4. Regulation and Supervision of Insured Depository Institutions

The entries in this section deal with the regulation and supervision of insured depository institutions: the appropriate role for bank regulation, alternative regulatory structures, principles of effective regulation, regulatory forbearance and its effect on the cost of bank failures, bank capital regulations, the economic effect of bank regulation, and deregulation.

Acharya, Sankarshan. 1990. Regulatory Policies When Banks Control Asset Quality, Unobserved by Regulators. Unpublished manuscript. Division of Research and Statistics, Board of Governors of the Federal Reserve System.

> The author derives optimal dynamic regulatory policies when (a) regulators cannot ex ante observe the quality of assets a bank will choose to hold during the period until the next examination, and (b) neither the regulators nor the banks know perfectly the subsequent asset-quality choices (since future choices depend on future asset values, which depend stochastically on current choices). In the game, a bank chooses equity capital, self-closure strategy, and quality of assets to maximize shareholders' wealth. Regulators set rules for timing bank closure and for establishing deposit insurance premiums to minimize their liabilities. Asset quality, capital, deposit insurance premiums, and closure timing are determined in equilibrium as functions of the assets-to-deposits ratio and other parameters specific to a bank. Game results indicate that a bank is closed whenever its assets-to-deposits ratio falls below an equilibrium threshold that is greater than or equal to 1. In the author's model, equilibrium can achieve the virtues of deregulation in a panic-proof banking industry when regulators do not insure bank deposits for profit.

Andrabi, Tahir, and Andrea Ripa di Meana. 1994. Bank Regulation and Debt Overhang. *Journal of Money, Credit, and Banking* 26 (part 1), no. 3:460–78.

> The paper explains why banking regulations are crucial to the unfolding of the current international debt crisis. The interplay of deposit insurance and capital adequacy requirements may create strong disincentives against offering relief to debtor countries with solvency problems, in spite of the fact that granting relief would improve the worth of the claims held by creditor banks. Furthermore, it is shown that the negotiating stance of individual banks is not related to their exposure to troubled loans in any simple way. Whether highly exposed banks are tougher than those with limited exposure is also generally dependent on the features of the regulatory environment. (©1999 EconLit)

Barth, James R., and Michael G. Bradley. 1989. Thrift Deregulation and Federal Deposit Insurance. *Journal of Financial Services Research* 2, no. 3:231–59.

> The authors observe that although federal insurance funds were designed to cover all insured deposits, federal regulations lacked a rule specifying how these deposits would be covered if a crisis occurred that swamped either of the insurance funds. Apparently Congress accepted the argument that strict

enforcement and regulation could be used to reduce the probability of failure and thereby prevent large losses to the insurance funds. The authors maintain, however, that this legislative oversight and the insufficiency of the savings association insurance fund forced regulators to permit insolvent institutions to remain open. The poor performance of these institutions skewed aggregate thrift performance, masking the performance of solvent institutions. A protracted debate ensued centering on the cost of resolving troubled thrifts and the ability of healthy thrifts to pay these costs. This debate drew attention away from the potential value of the thrift charter.

Basle Committee on Banking Supervision (BCBS). 1997a. *Core Principles for Effective Banking Supervision.* Publication no. 30. BCBS.

This document presents 25 principles for effective banking supervision relating to the following seven categories: (1) preconditions for effective banking supervision; (2) licensing authority and regulatory structure; (3) prudential regulations and requirements; (4) methods of ongoing banking supervision; (5) information requirements; (6) formal powers of supervisors; and (7) cross-border banking. The final section of the report discusses the role of deposit insurance.

Basle Committee on Banking Supervision (BCBS). 1997b. Deposit Protection Schemes in Member Countries of the Basle Committee. In *International Supervisory Issues*, 90–96. *Compendium of Documents Produced by the Basle Committee on Banking Supervision*, vol. 3. BCBS.

The Basle Committee has not issued recommendations on whether countries should have deposit protection arrangements or how these should be structured. The reason it has not is partly that its members have institutional differences and partly that its principal focus has been to create the conditions in which deposit protection is less likely to be needed. Nonetheless, for informational purposes the Committee has occasionally conducted surveys of the arrangements in force in its member countries. This publication provides a synopsis of the current (1997) arrangements.

Benston, George J., and George G. Kaufman. 1996. The Appropriate Role of Bank Regulation. *Economic Journal* 106, no. 436:688–98.

According to the authors, the appropriate role of bank regulation, or the question of whether banks should be regulated at all, has long been a matter of controversy. Before the United States had a central bank, banks themselves established private clearinghouses, resembling the private central banks in other countries, to both provide prudential supervision and to prevent abrupt local declines in the assets that served as bank reserves and money. Nevertheless, the authors take as givens not only a government central bank but also government-operated deposit insurance. Thus they do not disagree greatly with Dowd's defense of free or laissez-faire banking but focus instead on how banks should be regulated in an existing non-laissez-faire structure to achieve the best of both worlds. They find that bank regulation reduces both the negative externalities from moral hazard and

the agency costs that accompany poorly structured government-provided deposit insurance. But deposit insurance can effectively become redundant.

Benveniste, Larry, Dennis R. Capozza, Roger Kormendi, and William Wilhelm. 1994. Contract Design for Problem Asset Disposition. *American Real Estate and Urban Economics Association Journal* 22, no. 1:149–67.

As a result of declining real estate values and the receivership of numerous financial institutions, government regulators like the Resolution Trust Corporation (RTC) and Federal Deposit Insurance Corporation (FDIC) have large inventories of distressed assets. This paper develops a model of the principal/agent issues associated with management and disposition of problem assets. In the model, optimal contracts balance risk sharing with incentives for effort. The authors argue that the RTC will minimize the ultimate cost of the thrift crisis by placing managerial control of distressed assets in the private sector, while retaining full or partial ownership of the assets for risk-sharing purposes. Recoveries are maximized, however, only when an asset manager has an incentive to expend a first-best level of effort by indexing asset management and disposition contracts to market movements. (©1999 EconLit)

Boot, Arnoud W. A., and Anjan V. Thakor. 1993. Self-Interested Bank Regulation. *American Economic Review* 83:206–12.

The authors formalize the notion that a bank regulator may pursue self-interest rather than social welfare, and examine the implications of this for deposit insurance and regulatory reform in banking. They model the pursuit of self-interest by introducing uncertainty about the regulator's ability to monitor a bank's asset choice. This uncertainty creates a desire on the part of the regulator to acquire a reputation as a capable monitor, and this desire distorts the regulator's bank-closure policy and inflates the liability of the deposit insurance fund. The authors use this perspective on bank regulation to generate numerous policy prescriptions about banking reform.

Bourke, Philip. 1994. Bank Stability, Deposit Insurance and Regulation. In *The Competitiveness of Financial Institutions and Centers in Europe*, edited by Donald E. Fair and Robert Raymond, 403–17. Financial and Monetary Policy Studies, vol. 28. Kluwer Academic Publishers.

This article discusses issues related to the supervision of financial intermediaries in Europe and elsewhere outside the United States, particularly the issue of deposit insurance, and discusses some regulatory implications of the internationalization of the financial-services industry.

Bradley, Michael G., Carol A. Wambeke, and David A. Whidbee. 1991. Risk Weights, Risk-Based Capital and Deposit Insurance. *Journal of Banking and Finance* 15, no. 4–5:875–93.

The thrift risk-based capital regulation assigns weights to various asset categories according to their perceived credit risk. The risk-based capital requirement is

currently 8 percent of these risk-weighted assets. Little empirical work exists to support either the 8 percent capital level or the weights included in the regulation. They authors employ the asset categories set forth in the regulation to calculate statistical estimates of the capital level and the risk weights that would have been required for the deposit insurance system for thrifts to have been actuarially fair over the 1985–88 period. Their results indicate that the 8 percent capital requirement adopted by federal regulators would have been too little to cover insurance costs over the 1985–88 period and that the risk weights assigned to some asset categories would have been too high relative to the risk weight assigned "standard" assets. (©1999 EconLit)

Broaddus, J. Alfred Jr. 1994. Choices in Banking Policy. Federal Reserve Bank of Richmond *Economic Quarterly* 80, no. 2:1–9.

The central purpose of bank regulation is to protect the actuarial soundness of the federal safety net-deposit insurance, discount window lending, and the Fed's oversight of the payments system. Some regulatory changes could improve current banking policy by reducing regulatory burden while maintaining the soundness of the existing safety net. Beyond these changes, however, society faces a trade-off: further easing of the costs of bank regulation would require limiting the scope of the federal safety net. (©1999 EconLit)

Calomiris, Charles W. 1993. The Decline of Private Deposit Insurance in the United States: A Comment [on English in same issue]. *Carnegie–Rochester Conference Series on Public Policy* 38:129–42.

The author analyses the economic constraints that private, state-mandated deposit insurance systems have had to satisfy. He argues that greater risk-taking during booms and increased incidence of fraud during economic declines are important elements in a coherent story of the timing of deposit-insurance-fund collapses, and that these two tendencies are magnified by the peculiar economic constraints that underlie private deposit insurance. He examines the boom and collapse of deposit insurance funds over time, and ponders the appropriate regulatory response to such crises.

Chen, Andrew H., and Sumon C. Mazumdar. 1994. Impact of Regulatory Interactions on Bank Capital Structure. *Journal of Financial Services Research* 8, no. 4:283–300.

This article examines a bank's optimal capital structure and risk-taking decisions in a regulated environment. It focuses on the interactive nature of the Fed's collateralized discount window lending and the FDIC's deposit insurance. Such regulatory interactions are shown to have nonlinear and nonuniform impacts on the bank's leverage and risk-taking decisions. Thus, bank moral hazard problems may persist, even when banks are charged risk-adjusted deposit insurance premia and are also subject to market discipline through subordinated debt. The analysis yields several new policy implications about the design and pricing of bank regulations. (©1999 EconLit)

Cobos, Dean Forrester. 1989. Forbearance: Practices and Proposed Standards. *FDIC Banking Review* 2, no. 1:20–28.

The author suggests that forbearance is a word with different meanings to different people. Because in recent years forbearance has often been associated with the delayed closure of insolvent institutions, the word has become pejorative in many places. However, many forms of forbearance have long been accepted supervisory practices. Forbearance is not something to be avoided under all circumstances. This article discusses appropriate uses of supervisory forbearance.

Curry, Timothy J., John P. O'Keefe, Jane Coburn, and Lynne Montgomery. 1999. Financially Distressed Banks: How Effective Are Enforcement Actions in the Supervision Process? *FDIC Banking Review* 12, no. 2:1–18.

This article investigates the effects of bank examinations and formal enforcement actions on the behavior of problem banks during the 1980s and 1990s. The first section discusses the legal and regulatory framework for the application of formal enforcement actions. The second section focuses on the enforcement policies available to the FDIC: kinds of actions, procedures used, and number and types of enforcement actions issued by the FDIC in recent decades. The third section reviews previous empirical studies. The results show that both examiner downgrades in safety-and-soundness ratings and the issuance of formal enforcement actions had important effects on the performance of distressed banks.

Dahl, Drew, John P. O'Keefe, and Gerald A. Hanweck. 1998. The Influence of Examiners and Auditors on Loan-Loss Recognition. *FDIC Banking Review* 11, no. 4:10–25.

The authors find that when bankers have some discretion in their treatment of loan losses, the timing of loan-loss recognition is influenced by bank examiners but not by auditors. Auditors appear to focus less on *recognizing* loan losses and more on *providing* for them.

Dreyfus, Jean-François, Anthony Saunders, and Linda Allen. 1994. Deposit Insurance and Regulatory Forbearance: Are Caps on Insured Deposits Optimal? *Journal of Money, Credit, and Banking* 26 (part 1), no. 3:412–38.

This article examines the desirability of establishing caps on the scope of insured deposits, given the existence of a flat (mispriced) premium schedule for deposit insurance. The authors show that the optimal setting of caps on insured deposit coverage cannot be analyzed independently from either the FDIC's bank closure policy or the nature of the deposit insurance premium. Specifically, while the existence of flat premium schedules might seem to imply that the expected liability of the insurer is an increasing function of the size of a bank's insured deposits, the study reveals that this need not be the case when the insurer follows dynamically optimal closure policies and when the early liquidation of a bank's assets entails positive transaction costs.

Elmer, Peter J. 1990. Risk-Based Capital Requirements: Reshaping the Thrift Industry. *FDIC Banking Review* 3, no. 1:27–35.

> The Financial Institutions Reform, Recovery, and Enforcement Act of 1989 established new and higher capital standards for savings and loans and other depository institutions in the United States. Based on fourth-quarter data for 1989, the author estimates that almost one-half of the assets of nonconservatorship thrifts were in thrifts that did not meet their current capital requirements, while almost three-fourths of the assets of nonconservatorship thrifts were in thrifts that did not, at that time, meet the new standards that were to be phased in under FIRREA. The author points out, however, that thrifts not meeting the requirements are not doomed to fail, but that without a major improvement in performance, the options available to many of them seem limited to some combination of the following: shrinking, merging with healthier institutions, or attracting outside capital.

English, William B. 1993. The Decline of Private Deposit Insurance in the United States. *Carnegie–Rochester Conference Series on Public Policy* 38:57–128. [Followed by comments by Charles W. Calomiris.]

> Since the early 1980s, the number of private deposit-insurance providers operating in the United States has declined sharply, as many of them have failed. The failures were caused both by poor design and by inadequate regulation of member institutions. The weak regulation was primarily the result not of inadequate examinations of members but of inaction on the part of the insurers and state regulators. The private deposit insurance failures of the 1980s are similar in many respects to the failures that occurred in earlier groups of private deposit insurers.

French, George E. 1992. Early Corrective Action for Troubled Banks. *Contemporary Policy Issues* 10, no. 4:103–13. Also 1991. Early Corrective Action for Troubled Banks. *FDIC Banking Review* 4, no. 2:1–12.

> This paper presents data concerning the performance of the U.S. commercial bank supervisory system and identifies a number of needed improvements in areas including: (1) rules governing bank loss recognition, (2) supervisory response to excessive loan concentrations and poor underwriting standards, (3) rules governing dividend payments by troubled banks, and (4) the early closure or resolution of troubled banks. (©1999 EconLit)

Fries, Steven, Pierre Mella-Barral, and William Perraudin. 1997. Optimal Bank Reorganization and the Fair Pricing of Deposit Guarantees. *Journal of Banking and Finance* 21, no. 4:441–68.

> When should regulators close a financially ailing bank? FDIC practice has moved toward early closure. In contrast, the approach taken by banking regulators in Japan continues to be more patient. The authors analyze a series of models in which closure rules and bailout policies arise endogenously through the interaction of (1) regulators' attempts to minimize discounted, expected costs of

bankruptcy, and (2) equity-holders' incentives to recapitalize banks. The authors outline policies for implementing socially optimal closure rules for distressed banks that minimize financial costs to regulators and reduce moral hazard.

Furlong, Frederick T., and Michael C. Keeley. 1989. Capital Regulation and Bank Risk-Taking: A Note. *Journal of Banking and Finance* 13, no. 6:883–91. Also 1989. Capital Regulation and Bank Risk-Taking: A Note. In *Banking System Risk: Charting a New Course*, Proceedings of the 25th Annual Conference on Bank Structure and Competition, 101–16. Federal Reserve Bank of Chicago.

This paper examines the theoretical effects of more stringent capital regulation on bank asset-portfolio risk. The analysis shows that, for a value-maximizing bank, incentives to increase asset risk decline as capital increases. Thus, as long as regulators do not reduce their efforts to contain asset risk and bank size, more stringent capital regulation unambiguously reduces the expected liability of the deposit insurance system.

Garner, Craig Boyd. 1994. Unconstitutional Regulatory Seizures under the Federal Deposit Insurance Corporation Improvement Act of 1991: The Final Blow to the Independence of National Banks. *Pepperdine Law Review* 22, no. 1:131–65.

Tracing the evolution of FDICIA, the author provides historical background and discusses the traditional regulation of financial institutions. He claims FDICIA is unconstitutional in two ways. First, inasmuch as it applies to solvent banks, it is a direct violation of the Takings Clause of the U.S. Constitution. Second, Title 12 of the United States Code, Section 191, violates due process requirements since it provides no notice or opportunity for a hearing when the FDIC is appointed receiver for solvent institutions. The author also explains why the standard of review that applies to regulatory takeovers by federal agencies is so arbitrary and capricious.

Gart, Alan. 1994. *Regulation, Deregulation, Reregulation: The Future of the Banking, Insurance, and Securities Industries*. Wiley.

Places into historical perspective the changes that have taken place within the U.S. financial services industry in order to draw lessons for the regulation and redefinition of the industry in the future. Provides an overview and history of financial regulation, discussing the financial services industry; the history of bank regulation; securities and investment regulation, 1940–79; mainframe bank deregulation; and regulation of the insurance industry. Addresses contemporary banking issues and discusses deposit insurance and bank failures. Examines trends and structural change in the insurance industry, the investment banking and securities industry, and the banking industry. Sets out the opinions of various experts concerning reform in the banking industry. Considers the prospects for regulation and deregulation in the financial services industry in the 1990s and offers an agenda for reform. (©1999 EconLit)

Giammarino, Ronald M., Tracy R. Lewis, and David E. M. Sappington. 1993. An Incentive Approach to Banking Regulation. *Journal of Finance* 48, no. 4:1523–42.

The authors examine the optimal design of a risk-adjusted deposit insurance scheme when the regulator has less information than the bank about the inherent risk of the bank's assets (adverse selection) and when the regulator is unable to monitor the extent to which bank resources are being directed away from normal operations toward activities that lower asset quality (moral hazard). Under a socially optimal insurance scheme: (1) asset quality is below the first-best level, (2) higher-quality banks have larger asset bases and face lower capital adequacy requirements than lower-quality banks, and (3) the probability of failure is equated across banks. (©1999 EconLit)

Giammarino, Ronald M., and Josef Zechner. 1990. Uniform Risk Based Capital Requirements for Deposit Taking Institutions: A Canadian/U.S. Comparison. Research Papers in International Business, Trade, and Finance. Faculty of Commerce and Business Administration, University of British Columbia.

The Bank of International Settlements proposed wide-scale adoption of a specific risk-adjusted capital adequacy requirement and the proposal was accepted by many countries, including Canada, Japan, the United Kingdom, and the United States. The authors examine the proposed standards in some detail. In particular, they ask whether the capital standards will create or exacerbate (as opposed to eliminate or mitigate) international differences in the regulatory environment.

Gilbert, R. Alton. 1994. Federal Reserve Lending to Banks That Failed: Implications for the Bank Insurance Fund. Federal Reserve Bank of St. Louis *Review* 76, no. 1:3–18.

During the 1980s many banks failed, imposing large losses on the Bank Insurance Fund (BIF). The Federal Reserve had loaned to many of the banks that ultimately failed—thus many people were convinced that Federal Reserve lending practices had increased BIF losses. This concern led Congress, in the Federal Deposit Insurance Corporation Improvement Act, to impose limits on Federal Reserve lending to troubled banks. The author investigates whether the evidence supports the conclusion that Federal Reserve lending practices increased BIF losses. The findings are contradictory.

Green, David. 1995. Banking Supervision in the New Europe. *European Business Journal* 7, no. 4:26–33.

The author maintains that the integration of the European financial system means that developments in the banking system of one country will have repercussions in other member states. Integration, therefore, will pose new challenges to regulators and bank supervisors that may warrant a reassignment of competencies between tiers of government. The author therefore advocates a shift in responsibility toward the European Central Bank but proposes that national supervisors continue to have a role in implementation of policy.

Harrell, Alvin C. 1993. Deposit Insurance Issues and the Implications for the Structure of the American Financial System. *Oklahoma City University Law Review* 18, no. 2.

This article discusses the U.S. experience with deposit insurance and bank regulation in the twentieth century. It specifically analyzes two assumptions: (1) deposit insurance is a public necessity that cannot be significantly cut back; and (2) any regulatory problems can be solved if bank regulatory powers and penalties are increased.

Hazlett, Denise. 1997. Deposit Insurance and Regulation in a Diamond–Dybvig Banking Model with a Risky Technology. *Economic Theory* 9, no. 3:453–70.

Three deposit insurance schemes are studied in a version of the Diamond–Dybvig banking model with a risky technology. The schemes include a full deposit guarantee and two alternatives which people have suggested as ways to limit the moral hazard problem of deposit insurance. Regulation to suppress the moral hazard problem under each theme takes the form of solvency and incentive compatibility constraints. When the regulation is relaxed slightly, as it might be under regulatory error, the insurer's payout is lower under the alternatives than under the full guarantee. However, the coinsurance and deductible schemes are less effective at preventing bank runs than the full guarantee. Moreover, in some environments, even the full guarantee itself does not provide enough reassurance to rule out bank runs. (©1999 EconLit)

Institute of Financial Education. 1990. *Insurance of Accounts: A Practical Guide to the FDIC Regulations*. Institute of Financial Education.

This book presents and explains the uniform insurance regulations of the FDIC. It provides bank employees with basic knowledge of the insurance of accounts and serves as a handy reference tool.

Javoer, Suarez. 1998. Risk-Taking and the Prudential Regulation of Banks. *Investigaciones-Economicas* 22, no. 3:307–36.

Under deposit insurance, prudential regulation replaces market discipline in the control of banks' risk-taking. This paper examines different types of prudential regulation, from the relatively sophisticated risk-based proposals made by theorists to the risk-insensitive schemes that existed in most countries prior to the Basle Accord on capital standards of 1988. Exploiting the isomorphic relationship between deposit insurance guarantees and put options, like in Merton (1977), the author focuses on the behavior of banks under alternative regulatory schemes, rather than on pure valuation issues. The paper also investigates the role of capital requirements in a perfectly competitive banking industry operating under flat-rate deposit insurance premiums. After exploring the rationale and limitations for the use of risk-based capital requirements, it evaluates the theoretical adequacy of the Basle Accord. (©1999 EconLit)

Kaufman, George G. 1989. Thrift Deregulation and Federal Deposit Insurance: Comments [on Barth and Bradley in same issue]. *Journal of Financial Services Research* 2, no. 3:261–64.

The author expresses concern that Barth and Bradley's analysis, although providing an excellent review of the S&L crisis, is colored in favor of the Federal Home Loan Bank Board (FHLBB). He discusses a number of events less favorable to the FHLBB.

Khademian, Anne M. 1996. *Checking on Banks: Autonomy and Accountability in Three Federal Agencies.* Brookings Institution.

Explains the connection between structure, political oversight, and the way bank supervision is managed in the three agencies that oversee banking in the United States—the Office of the Comptroller of the Currency (OCC), the Federal Reserve Board (Fed), and the Federal Deposit Insurance Corporation (FDIC). Contends that the current three-agency system is a healthy arrangement for the banking industry. Draws on open-ended interviews conducted in 1992 and 1993 with past and present bank examiners, supervisors, and officials in the Fed, OCC, and FDIC. Introduces the art of bank examination and supervision and the management challenges they pose. Presents the distinctive management styles of the three agencies. Discusses the concept of agency autonomy and its connection to the development of each agency's organizational character. Examines the organizational characters of the Fed, FDIC, and OCC, represented by sets of commitments, and the connection between characters and management styles. Studies the organizational characters in action as each agency grapples with common mandates for supervising banks. Examines the historical record of banks under the jurisdiction of each agency, arguing that some overlap in jurisdictions is desirable. (©1999 EconLit)

King, Kathleen Kuester, and James M. O'Brien. 1991. Market-Based, Risk-Adjusted Examination Schedules for Depository Institutions. *Journal of Banking and Finance* 15, no. 4–5:955–74.

Among deposit insurance reforms considered by economists and policymakers have been prompt resolution of problem institutions, risk-adjusted deposit insurance premiums and risk-adjusted capital requirements. Some economists have further suggested that risk-adjusted deposit insurance premiums or capital ratios be calculated by applying option pricing models to stock market data. Alternatively, the option methodology could be used to establish a risk-based examination schedule whereby riskier banks would be examined on a more frequent basis. Such an examination schedule would be consistent with prompt resolution strategies since it would relate the frequency of examination and closeness of supervision to banks' riskiness. This paper demonstrates how a risk-adjusted examination schedule could be derived. The paper also considers alternatives to the assumptions regarding examination policies made in standard applications of the option model, which may be valid for the sample periods

previously used. It discusses potential resulting biases and ways to mitigate their effects. (©1999 EconLit)

Kroszner, Randall S., and Philip E. Strahan. 1996. Regulatory Incentives and the Thrift Crisis: Dividends, Mutual to Stock Conversions, and Financial Distress. *Journal of Finance* 51, no. 4:1285–319.

During the 1980s, insolvency of individual thrifts and the thrift deposit insurer created severe incentive problems. Lacking cash to close insolvent thrifts, regulators induced nearly $10 billion of private capital to flow into the industry through mutual-to-stock conversions. The authors test a theory of how regulators encouraged capital-impaired mutual thrifts to convert by permitting them to pay dividends rather than rebuild capital. They estimate the costs of this policy and interpret the 1991 Federal Deposit Insurance Corporation Improvement Act as requiring regulators to impose restraints on depository institutions parallel to debt covenants that prevent capital distributions by nonfinancial firms experiencing distress. (©1999 EconLit)

Lang, William W., and Leonard I. Nakamura. 1990. Optimal Bank Closure for Deposit Insurers. Working Paper no. 90-12. Federal Reserve Bank of Philadelphia.

The authors consider a model of banks with public deposit insurance in which the differential between returns on bank assets and the costs per dollar of deposits vary over time and across banks. In this case, there exists a positive option value to closure that should be considered, in addition to the bank's expected return and asset-deposit ratio, in the optimal regulatory closure rule. Actuarially fair deposit premiums must include this option value in order to induce optimal self-closure for banks. Thus, risk-related deposit premiums should be tailored to the individual return history of the bank.

Macey, Jonathan R., and Geoffrey P. Miller. 1994. Towards a Regulatory Analysis of Deposit Insurance. In *Prudential Regulation of Banks and Securities Firms,* edited by Guido Ferrarini, 209–90. Kluwer Law International.

The authors explore the relationship between deposit insurance and the mismatch in the term structure of banks' assets and liabilities. They explain how the mismatch accounts for much of the instability in the banking system. They then critique the four principal alternative hypotheses that have been offered to explain this mismatch and suggest that a regulatory hypothesis may offer the best explanation. They warn, however, that acceptance of the regulatory hypothesis does not necessarily imply that government-sponsored deposit insurance is needed.

Macey, Jonathan R., and Geoffrey P. Miller. 1995. Deposit Insurance, the Implicit Regulatory Contract, and the Mismatch in the Term Structure of Banks' Assets and Liabilities. *Yale Journal of Regulation* 12, no. 1:1–24.

The authors discuss the relationship between deposit insurance and the mismatch in the term structure of commercial banks' assets and liabilities. First they

critique the traditional regulatory hypothesis which posits that government-sponsored deposit insurance gives banks incentives to fund long-term assets with short-term liabilities because it enhances bank credit and subsidizes short-term liabilities. The authors then use public-choice theory to argue that a modified version of the regulatory hypothesis is the best explanation for the mismatch. They also argue that embracing the regulatory hypothesis does not imply accepting the government-sponsored deposit insurance scheme as it exists in the United States.

Mazumdar, Sumon C. 1996. Bank Regulations, Capital Structure, and Risk. *Journal of Financial Research* 19, no. 2:209–28.

The joint influence of the Federal Reserve's (Fed) discount window credit and reserve requirements and FDIC's deposit insurance on a bank's optimal capital structure and asset risk choices is analyzed. The specific seniority of such regulatory claims, and potentially strong negative correlation between bank asset classes, significantly alters our traditional view of such regulatory influences on bank behavior. The author finds that the discount window's presence does not always prompt bank risk-taking and leverage, but it does partially offset such incentives under certain conditions. In addition to its cost, a reserve requirement provides the bank with an indirect subsidy that may encourage deposit funding. Thus, regulatory reforms, such as the FDIC Improvement Act of 1991, which curtail banks' access to the discount window, may not always be appropriate to resolve a bank's incentive for moral hazard behavior. The Fed's presence needs to be more comprehensively examined to design effective regulatory policy. (©1999 EconLit)

Mazumdar, Sumon C., and Suk Heun Yoon. 1996. Loan Monitoring, Competition, and Socially Optimal Bank Capital Regulations. *Journal of Risk and Insurance* 63, no. 2:279–312.

This article analyzes socially optimal bank capital regulations that support fairly-priced deposit insurance. Under full information, banks voluntarily choose a socially optimal interior capital structure based on the cost-benefit tradeoff involved in monitoring loans. Capital regulations are, therefore, redundant. Under asymmetric information, incentive-compatible capital regulations together with fairly-priced deposit insurance are possible if and only if the regulator can prevent bank-borrower collusive side-payments and also observe the rate charged and the equity contributed by the bank for a loan. The bank would then again voluntarily choose the socially optimal interior capital structure and bank capital requirements would be redundant. Greater equity contributions by banks with higher loan quality are then socially optimal. These results highlight the critical importance of bank supervision in effective regulatory policy design. (©1999 EconLit)

Miles, David. 1995. Optimal Regulation of Deposit Taking Financial Intermediaries. *European Economic Review* 39, no. 7:1365–85.

The author analyzes the case for special restrictions on the commercial decisions of deposit-taking financial intermediaries. He shows that the existence of asymmetric information between managers of intermediaries and depositors generates unregulated outcomes, such that equity capital is underutilized and lending is suboptimally low. Accordingly, he designs a form of regulation to correct this market failure: a capital adequacy scheme of the same kind as those used by bank regulators. The author maintains that previous research had heretofore failed to provide such schemes with a theoretical underpinning. He also analyzes the ways in which optimal capital adequacy rules differ from the regulations currently (1995) used by banking supervisors.

Nelson, Richard W. 1993. Regulatory Structure, Regulatory Failure, and the S&L Debacle. *Contemporary Policy Issues* 11, no. 1:108–15.

Widespread S&L failures during the 1980s required the federal government to spend over 100 billion dollars to bail out the thrift deposit insurance fund. This paper interprets the S&L debacle as a regulatory failure. Review of the S&L debacle suggests that regulators failed to manage the deposit insurance system efficiently. But the regulatory agencies' structure appears to have played a secondary role in contributing to regulatory failure. Faced with the same incentives, objectives, and resources, regulators probably would have behaved similarly regardless of the regulatory structure. (©1999 EconLit)

Nelson, Richard W. 1996. Supervision and the Great Deposit Insurance Debate. In *Stability in the Financial System*, edited by Dimitri B. Papadimitriou, 84–93. Jerome Levy Economics Institute Series. St. Martin's Press.

This article offers insight into alternative interpretations of the deposit insurance debacle of the 1980s. First, the author reviews deregulation and expanded insurance coverage as contributors to the debacle. Second, he analyzes the interrelations between supervision and deposit insurance and traces their interaction to colonial times. He concludes that creators of the federal deposit insurance system sought to limit its risk by withholding an explicit federal guarantee and by building checks into the system, including conservative coverage limits, high chartering standards, and wider supervisory authority. He further suggests that the deposit insurance debacle of the 1980s resulted from erosion of these checks.

Noe, Thomas H., Michael J. Rebello, and Larry D. Wall. 1996. Managerial Rents and Regulatory Intervention in Troubled Banks. *Journal of Banking and Finance* 20, no. 2:1–50.

In this paper the authors investigate the effects of regulatory policies on troubled banks. In the authors' analysis banks' portfolio decisions are unobservable and are made by management. Management's decisions are influenced by the compensation and intervention policies of shareholders and regulators as well as

the impact of its portfolio choice on its share of firm-specific rents. They demonstrate that firm-specific rents may induce managers to prefer risky asset portfolios. These incentives may be exacerbated by shareholder-designed compensation contracts intended to align managerial and stockholder interests. Depending on the parametric specifications of the model, both the often-criticized practice of regulatory forbearance and the compensation regulations proposed in the Federal Deposit Insurance Corporation Improvement Act of 1991 may form part of the deposit insurance loss-minimizing regulatory policy. (©1999 EconLit)

Nuxoll, Daniel A. 1999. Internal Risk-Management Models as a Basis for Capital Requirements. *FDIC Banking Review* 12, no. 1:18–29.

In the first part of this article, the author describes some of the "Value at Risk" (VAR) models in use and discusses their limitations, especially in setting capital requirements. In the second part of the article, the author discusses three proposals to revise the Basle Accord. The first, which was adopted in 1996, permits banks to use internal VAR models to estimate one kind of risk—the risk of trading activities. The second would permit banks to use somewhat different VAR models to evaluate the risk of making loans. The third would permit banks to use any method to estimate their own risk. However, in contrast to current regulatory regimes, banks that underestimated the risk of their activities would be penalized.

O'Keefe, John P. 1993. Risk-Based Capital Standards for Commercial Banks: Improved Capital-Adequacy Standards? *FDIC Banking Review* 6, no. 1:1–15.

At year-end 1990, risk-based capital standards were implemented for U.S. commercial banks. By replacing simple flat-rate capital requirements with ones that explicitly incorporate risk, the new standards substantially changed the approach used to assess bank capital adequacy. This study investigates whether the risk-based capital standards are improved measures of capital adequacy. The author discusses the relative merits of both the risk-based and the former flat-rate capital standards and analyzes banks' regulatory capital ratios over time in order to assess the relative effectiveness of the two approaches.

Peek, Joe, and Eric S. Rosengren. 1996. The Use of Capital Ratios to Trigger Intervention in Problem Banks: Too Little, Too Late. Federal Reserve Bank of Boston *New England Economic Review* (September 1): 49–58.

In the 1980s and on into the 1990s, numerous depository institutions failed and the deposit insurance funds suffered dramatic losses. In response, Congress passed a series of bank regulatory acts intended to address the problems that had led to the crisis and thus prevent its recurrence. The capstone of this transformation of banking legislation was the Federal Deposit Insurance Corporation Improvement Act of 1991 (FDICIA), with two key provisions designed to reduce the cost of troubled banks to the deposit insurance funds: early closure of failing institutions, and early supervisory intervention in problem banks. Both provisions together are referred to as prompt corrective action. This

article considers whether capital ratio thresholds that trigger prompt corrective action provide enough lead time for intervention at trouble banks to be successful.

Pierce, James L. 1993. The Functional Approach to Deposit Insurance and Regulation. In *Safeguarding the Banking System in an Environment of Financial Cycles,* Conference Series no. 37, 111–30. Federal Reserve Bank of Boston.

This paper argues that the fixed-institutions approach is inadequate to deal with the issues faced by public-policymakers charged with ensuring the stability and efficiency of the banking system. The author argues that a more functional approach to bank regulation—one that focuses on crucial economic functions and not the preservation of existing institutional arrangements—is needed to confront the implications of the technological revolution that has integrated financial markets and institutions. The author argues that failure to adopt a more functional approach will cause an even larger share of the financial system to be protected by the federal safety net.

Pike, Christopher J., and James B. Thomson. 1992. FDICIA's Prompt Corrective Action Provisions. Federal Reserve Bank of Cleveland *Economic Commentary* (September 1).

This article focuses specifically on the early intervention (prompt corrective action) provisions of the Federal Deposit Insurance Corporation Improvement Act (FDICIA) of 1991. The authors review the origins of mandatory early intervention policy and the underlying political–economic arguments that support it; discuss the specific sections of the law that pertain to this policy; and glance at the effect new guidelines will have on the nation's depositories.

Randall, Richard E. 1989. Can the Market Evaluate Asset Quality Exposure in Banks? Federal Reserve Bank of Boston *New England Economic Review* (July/August): 3–24.

The insolvency of the federal deposit insurance fund for thrifts and the recognition of serious weaknesses in a number of large commercial banking organizations have sparked an intensive discussion of possible changes to make the banking system and the deposit insurance funds safer. This study evaluates the success of investors and security analysts in identifying and evaluating the problems of large bank holding companies in the 1980s. The author finds that the developing problems were not identified by the market until substantial damage was done. He concludes that market discipline cannot be relied on to limit credit risk and could be counterproductive by increasing liquidity risks. He further concludes that the mark-to-market concepts and risk-adjusted deposit insurance premiums, while having desirable features, cannot effectively protect the banking system and deposit insurance funds. (©1999 EconLit)

Thomson, James B. 1993. The Cost of Buying Time: Lessons from the Thrift Debacle. Federal Reserve Bank of Cleveland *Economic Commentary* (January 1).

This article takes a critical look at capital forbearance as a policy for dealing with troubled financial institutions. After reviewing the mounting evidence on the cost

of thrift forbearance, the author concludes that the policy was indeed a losing proposition for taxpayers.

Yoon, Suk Heun, and Sumon C. Mazumdar. 1996. Fairly Priced Deposit Insurance, Incentive Compatible Regulations, and Bank Asset Choices. *Geneva Papers on Risk and Insurance Theory* 21, no. 1:123–41.

This article provides incentive compatible regulations that support fairly priced deposit insurance in a competitive banking industry. If informational asymmetry exists between the regulator and banks regarding loan quality, it is shown to be incentive compatible when the regulator can observe actual loan rates decrease in loan quality. Competition in the loan market induces banks to be indifferent to all loans that satisfy a minimum acceptable quality and reject all riskier loans. The regulator could reduce the banking industry's riskiness by imposing stricter capital requirements that increase this minimum quality. (©1999 EconLit)

Young, Maureen Ann. 1990. Why Regulatory Reform Fails: A Study of the United States Banking System. Ph.D. diss., University of California at Berkeley.

This dissertation develops a theory of regulatory competence that proposes that there are limited functions and activities for which government actors are well suited, and argues that primary supervision of the deposit insurance system is not one of them. After reviewing the complex regulatory bureaucracy in the United States and analyzing the rationality of the existing structure, the thesis considers the merits of alternative regulatory restructuring proposals. The author also critiques regulatory effectiveness by examining, among other things, policies for dealing with bank failures, the "too big to fail" policy, and privatization of the deposit insurance function. Finally, the author presents a formal theory of regulatory competency, outlines a hierarchy of activities that government bureaucracies can successfully undertake, and concludes by offering some general principles for achieving efficient regulatory systems.