$

$$b_M - c_M\,(1 - b_D) = 1. \tag{10}$$

II. Market-Mimicking Strategies of Crisis Prevention

Corporations become economically insolvent when their tangible and intangible assets can no longer generate enough income to fully service their obligations to creditors. Insolvency resolution is the process of formally writing down the claims of stockholders and creditors to lower values that add up to the (reduced) market value of corporate assets (MV_A).

Corporations may be said to fall into "financial distress" well before the market value of stockholders' stake in the firm (MV_{NW}) reaches zero. Because the probability of financial distress is a function of endogenous leverage and project-risk decisions, lenders and borrowers typically incorporate a package of disclosure and risk-control obligations into their debt contracts. For creditors and guarantors, these so-called "covenants" open a set of windows into borrowers' affairs by requiring borrowers to conduct and report the outcomes of a series of periodic tests of their current financial strength and evolving

[1] Alternatively, one might assume that the direct marginal benefits of supervision and planning would decline monotonically with the amount expended on them, as would the marginal effects that these

vulnerability to future loss. Covenant violations that can be proven to have no material effect on lenders' position are waived. However, when one or more violations prove material, creditors enjoy the right to demand that the borrower remedy the condition or enter into negotiations to reprice or otherwise mitigate adverse effects on loan values.

Covenant violations may be thought of overcoming weaknesses in accounting reports. Covenants assure that private insolvency-resolution negotiations can occur in timely fashion. Lenders that are dissatisfied with the "quid" a borrower offers in exchange for waiving a material violation typically have the right to require immediate repayment of their debt. Because enforcing this right would reveal the borrower's newfound weakness to third parties, a breakdown in negotiations is apt to intensify a borrowing firm's distress and possibly force it to seek formal bankruptcy protection.

Countries that levy risk-based capital requirements on their banks impose covenant-like reporting and loss-control obligations on them. These obligations help government agencies to centralize the function of monitoring and policing individual-bank insolvency on behalf of depositors. Each bank must periodically measure the ability of its capital to support its current risk exposure and convey to regulators market-mimicking rights to demand that observed shortfalls in capital be alleviated in short order. Such demands are reinforced by regulators' ability to require alteration in administrative practices or behavior and to impose escalating penalties on any nonconforming firm. Escalation can take the form of progressively higher deposit-insurance premiums and/or progressively tighter surveillance. In the United States and many other countries, banks' incentives to report truthfully are enhanced by on-site examinations and penalties for fraudulent and negligent misrepresentation.

Deterrent regulatory discipline may not be able to stop a distressed bank's slide into economic insolvency. If regulators seek to follow market-mimicking principles of insolvency resolution, officials would take control of a bank more or less as its insolvency occurred [Kaufman and Scott, 2000]. After takeover, officials would have to make two interconnected decisions: what to do with the bank and how to restructure existing creditor, stockholder, and government claims on its assets (Hart, 2000). If

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expenditures have on depositor discipline.

officials determine that it is more efficient for society to keep the bank in operation, the second decision results in a plan to recapitalize and perhaps restaff the institution. If officials decide to liquidate the bank's assets, the second decision entails liquidating the bank's assets and distributing liquidation proceeds among government and private stakeholders more or less in accordance with the bank's contractual obligations to each party.

Equations (2), (3), and (4) use C_P to represent cost-efficient expenditures on monitoring and enforcing bank capital adequacy and on resolving individual-bank insolvencies when they arise. This section presumes that reliance on market-mimicking principles of insolvency prevention and resolution is a necessary condition for crisis-prevention expenditures to be cost-efficient. The next section similarly describes efficiency requirements that should apply to expenditures on crisis-management.

III. Market-Mimicking Strategies of Crisis Management

Banking crises occur when efficient individual-bank insolvency prevention and resolution policies have been circumvented on a massive scale (Todd, 1994). Often this occurs because government officials face different incentives in monitoring and disciplining distressed banks than private creditors would (Kane, 2000b).

Regulators' efforts to convince taxpayers that systemic crises are unthinkable catastrophes look suspiciously like a disinformational attempt to avoid accountability for timid strategies of insolvency resolution. The possibility of financial crisis is always present in any system of vigorous financial-institution competition. The ability to frame crises as unmitigatable disasters allows officials to be less resolute in their commitment to resolving unfolding banking problems in timely fashion. In the face of widespread banking weakness, it is easy for officials to convince one another that the risk of destructive bank runs must be minimized at all costs. Concerns about triggering a contagious loss of depositor confidence make it reputationally and politically convenient for regulators to exercise the option to leave individual insolvencies unresolved and to gamble myopically that favorable macroeconomic events will obviate their need to mark down devalued bank assets and to allocate the opportunity-cost losses these markdowns imply across the universe of bank stakeholders.

A banking crisis is an ongoing struggle about whose wealth is going to be forced to absorb previously undisclosed losses that a nation's banks have amassed. Without reliable information and a reasoned plan of crisis management, authorities are apt to guarantee all liabilities of insolvent institutions and to leave the problem of subsequently scaling back the blanket guarantees to an unspecified later (and quieter) time. Although blanket guarantees provide a convenient way to stabilize aggregate liquidity, they surrender longer-run incentive benefits that can be generated by marking down devalued assets and allocating the opportunity losses these markdowns convey to bank stakeholders who can be identified as having voluntarily agreed to finance the now-troubled assets.

To position regulators to better mediate their time-inconsistent incentives, taxpayers must formally oblige officials to develop, rehearse and update in ordinary times a well-publicized strategic plan for managing a systemic banking disaster and oblige them to follow this plan when a crisis ensues. By likening a systemic financial breakdown to a building collapse, it is easy to see that a complete disaster plan must address three problems: (1) rescue and triage; (2) panic control; and (3) cleanup. In what follows, we outline efficient procedures for addressing each problem in turn.[2]

Rescue and Triage

When a tall building collapses, appropriate actions and decisions must be taken expeditiously. Rescue and medical personnel and equipment must be moved to the scene and put to work as soon as possible. Survivors must be promptly diagnosed and queued for treatment. Ambulances and other vehicles must be commandeered to shuttle those of the wounded who can be safely moved to clinics and hospitals. To the extent that it is feasible, survivors should be interviewed for information about the identities and potential locations of missing persons. Body-sniffing dogs may be used to further pinpoint salvage efforts. Barriers must be erected to keep gawkers from interfering with operations.

When a banking system collapses, governments must execute parallel actions and decisions. The casualties that need to be found and treated are the stockholders,

[2] The next three subsections draw on Kane (2001).

employees, depositors and nondeposit creditors of a nation's banks. Regulators cannot expect to uncover individual casualties efficiently unless they have previously formulated an integrated disaster plan and drilled appropriate personnel in its execution. In an emerging crisis, staffmembers must be able to react immediately to depositor runs without having to await detailed instructions from on high.

The first team of officials dispatched to a troubled bank should be forensic bank examiners. These officials must have the authority to take immediate possession of relevant data and must possess the financial expertise to measure the depth of a bank's hidden insolvency in a quick and dirty manner. Their findings must be forwarded promptly to a second team of treatment specialists whose job is to estimate the degree and character of help that would most efficiently put the institution's various stakeholders on their feet again. Both in crisis countries and abroad, higher officials need this kind of advice to determine how much and what kind of assistance to extract from taxpayers and foreign institutions.

In exchange for the financial assistance that domestic and foreign officials ask taxpayers and foreign banks to supply, a crisis government should issue enforceable claims on the future profits of each troubled bank kept in operation. Ideally, the new claims would greatly diminish or completely extinguish the rights of former shareholders. At a minimum, authorities should carve out a warrant position large enough to compensate suppliers of risk capital for the administrative and risk-bearing costs of contributing to a rescued bank's recapitalization. In all cases, governments and supragovernmental institutions such as the International Monetary Fund (IMF) or World Bank would do well to commit themselves to sell their equity claims to private parties as reliable information on asset values is developed.

During an emergency, the autonomy of information-collection teams must be supported at every level of government. Although accountability requires that staff judgments be reviewed and criticized later, triage assessments cannot be held up to wait for formal ratification by less-informed and incentive-conflicted higher-ups. Government officials must condition one another and the press to respect the proposition that, in dealing with hopelessly insolvent institutions, it is inappropriate to devote public funds

either to preserving the positions of stockholders and subordinated creditors or to paying lofty salaries to discredited managers.

In the aftermath of a building collapse, emergency personnel cannot divert their limited surgical resources to sewing up the wounds or setting the broken bones of dying individuals. To neutralize the pleas for mercy that moribund casualties are bound to emit, supervisors and the public must be conditioned in advance to annihilate stockholders' position and to cut back management salaries in every bank whose insolvency is too profound to support a reasonable prospect of repaying government or foreign-bank loans.

Panic Control.

Panic refers to hysterical behavior that spreads through a group that confronts a horrific vision or event. The triggering event in a banking panic is the surfacing of adverse information that destroys public confidence in the repayment capacity of several of a nation's banks. This loss of confidence may be based on either rational calculation or (far more rarely) wholly irrational fears. The trigger can take the form of general information about the consequences of major economic events or information that is specific to individual banks or to a class of assets they are known to hold.

Corporate-finance theory explains that the economic value of stakeholders' aggregate claims against a corporation can never exceed the fair market value of its assets. Hence, whenever a bank's assets lose a substantial portion of their value, the total value of the bank's obligations decline to the same degree. The emergence of adverse information about borrower prospects or about hidden bank frauds or trading losses destroys asset and liability values in tandem.

A banking panic combines the phenomenon of simultaneous runs on several banks with a seizing up of opportunities for interbank borrowing and for sales of allegedly liquid securities. In a panic, bank runs and fears of runs become so widespread that individual banks can no longer raise funds quickly by selling portfolio assets to other parties at fair prices. Institutions not experiencing runs back away from lending funds to affected banks so as to support more firmly the convertibility of their own deposits into cash.

To treat both the shrinkage of bank deposits and the panicky evaporation of interbank liquidity that widespread bank runs induce, strong reputational and political

pressures tempt officials to offer government loans and guarantees indiscriminately to troubled banks. However, efficiency requires that liquidity be restored without sacrificing the longer-run advantages of marking down devalued bank assets and allocating efficiently the opportunity-cost losses these markdowns imply at affected institutions.

Panic control turns on keeping the nation's money supply from shrinking. The central bank and foreign officials can offset the negative effects of regulators' triage efforts by standing ready both to purchase good assets they are offered for sale and to lend vigorously to demonstrably solvent or near-solvent banks.

As Kaufman and Seelig (2000) emphasize, how depositors are treated at failed banks can greatly assist the central bank's liquidity-maintenance efforts. Insured depositors should be granted access to their funds as soon as this becomes administratively feasible and uninsured depositors should be accorded a just degree of immediate fractional access to their balances. Determining the fraction of an insolvent bank's uninsured deposit balances that can be immediately withdrawn should be founded on the conservative valuation techniques that forensic examiners and treatment specialists are asked to rehearse in advance. Each emergency examination would estimate the percentage of uninsured deposits that liquidators could confidently expect to recover if the bank's tangible portfolio were to be liquidated at a later date in an orderly fashion. To reflect the margin for error in the quick-and-dirty loss assessments the emergency examination teams produce, the percentage haircut applied to uninsured balances should be somewhat lower than this figure. Bank employees would set the frozen part of each uninsured balance aside and stand ready to unfreeze it in stages as it proves possible to size more accurately the value of intangible positions and the depth of each bank's insolvency.

To end a panic, aggregate liquidity must be restored. To do this efficiently, a country's central bank must maintain aggregate liquidity by open-market operations, but supervisory personnel must stop to assess a financial institution's wounds before authorizing the payment of deposit-insurance claims or granting banks and their uninsured depositors irreversible access to liquid government funds. Government and IMF injections of liquidity must be directed as exclusively as possible toward insured

depositors, recoverable portions of uninsured balances, and putatively solvent institutions. Hopelessly insolvent institutions must be identified and control over them transferred smoothly into socially responsible hands. It should be understood that, even during examiners' brief insolvency-assessment timeout, private transactions need not grind to a halt. Would-be transactors would have strong private incentives to use standard and innovative forms of credit to prevent transactions from grinding to a halt.[3]

Cleanup.

Unlike triage and panic control, the cleanup tasks of reprivatizing problem assets and banking franchises and collecting payments from problem borrowers require careful rather than quick decisions. In a "rational" crisis, the information that lowered bank asset values is by definition broadly accurate. This means that liabilities tied to the lost value become "junk" that regulators should promptly remove from bank balance sheets. The market-mimicking standard of policy response asks bank supervisors to resort to the economic equivalent of a junkyard.

The junkyard's job is to identify worthless assets and liabilities as refuse, and to dispose of them quickly and efficiently. Officials are asked to do this --not to punish anyone-- but to promote healthy incentives for subsequent investment and economic growth by clearing bank balance sheets of stakeholdings whose claims on future upside returns would otherwise distort future lending incentives.

Market-mimicking cleanup procedures center on surgically separating diseased assets from the healthy parts of troubled-bank portfolios. In practice, this involves either selling problem assets at market value to a pre-existing workout specialist or specifically chartering a new public or private entity to extract maximum value from the problem borrowers. This good bank/bad bank surgical model was pioneered in the 1990s by U.S. regulators and has been copied with some degree of success in several other countries since.

The expectation that ownership claims and uninsured liabilities will expire when they become valueless is necessary for lending and deposit markets to function

[3] Credit cards and checks can be accepted, perhaps supplemented by ad hoc documents or collateral, to establish evidence of personal indebtedness whose value may be collectable in part from other sources if authorities place the issuing bank into liquidation.

appropriately. Writing down the realizable value of damaged claims in bad states of the world is a crucial part of the evolutionary process of economic renewal that Schumpeter brilliantly characterized as "creative destruction."

Despite the temporary disruption bank runs invoke, in the long run a banking panic can assist society by forcing authorities to repair, rehabilitate, or eliminate troubled banks and problem industries in a more timely fashion. The desire to stop a panic quickly must not be allowed to interfere with the need to identify hopelessly insolvent enterprises and to wind up their insolvency in an efficient manner. Issuing blanket government loans and guarantees to solvent and insolvent banks alike is myopic because it greatly reduces subsequent political and economic pressure for cleanup. It reinforces bad lending and investment incentives that promise to expand rather than reduce the number of negative present-value projects in play. In a discounted present-value sense, this is very costly to taxpayers. Guarantees shift the burden of absorbing the losses imbedded in the portfolios of insolvent institutions and their borrowers to taxpayers. At the same time, they release managers, stockholders, and creditors of troubled institutions from the spur of bearing due responsibility for loss-making decisions they previously ratified.

IV.

In a classic Dilbert cartoon, the overworked and overcoffeed character Alice uses an overhead projector to explain her firm's disaster recovery plan. Her only slide pictures a frantic man in a suit screaming, "Help! Help!" She ends by telling her pointy-haired boss, "Someday we hope to have a budget."

In developing countries especially, government's planning for recovery from financial disaster amounts to expecting to call frenziedly on supragovernmental institutions, foreign governments, and foreign banks for help. Moreover, these potential rescuers plan in turn to call for help from various taxpayers.

Public-choice theory treats authorities' reliance on ad hoc rather than market-mimicking strategies of crisis management as evidence of weaknesses in public-sector governance. Poor governance creates accountability resistance and fosters conflicts of interest between taxpayers and financial regulators both in individual countries and in

cross-country relationships. To be economically efficient, regulatory strategies must embody market-mimicking concepts of insolvency, insolvency prevention, and insolvency resolution. Supervisory standards must not be limited to strategies for crisis prevention. Efficiency requires that regulators in different countries and in supranational organizations credibly commit themselves and their successors to fair and efficient policies of crisis management as well. This means surrendering two longstanding contingent options: to assess political pressures for and against particular bailouts and, in a systemic disaster, to let political forces shape their response.

REFERENCES

Demirgüç-Kunt, Aslı and Enrica Detragiache, 2000. "Does Deposit Insurance Increase Banking System Stability? An Empirical Investigation." Washington: World Bank working paper (April).

Demirgüç-Kunt, Aslı and Tolga Sobaci, 2000a. "Deposit Insurance around the World: A Data Base." Washington: World Bank working paper (May).

Hart, Oliver, 2000. "Different Approaches to Bankruptcy." Cambridge, MA: Harvard University Discussion Paper No. 1903 (September).

Kane, Edward J., 2000a. "Designing Financial Safety Nets to Fit Country Circumstances," Boston College (May 9).

_____, 2000b. "Dynamic Inconsistency of Capital Forbearance: Long-Run vs. Short-Run Effects of Too-Big-to-Fail Policymaking," Pacific Basin Finance Journal (forthcoming).

_____, 2001. "Relevance and Need for International Regulatory Standards, Brookings-Wharton Papers on Financial Services, Vol. 4, Washington: The Brookings Institution: forthcoming.

Kaufman, George, and Kenneth Scott, 2000. "Does Bank Regulation Retard or Contribute to Systemic Risk?," Chicago: Loyola University working paper (Nov. 29).

Kaufman, George, and Stephen A. Seelig, 2000. "Treatment of Depositors at Failed Banks, etc.," Chicago: Loyola University (November 27).

Laeven, Luc, 2000. "Banking Risks around the World: The Implicit Safety Net Subsidy Approach." Washington: World Bank working paper (November).

Todd, Walker F., 1994. "Lessons from the Collapse of Three State-Chartered Private Deposit Insurance Funds," Economic Commentary (May 1), Federal Reserve Bank of Cleveland.