

1-1-1984

Bank Performance as the Economy Rebounds

Jonathan A. Scott
Southern Methodist University

George H. Hempel
Southern Methodist University

Follow this and additional works at: https://scholar.smu.edu/business_workingpapers



Part of the [Business Commons](#)

This document is brought to you for free and open access by the Cox School of Business at SMU Scholar. It has been accepted for inclusion in Historical Working Papers by an authorized administrator of SMU Scholar. For more information, please visit <http://digitalrepository.smu.edu>.

BANK PERFORMANCE AS THE ECONOMY REBOUNDS

Working Paper 84-104*

by

Jonathan A. Scott

and

George H. Hempel

Jonathan A. Scott
Assistant Professor of Finance
Edwin L. Cox School of Business
Southern Methodist University
Dallas, Texas 75275

George H. Hempel
Professor of Finance
Edwin L. Cox School of Business
Southern Methodist University
Dallas, Texas 75275

*This paper represents a draft of work in progress by the authors and is being sent to you for information and review. Responsibility for the contents rests solely with the authors. This working paper may not be reproduced or distributed without the written consent of the authors. Please address all correspondence to Jonathan A. Scott or George H. Hempel.

Bank Performance as the Economy Rebounds

Both short-and long-term interest rates have remained persistently high during the past year, a phenomenon that has spawned much discussion about whether rates are "too high" and the proper course of action the Administration and the Fed should take. Another aspect of the debate over high interest rates has been political "jawboning" which has suggested that banks have kept consumer and business loan rates artificially high.¹ Typically, loan rates adjust to market rates with a lag because the base lending rate reflects an average of the current cost of funds and the cost of previously issued funds that are still outstanding.² At the early stage of an economic recovery, banks may still have some longer term sources of funds locked in at higher rates. After these liabilities mature, the banks can renew this source at the lower, current market rates.

Loan rates did not fall as much (relative to market rates) in 1983 as they have in previous recoveries for two reasons. First, the average cost of funds for most banks has not declined as much as it did at the same stage of previous economic recoveries. This phenomenon precludes the base lending rate from dropping as much except for the largest money center banks. In past recoveries, banks have benefited from reintermediation of funds into accounts subject Regulation Q interest ceilings. But the introduction of Money Market Deposit Accounts (MMDAs) and Super-Now Accounts precludes this pattern from happening during this recovery. Second, changes in the bankruptcy code, effective in late 1979, raised the cost of producing loans which have been passed on to the borrowers.

The combined effect of these events have generally made previously acceptable return targets achievable only by taking on significantly more risk.

Banks could have charged higher loan rates or increase other fees and charges, but the competition from other financial institutions (as well as within the banking industry itself) in the lending and deposit markets limited the effectiveness of these strategies. Banks might have also lowered expenses through acquisitions to achieve its previously acceptable return targets, but the most recent research suggests that economies of scale in the banking industry are limited.

This paper examines in detail the reasons why the decline in lending rates at the early stage of this business cycle has been less (relative to market rates) than previous economic recoveries and to identify the types of risk banks may be forced to take if previously acceptable return targets are to be maintained. The paper concludes with the implications of these findings for bank management in the future.

Higher Relative Cost of Funds

The introduction of MMDAs and Super-Now Accounts in late 1982 -- early 1983 and the removal of rate ceilings on most savings type accounts in October, 1983, has had a dramatic effect on the deposit composition of most banks. For example, the MMDAs are estimated to have grown to \$380 billion by early January, 1984 since they were authorized in December, 1982. Table 1 shows an example balance sheet for a hypothetical \$100 million bank as of January 1, 1983, and January 1, 1984. Let us assume for this bank that Super NOW accounts grew \$2 million and MMDAs grew \$18 million during 1983. Part of this money was from new sources and part came from the bank's own low cost sources: demand deposits fell \$2 million, passbook savings fell \$6 million and time deposits fell \$3 million. Table 2 presents some representative costs of and returns on funds as of January 1, 1983, and January 1, 1984. The roughly 2

Table 1
 Typical National Bank
 January 1, 1983

Assets		Liabilities and Net Worth	
Cash and Due From	7	Demand Deposits	23
Short-term Invest	15	NOW Accounts	4
Long-term Invest	15	Super NOW Accounts	1
Loans	60	Passbook Savings	16
Premises	<u>3</u>	Money Market Accounts	2
		Time Deposits	42
		Borrowings and OL	6
Total	100	Equity	<u>6</u>
		Total	100

January 1, 1984

Assets		Liabilities and Net Worth	
Cash and Due From	7	Demand Deposits	21
Short-term Invest	15	NOW Accounts	5
Long-term Invest	15	Super NOW Accounts	3
New Use	10	Passbook Savings	10
Loans	60	Money Market Accounts	20
Premises	<u>3</u>	Time Deposits	39
		Borrowings and OL	5
		Equity	<u>7</u>
Total	110	Total	110

percent decline in most rates during 1983 would have resulted in a decline in interest expense from \$7.0 million based on rates at the start of 1983 to slightly over \$6.0 million based on the rates at the start of 1984 if the mix of funding sources had not changed.³ Table 3 illustrates that, rather than declining by \$1 million, the bank's actual cost of funds stayed roughly the same at the end of 1983 because of the changing mix of funds for the bank.

The lack of a significant decline in the bank's cost of funds means the bank cannot lower its lending rate or it must accept a lower return on assets and return on equity unless some offsetting action is taken. Banks that have relied heavily upon accounts subject to Regulation Q interest rate ceilings for funding loan demand feel the greatest effect. Competition (and political jawboning) may limit the extent to which lending rates fall. An adequate net interest margin may be achieved only at the expense of accepting increased credit risk. However, loan demand continued to be weak, requiring that some new funds may have to be placed in investments which typically earn lower rates of return than loans.⁴ Return on asset targets are being squeezed by a lack of a significant decrease in the cost of funds, by declining earnings rates on assets, and by a shift in asset composition to lower earning assets.

Table 3 examines two alternative courses of action bank management could take. First, all newly attracted funds are assumed to be invested in loans earning 12 percent. Despite the higher credit risk (as reflected in a higher loan/asset ratio), the bank's return on assets falls to .78 percent and its return on equity falls to 12.29 percent. Of course, investing in (riskier) loans with a higher return and higher credit risk could improve the bank's performance. The second alternative is to assume that the newly attracted funds are invested in short-term instruments earning 8.5 percent. Such a

Table 2

Assumed Annual Percent Costs and Returns

	January, 1983	January, 1984
Demand Deposits	0.0	0.0
NOW Accounts	5.5	5.5
Super NOWs	8.5	7.0
Passbook Savings	5.5	5.5
Money Market Accts	9.5	8.0
Time Deposits	12.0	10.0
Borrowing and OL	9.5	8.5
Short-term Invest	9.5	8.5
Long-term Invest	12.5	10.5
Loans	14.0	12.0

1. The NOW and passbook savings account rates are the statutory maximums.
2. The Super NOW and MMDA rates represent recently quoted averages from several banks.
3. The short-term investment (91-day Treasury bill) and borrowing (federal funds) rates are the current rates at each point in time.
4. The time deposit, long-term investment, and loan returns are average figures, reflecting a weighted sum of current and past rates on amounts previously issued, but still outstanding.

Table 3

Resulting Annualized Income Statements
(in \$ millions)

	Alternative Use of New Funds		
	<u>January, 1983</u>	<u>Loans January, 1984</u>	<u>Short-Term Investments January, 1984</u>
Interest Income	\$11.70	\$11.25	\$10.90
-Interest Expense	\$ 6.99	\$ 6.96	\$ 6.96
Interest Margin	\$ 4.71	\$ 4.29	\$ 3.94
+Other Income	\$ 0.50	\$ 0.60	\$ 0.60
-Other Expenses	\$ 3.20	\$ 3.30	\$ 3.30
Operating Income	\$ 2.01	\$ 1.59	\$ 1.24
Taxes (46%)	\$ 0.92	\$ 0.73	\$ 0.57
Net Income	\$ 1.09	\$ 0.86	\$ 0.67
Return on Assets	1.09%	0.78%	0.61%
Return on Equity	18.09%	12.29%	9.57%

solution promotes improved credit risk and better interest sensitivity matching (after all, MMDA's are interest sensitive), but this solution reduces ROA to .61 percent and ROE to 9.57 percent.

Another way to attempt to avoid a profit squeeze is for banks to take on more interest rate risk. With an upward sloping yield curve, a higher return on investments can be made by investing long-term taxable securities. But this strategy exposes the bank to increased interest rate risk. Moreover, the bank may be increasing its liquidity risk if the MMDA money is "hot". Should inflation flare up again, these funds may leave the bank for real assets such as real estate. Or, a continued robust recovery with a mild increase in interest rates (which would still cause material declines in long-term bond prices) may still expose the bank to liquidity risk if the funds are pulled out for investment in the stock market.

More investment in long-term municipal securities is yet another way to mitigate declining interest margins, especially given the high recent yields on these securities. This higher yield is required because of both higher credit risk and an increased supply of issues. Increased investment in long-term municipals, then, exposes the bank not only to additional interest rate risk, but possibly to additional credit risk.

Banks could avoid taking on more risk to maintain profitability by either increasing loan rates and non-interest income or by decreasing expenses. Increasing loan rates most likely is not a viable strategy because loan demand is still not strong and higher rates may not be supported by other banks, thus resulting in lost customers. Higher non-interest and fee income may also be an elusive goal, especially in deposit markets, where competition from money market funds, brokerage firms, and thrift institutions is intense.⁵ A significant reduction in expenses through acquisition to reduce the effect of

reduced interest margins is also not likely to be effective. Previous research has shown that economies of scale in banking are small and tend to diminish rapidly once bank size exceeds \$50 million in assets.⁶ If other income cannot be increased enough or expenses reduced enough to offset the effect of decreased interest margins, then higher risk may be the only feasible alternative for maintaining previous levels of profitability.

The New Bankruptcy Code and the Pricing of Loans

On October 1, 1979, the most significant change in the bankruptcy laws since 1938 became effective, the Bankruptcy Reform Act of 1978 (Public Law No. 95-598). The new Code was designed with three goals in mind: (1) provide the debtor with a fresh start, (2) maximize the value of the debtor's property, and (3) afford fair treatment of creditors, shareholders, and others with an interest in the debtor's property. In achieving these goals the Code significantly raised the cost of producing loans. For example, the automatic stay provision prohibits any action on the part of a creditor to collect its debt, whether secured or unsecured. The allowable amount of unattachable assets has been increased (unless states decide to override the federal exemptions). No knowledge test exists for preference payments. Setoffs can be disallowed within 90 days of the bankruptcy filing even if the debtor was solvent at the time or if the lender had security for the loan.

Faced with a new legal environment for lending that increased the cost of making loans, banks had the choice of absorbing these costs or passing them on to borrowers. The cumulative effects of competition from within and outside of the banking industry made absorption of these costs impossible if banks were to earn normal rates of return for their shareholders. Thus, the choice was reduced to passing the costs on to the borrowers. But these additional

costs could be passed on in a variety of ways. Loan contract rates could be increased. Credit standards could be made more stringent, thus increasing the loan turndown rate. Or less lending could take place.

Some evidence regarding the way in which these costs passed on in the form of higher loan rates is available from recent surveys (April 1980, 1982) of the membership of the National Federation of Independent Business. In these surveys, the respondents reported rates of interest on their most recent loans, characteristics of the loan (size, maturity, collateral requirements), and other information about the firm and its recent credit experience. The April, 1980 survey data included information about loans originated before and after the Code change and thus present an ideal opportunity to observe how the new bankruptcy Code affected contract interest rates on loans made to small businesses.

Any effort to identify the effect of the new Code on contract rates over the 1979 to 1980 period is complicated by the fact that loan rates rose dramatically at this time. Even if the change in the level of interest rates is controlled, attributing any remaining change in contract rates to the new Code is a very weak test. But the new Code does not affect all loan contracts in the same way. By identifying these differential effects on specific types of contracts and then by controlling for changes in market rates of interest and differences in borrower risk, a better test for the effect of the new Code on loan rates can be made.

The revised Code has a differential effect on non-corporate versus corporate loans. An expanded list of property exemptions (i.e., unattachable assets) reduces the pool of assets available to satisfy a bankruptcy proceeding and raises expected bad debt losses. This provision only affects personal loans, such as those made to proprietorships and partnerships, and not those

to corporations. The new Code also allows proprietorships access to Chapter 13 bankruptcy filing, which has the effect of delaying liquidation proceedings while the bankrupt debtor files a plan to repay debts out of future income. Both of these provisions in the revised Code should increase the cost of making loans to non-corporate small businesses relative to corporate ones and, therefore, reduce the spread between corporate and non-corporate loans after the effective date of the Code.

The second differential effect pertains to secured versus unsecured loans. All of the provisions listed above (automatic stay, preferences, set-off) raise the cost of making both secured and unsecured loans. But the provision of adequate protection for secured creditors gave this class of creditors an advantage over unsecured creditors not available in the previous bankruptcy act. The adequate protection clause established for the first time in the history of bankruptcy law how a debtor or trustee in possession may use a lender's collateral. With the benefit of adequate protection, the cost of making an unsecured loan should rise relative to an secured loan, causing the spread between secured and unsecured loans to decline after the effective date of the Code.

The evidence regarding these hypotheses is presented in Table 4. Short-term commercial bank loan rates obtained from almost 700 small businesses in the April, 1980 survey were used in the computations. The data are taken from the results of a regression analysis that controlled for changes in the market rates of interest (the 91-day Treasury bill rate) and borrower risk (using years in business and loan size as proxies).⁷ The spread between secured and unsecured loans fell about 90 basis points (122-135), on average, after the Code change, even after controlling for the level of interest rates and for borrower risk. The spread between corporate and non-corporate loan

Table 4

Small Business Short-term Loan Rates:
Before and After the Bankruptcy Code Change

Difference in Loan Rates (in basis points)

	April, 1980		April, 1982
	<u>Pre-Code</u>	<u>Post Code</u>	<u>Post-Code</u>
Secured vs. Unsecured	122	35	37
Corporate vs. Non-corporate	113	43	0

Source: Credit, Banks and Small Business (April, 1980, 1982) National Federation of Independent Business, San Mateo, California.

rates also fell, about 70 basis points on average (113-431). The April, 1982 survey data confirmed the effects of the Code change on small business loan rates. Non-corporate loan rates were not significantly different from corporate loan rates and secured loan rates were above unsecured loan rates by approximately the same amount as they were after the Code change in the first quarter of 1980 (about 37 basis points).

Conclusion

Banking interest margins are under extreme pressure as the economy moves into the second year of positive real economic growth. In the past, these margins may have widened slightly at this stage of the recovery because of reintermediation of funds into lower rate accounts subject to regulation Q. But the higher overall level of rates plus the availability of MMDA and Super-Now Accounts have precluded this reintermediation of funds into lower rate accounts. In 1983, funds have moved from lower rate passbook accounts into those higher rate MMDA accounts for many banks.

Weak loan demand, increased lending competition from thrifts, and thrift competition for MMDA funds have all squeezed interest margins, with the overall effect of keeping lending rates higher (relative to other market rates of interest) than they have been in previous recoveries. Moreover, the new Bankruptcy Code has also increased the base lending rate by raising expected bad debt losses.

The combination of the lack of a significant decline in the cost of funds with limited lending opportunities early in an economic recovery may force banks into taking more risk to attain their 'normal' return targets. This higher risk arises from three sources. First, because loan demand is typically weak at the beginning of an economic recovery, increased credit risk may

have to be taken on to maintain normal net interest margins. Second, if banks attempt to offset the lack of a decline in the cost of funds through investment in long-term securities (taxable or non-taxable), they expose themselves to increased interest rate risk. And third, if the new MMDA money is 'hot' and interest rates do rise suddenly, any shift of these funds out of banks into real or other financial assets would create liquidity problems.

The implications of this new banking environment should be uncomfortable, but clear to bank managers if banking profitability is to be maintained: banking risks probably have to be increased in the future. Above average risk may now have to be taken to attain what was once an average return on assets' target, even if loan demand picks up. If banks extend the maturity of their investment portfolios to attain these targets, they would be well-advised to carefully evaluate their capital position. A sensitivity analysis of a scenario with rising rates and 'fleeing' MMDA money could be a sobering exercise.

The alternative to taking on more risk is to recognize that with the deregulation of the liability side of the balance sheet and intense competition from outside the industry, the banking industry has become more competitive. Unfortunately, more competition usually brings lower rates of return. Bankers cannot individually stop these competitive pressures, but they can adapt by recognizing the emerging new set of risk-return trade-offs.

Footnotes

¹K.H.Bacon, "Regan Criticizes Financial Institutions, Says Rates Don't Reflect Cooler Inflation", Wall Street Journal, Sept. 9, 1983, p3.

²R. W. Hafer ("The Prime Rate and the Cost of Funds: Is the Prime Too High," Review, Federal Reserve Bank of St. Louis, May 1983) documents this phenomenon statistically using regression analysis.

³The \$6.0 million interest expense figure is computed by applying the January, 1984 interest costs to the January 1, 1983 balance sheet amounts (and thus assumes no asset growth as well as no change in funding mix).

⁴The combined effects of more liberal depreciation allowances and significant paring of obsolete production capacity has greatly improved corporate cash flow.

⁵Many smaller banks have begun to offer discount brokerage services, which large regional and money center banks have begun to offer an array of services to their downstream correspondents (see D. W. Hilder, "Some Big Banks Begin Marketing Advanced Services to Smaller Banks," Wall Street Journal, July 25, 1983). Whether the new service offerings, will generate sufficient income to offset narrower interest margins remains to be seen.

⁶See G. J. Benston, G. A. Haweck and D. B. Humphrey ("Operating Costs in Commercial Banking," Economic Review, November 1982, Federal Reserve Bank of Atlanta) for a summary of the most recent evidence on economies of scale in banking.

⁷A more detailed discussion of these results is in Jonathan A. Scott, "The Effect of the Bankruptcy Reform Act of 1978 on Small Business Loan Pricing," unpublished manuscript, Southern Methodist University, Dallas, TX, 1984.

The following papers are currently available in the Edwin L. Cox School of Business Working Paper Series.

- 79-100 "Microdata File Merging Through Large-Scale Network Technology," by Richard S. Barr and J. Scott Turner
- 79-101 "Perceived Environmental Uncertainty: An Individual or Environmental Attribute," by Peter Lorenzi, Henry P. Sims, Jr., and John W. Slocum, Jr.
- 79-103 "A Typology for Integrating Technology, Organization and Job Design," by John W. Slocum, Jr., and Henry P. Sims, Jr.
- 80-100 "Implementing the Portfolio (SBU) Concept," by Richard A. Bettis and William K. Hall
- 80-101 "Assessing Organizational Change Approaches: Towards a Comparative Typology," by Don Hellriegel and John W. Slocum, Jr.
- 80-102 "Constructing a Theory of Accounting--An Axiomatic Approach," by Marvin L. Carlson and James W. Lamb
- 80-103 "Mentors & Managers," by Michael E. McGill
- 80-104 "Budgeting Capital for R&D: An Application of Option Pricing," by John W. Kensinger
- 80-200 "Financial Terms of Sale and Control of Marketing Channel Conflict," by Michael Levy and Dwight Grant
- 80-300 "Toward An Optimal Customer Service Package," by Michael Levy
- 80-301 "Controlling the Performance of People in Organizations," by Steven Kerr and John W. Slocum, Jr.
- 80-400 "The Effects of Racial Composition on Neighborhood Succession," by Kerry D. Vandell
- 80-500 "Strategies of Growth: Forms, Characteristics and Returns," by Richard D. Miller
- 80-600 "Organization Roles, Cognitive Roles, and Problem-Solving Styles," by Richard Lee Steckroth, John W. Slocum, Jr., and Henry P. Sims, Jr.
- 80-601 "New Efficient Equations to Compute the Present Value of Mortgage Interest Payments and Accelerated Depreciation Tax Benefits," by Elbert B. Greynolds, Jr.
- 80-800 "Mortgage Quality and the Two-Earner Family: Issues and Estimates," by Kerry D. Vandell
- 80-801 "Comparison of the EEOCC Four-Fifths Rule and A One, Two or Three σ Binomial Criterion," by Marion Gross Sobol and Paul Ellard
- 80-900 "Bank Portfolio Management: The Role of Financial Futures," by Dwight M. Grant and George Hempel

- 80-902 "Hedging Uncertain Foreign Exchange Positions," by Mark R. Eaker and Dwight M. Grant
- 80-110 "Strategic Portfolio Management in the Multibusiness Firm: An Implementation Status Report," by Richard A. Bettis and William K. Hall
- 80-111 "Sources of Performance Differences in Related and Unrelated Diversified Firms," by Richard A. Bettis
- 80-112 "The Information Needs of Business With Special Application to Managerial Decision Making," by Paul Gray
- 80-113 "Diversification Strategy, Accounting Determined Risk, and Accounting Determined Return," by Richard A. Bettis and William K. Hall
- 80-114 "Toward Analytically Precise Definitions of Market Value and Highest and Best Use," by Kerry D. Vandell
- 80-115 "Person-Situation Interaction: An Exploration of Competing Models of Fit," by William F. Joyce, John W. Slocum, Jr., and Mary Ann Von Glinow
- 80-116 "Correlates of Climate Discrepancy," by William F. Joyce and John Slocum
- 80-117 "Alternative Perspectives on Neighborhood Decline," by Arthur P. Solomon and Kerry D. Vandell
- 80-121 "Project Abandonment as a Put Option: Dealing with the Capital Investment Decision and Operating Risk Using Option Pricing Theory," by John W. Kensinger
- 80-122 "The Interrelationships Between Banking Returns and Risks," by George H. Hempel
- 80-123 "The Environment For Funds Management Decisions In Coming Years," by George H. Hempel
- 81-100 "A Test of Gouldner's Norm of Reciprocity in a Commercial Marketing Research Setting," by Roger Kerin, Thomas Barry, and Alan Dubinsky
- 81-200 "Solution Strategies and Algorithm Behavior in Large-Scale Network Codes," by Richard S. Barr
- 81-201 "The SMU Decision Room Project," by Paul Gray, Julius Aronofsky, Nancy W. Berry, Olaf Helmer, Gerald R. Kane, and Thomas E. Perkins
- 81-300 "Cash Discounts to Retail Customers: An Alternative to Credit Card Performance," by Michael Levy and Charles Ingene
- 81-400 "Merchandising Decisions: A New View of Planning and Measuring Performance," by Michael Levy and Charles A. Ingene
- 81-500 "A Methodology for the Formulation and Evaluation of Energy Goals and Policy Alternatives for Israel," by Julius Aronofsky, Reuven Karni, and Harry Tankin

- 81-501 "Job Redesign: Improving the Quality of Working Life," by John W. Slocum, Jr.
- 81-600 "Managerial Uncertainty and Performance," by H. Kirk Downey and John W. Slocum, Jr.
- 81-601 "Compensating Balance, Rationality, and Optimality," by Chun H. Lam and Kenneth J. Boudreaux
- 81-700 "Federal Income Taxes, Inflation and Holding Periods for Income-Producing Property," by William B. Brueggeman, Jeffrey D. Fisher, and Jerrold J. Stern
- 81-800 "The Chinese-U.S. Symposium On Systems Analysis," by Paul Gray and Burton V. Dean
- 81-801 "The Sensitivity of Policy Elasticities to the Time Period Examined in the St. Louis Equation and Other Tests," by Frank J. Bonello and William R. Reichenstein
- 81-900 "Forecasting Industrial Bond Rating Changes: A Multivariate Model," by John W. Peavy, III
- 81-110 "Improving Gap Management as a Technique for Reducing Interest Rate Risk," by Donald G. Simonson and George H. Hempel
- 81-111 "The Visible and Invisible Hand: Source Allocation in the Industrial Sector," by Richard A. Bettis and C. K. Prahalad
- 81-112 "The Significance of Price-Earnings Ratios on Portfolio Returns," by John W. Peavy, III and David A. Goodman
- 81-113 "Further Evaluation of Financing Costs for Multinational Subsidiaries," by Catherine J. Bruno and Mark R. Eaker
- 81-114 "Seven Key Rules for Successful Stock Market Speculation," by David Goodman
- 81-115 "The Price-Earnings Relative as an Indicator of Investment Returns," by David Goodman and John W. Peavy, III
- 81-116 "Strategic Management for Wholesalers: An Environmental Management Perspective," by William L. Cron and Valarie A. Zeithaml
- 81-117 "Sequential Information Dissemination and Relative Market Efficiency," by Christopher B. Barry and Robert H. Jennings
- 81-118 "Modeling Earnings Behavior," by Michael F. van Breda
- 81-119 "The Dimensions of Self-Management," by David Goodman and Leland M. Wooton
- 81-120 "The Price-Earnings Relatives - A New Twist to the Low-Multiple Strategy," by David A. Goodman and John W. Peavy, III
- 82-100 "Risk Considerations in Modeling Corporate Strategy," by Richard A. Bettis

- 82-101 "Modern Financial Theory, Corporate Strategy, and Public Policy: Three Conundrums," by Richard A. Bettis
- 82-102 "Children's Advertising: The Differential Impact of Appeal Strategy," by Thomas E. Barry and Richard F. Gunst
- 82-103 "A Typology of Small Businesses: Hypothesis and Preliminary Study," by Neil C. Churchill and Virginia L. Lewis
- 82-104 "Imperfect Information, Uncertainty, and Credit Rationing: A Comment and Extension," by Kerry D. Vandell
- 82-200 "Equilibrium in a Futures Market," by Jerome Baesel and Dwight Grant
- 82-201 "A Market Index Futures Contract and Portfolio Selection," by Dwight Grant
- 82-202 "Selecting Optimal Portfolios with a Futures Market in a Stock Index," by Dwight Grant
- 82-203 "Market Index Futures Contracts: Some Thoughts on Delivery Dates," by Dwight Grant
- 82-204 "Optimal Sequential Futures Trading," by Jerome Baesel and Dwight Grant
- 82-300 "The Hypothesized Effects of Ability in the Turnover Process," by Ellen F. Jackofsky and Lawrence H. Peters
- 82-301 "Teaching a Financial Planning Language as the Principal Computer Language for MBA's," by Thomas E. Perkins and Paul Gray
- 82-302 "Put Budgeting Back Into Capital Budgeting," by Michael F. van Breda
- 82-400 "Information Dissemination and Portfolio Choice," by Robert H. Jennings and Christopher B. Barry
- 82-401 "Reality Shock: The Link Between Socialization and Organizational Commitment," by Roger A. Dean
- 82-402 "Reporting on the Annual Report," by Gail E. Farrelly and Gail B. Wright
- 82-403 "A Linguistic Analysis of Accounting," by Gail E. Farrelly
- 82-600 "The Relationship Between Computerization and Performance: A Strategy for Maximizing the Economic Benefits of Computerization," by William L. Cron and Marion G. Sobol
- 82-601 "Optimal Land Use Planning," by Richard B. Peiser
- 82-602 "Variances and Indices," by Michael F. van Breda
- 82-603 "The Pricing of Small Business Loans," by Jonathan A. Scott
- 82-604 "Collateral Requirements and Small Business Loans," by Jonathan A. Scott
- 82-605 "Validation Strategies for Multiple Regression Analysis: A Tutorial," by Marion G. Sobol

- 82-700 "Credit Rationing and the Small Business Community," by Jonathan A. Scott
- 82-701 "Bank Structure and Small Business Loan Markets," by William C. Dunkelberg and Jonathan A. Scott
- 82-800 "Transportation Evaluation in Community Design: An Extension with Equilibrium Route Assignment," by Richard B. Peiser
- 82-801 "An Expanded Commercial Paper Rating Scale: Classification of Industrial Issuers," by John W. Peavy, III and S. Michael Edgar
- 82-802 "Inflation, Risk, and Corporate Profitability: Effects on Common Stock Returns," by David A. Goodman and John W. Peavy, III
- 82-803 "Turnover and Job Performance: An Integrated Process Model," by Ellen F. Jackofsky
- 82-804 "An Empirical Evaluation of Statistical Matching Methodologies," by Richard S. Barr, William H. Stewart, and John Scott Turner
- 82-805 "Residual Income Analysis: A Method of Inventory Investment Allocation and Evaluation," by Michael Levy and Charles A. Ingene
- 82-806 "Analytical Review Developments in Practice: Misconceptions, Potential Applications, and Field Experience," by Wanda Wallace
- 82-807 "Using Financial Planning Languages for Simulation," by Paul Gray
- 82-808 "A Look at How Managers' Minds Work," by John W. Slocum, Jr. and Don Hellriegel
- 82-900 "The Impact of Price Earnings Ratios on Portfolio Returns," by John W. Peavy, III and David A. Goodman
- 82-901 "Replicating Electric Utility Short-Term Credit Ratings," by John W. Peavy, III and S. Michael Edgar
- 82-902 "Job Turnover Versus Company Turnover: Reassessment of the March and Simon Participation Model," by Ellen F. Jackofsky and Lawrence H. Peters
- 82-903 "Investment Management by Multiple Managers: An Agency-Theoretic Explanation," by Christopher B. Barry and Laura T. Starks
- 82-904 "The Senior Marketing Officer - An Academic Perspective," by James T. Rothe
- 82-905 "The Impact of Cable Television on Subscriber and Nonsubscriber Behavior," by James T. Rothe, Michael G. Harvey, and George C. Michael
- 82-110 "Reasons for Quitting: A Comparison of Part-Time and Full-Time Employees," by James R. Salter, Lawrence H. Peters, and Ellen F. Jackofsky
- 82-111 "Integrating Financial Portfolio Analysis with Product Portfolio Models," by Vijay Mahajan and Jerry Wind

- 82-112 "A Non-Uniform Influence Innovation Diffusion Model of New Product Acceptance," by Christopher J. Easingwood, Vijay Mahajan, and Eitan Muller
- 82-113 "The Acceptability of Regression Analysis as Evidence in a Courtroom - Implications for the Auditor," by Wanda A. Wallace
- 82-114 "A Further Inquiry Into the Market Value and Earnings' Yield Anomalies," by John W. Peavy, III and David A. Goodman
- 82-120 "Compensating Balances, Deficiency Fees and Lines of Credit: An Operational Model," by Chun H. Lam and Kenneth J. Boudreaux
- 82-121 "Toward a Formal Model of Optimal Seller Behavior in the Real Estate Transactions Process," by Kerry Vandell
- 82-122 "Estimates of the Effect of School Desegregation Plans on Housing Values Over Time," by Kerry D. Vandell and Robert H. Zerbst
- 82-123 "Compensating Balances, Deficiency Fees and Lines of Credit," by Chun H. Lam and Kenneth J. Boudreaux
- 83-100 "Teaching Software System Design: An Experiential Approach," by Thomas E. Perkins
- 83-101 "Risk Perceptions of Institutional Investors," by Gail E. Farrelly and William R. Reichenstein
- 83-102 "An Interactive Approach to Pension Fund Asset Management," by David A. Goodman and John W. Peavy, III
- 83-103 "Technology, Structure, and Workgroup Effectiveness: A Test of a Contingency Model," by Louis W. Fry and John W. Slocum, Jr.
- 83-104 "Environment, Strategy and Performance: An Empirical Analysis in Two Service Industries," by William R. Bigler, Jr. and Banwari L. Kedia
- 83-105 "Robust Regression: Method and Applications," by Vijay Mahajan, Subhash Sharma, and Jerry Wind
- 83-106 "An Approach to Repeat-Purchase Diffusion Analysis," by Vijay Mahajan, Subhash Sharma, and Jerry Wind
- 83-200 "A Life Stage Analysis of Small Business Strategies and Performance," by Rajeswararao Chaganti, Radharao Chaganti, and Vijay Mahajan
- 83-201 "Reality Shock: When A New Employee's Expectations Don't Match Reality," by Roger A. Dean and John P. Wanous
- 83-202 "The Effects of Realistic Job Previews on Hiring Bank Tellers," by Roger A. Dean and John P. Wanous
- 83-203 "Systemic Properties of Strategy: Evidence and a Caveat From an Example Using a Modified Miles-Snow Typology," by William R. Bigler, Jr.
- 83-204 "Differential Information and the Small Firm Effect," by Christopher B. Barry and Stephen J. Brown

- 83-300 "Constrained Classification: The Use of a Priori Information in Cluster Analysis," by Wayne S. DeSarbo and Vijay Mahajan
- 83-301 "Substitutes for Leadership: A Modest Proposal for Future Investigations of Their Neutralizing Effects," by S. H. Clayton and D. L. Ford, Jr.
- 83-302 "Company Homicides and Corporate Muggings: Prevention Through Stress Buffering - Toward an Integrated Model," by D. L. Ford, Jr. and S. H. Clayton
- 83-303 "A Comment on the Measurement of Firm Performance in Strategy Research," by Kenneth R. Ferris and Richard A. Bettis
- 83-400 "Small Businesses, the Economy, and High Interest Rates: Impacts and Actions Taken in Response," by Neil C. Churchill and Virginia L. Lewis
- 83-401 "Bonds Issued Between Interest Dates: What Your Textbook Didn't Tell You," by Elbert B. Greynolds, Jr. and Arthur L. Thomas
- 83-402 "An Empirical Comparison of Awareness Forecasting Models of New Product Introduction," by Vijay Mahajan, Eitan Muller, and Subhash Sharma
- 83-500 "A Closer Look at Stock-For-Debt Swaps," by John W. Peavy III and Jonathan A. Scott
- 83-501 "Small Business Evaluates its Relationship with Commercial Banks," by William C. Dunkelberg and Jonathan A. Scott
- 83-502 "Small Business and the Value of Bank-Customer Relationships," by William C. Dunkelberg and Jonathan A. Scott
- 83-503 "Differential Information and the Small Firm Effect," by Christopher B. Barry and Stephen J. Brown
- 83-504 "Accounting Paradigms and Short-Term Decisions: A Preliminary Study," by Michael van Breda
- 83-505 "Introduction Strategy for New Products with Positive and Negative Word-Of-Mouth," by Vijay Mahajan, Eitan Muller and Roger A. Kerin
- 83-506 "Initial Observations from the Decision Room Project," by Paul Gray
- 83-600 "A Goal Focusing Approach to Analysis of Intergenerational Transfers of Income: Theoretical Development and Preliminary Results," by A. Charnes, W. W. Cooper, J. J. Rousseau, A. Schinnar, and N. E. Terleckyj
- 83-601 "Reoptimization Procedures for Bounded Variable Primal Simplex Network Algorithms," by A. Iqbal Ali, Ellen P. Allen, Richard S. Barr, and Jeff L. Kennington
- 83-602 "The Effect of the Bankruptcy Reform Act of 1978 on Small Business Loan Pricing," by Jonathan A. Scott

- 83-800 "Multiple Key Informants' Perceptions of Business Environments,"
by William L. Cron and John W. Slocum, Jr.
- 83-801 "Predicting Salesforce Reactions to New Territory Design According
to Equity Theory Propositions," by William L. Cron
- 83-802 "Bank Performance in the Emerging Recovery: A Changing Risk-Return
Environment," by Jonathan A. Scott and George H. Hempel
- 83-803 "Business Synergy and Profitability," by Vijay Mahajan and Yoram
Wind
- 83-804 "Advertising, Pricing and Stability in Oligopolistic Markets for
New Products," by Chaim Fershtman, Vijay Mahajan, and Eitan Muller
- 83-805 "How Have The Professional Standards Influenced Practice?," by Wanda
A. Wallace
- 83-806 "What Attributes of an Internal Auditing Department Significantly
Increase the Probability of External Auditors Relying on the Internal
Audit Department?," by Wanda A. Wallace
- 83-807 "Building Bridges in Rotary," by Michael F. van Breda
- 83-808 "A New Approach to Variance Analysis," by Michael F. van Breda
- 83-809 "Residual Income Analysis: A Method of Inventory Investment Alloca-
tion and Evaluation," by Michael Levy and Charles A. Ingene
- 83-810 "Taxes, Insurance, and Corporate Pension Policy," by Andrew H. Chen
- 83-811 "An Analysis of the Impact of Regulatory Change: The Case of
Natural Gas Deregulation," by Andrew H. Chen and Gary C. Sanger
- 83-900 "Networks with Side Constraints: An LU Factorization Update," by
Richard S. Barr, Keyvan Farhangian, and Jeff L. Kennington
- 83-901 "Diversification Strategies and Managerial Rewards: An Empirical
Study," by Jeffrey L. Kerr
- 83-902 "A Decision Support System for Developing Retail Promotional Strategy,"
by Paul E. Green, Vijay Mahajan, Stephen M. Goldberg, and Pradeep K.
Kedia
- 83-903 "Network Generating Models for Equipment Replacement," by Jay E.
Aronson and Julius S. Aronofsky
- 83-904 "Differential Information and Security Market Equilibrium," by
Christopher B. Barry and Stephen J. Brown
- 83-905 "Optimization Methods in Oil and Gas Development," by Julius S.
Aronofsky
- 83-906 "Benefits and Costs of Disclosing Capital Investment Plans in
Corporate Annual Reports," by Gail E. Farrelly and Marion G. Sobol.

- 83-907 "Security Price Reactions Around Corporate Spin-Off Announcements,"
by Gailen L. Hite and James E. Owers
- 83-908 "Costs and their Assessment to Users of a Medical Library: Recovering
Costs from Service Usage," by E. Bres, A. Charnes, D. Cole Eckels,
S. Hitt, R. Lyders, J. Rousseau, K. Russell and M. Schoeman
- 83-110 "Microcomputers in the Banking Industry," by Chun H. Lam and George
H. Hempel
- 83-111 "Current and Potential Application of Microcomputers in Banking --
Survey Results," by Chun H. Lam and George H. Hempel
- 83-112 "Rural Versus Urban Bank Performance: An Analysis of Market Competition
for Small Business Loans," by Jonathan A. Scott and William C. Dunkelberg
- 83-113 "An Approach to Positivity and Stability Analysis in DEA," by A. Charnes,
W. W. Cooper, A. Y. Lewin, R. C. Morey, and J. J. Rousseau
- 83-114 "The Effect of Stock-for-Debt on Security Prices," by John W. Peavy, III
and Jonathan A. Scott
- 83-115 "Risk/Return Performance of Diversified Firms," by Richard A. Bettis
and Vijay Mahajan
- 83-116 "Strategy as Goals-Means Structure and Performance: An Empirical
Examination," by William R. Bigler, Jr. and Banwari L. Kedia
- 83-117 "Collective Climate: Agreement as a Basis for Defining Aggregate
Climates in Organizations," by William F. Joyce and John W. Slocum, Jr.
- 83-118 "Diversity and Performance: The Elusive Linkage," by C. K. Prahalad
and Richard A. Bettis
- 83-119 "Analyzing Dividend Policy: A Questionnaire Survey," by H. Kent
Baker, Richard B. Edelman, and Gail E. Farrelly
- 83-120 "Conglomerate Merger, Wealth Redistribution and Debt," by Chun H. Lam
and Kenneth J. Boudreaux
- 83-121 "Differences Between Futures and Forward Prices: An Empirical Investi-
gation of the Marking-To-Market Effects," by Hun Y. Park and Andrew H.
Chen
- 83-122 "The Effect of Stock-for-Debt Swaps on Bank Holding Companies," by
Jonathan A. Scott, George H. Hempel, and John W. Peavy, III
- 84-100 "The Low Price Effect: Relationship with Other Stock Market Anomalies,"
by David A. Goodman and John W. Peavy, III
- 84-101 "The Risk Universal Nature of the Price-Earnings Anomaly," by David A.
Goodman and John W. Peavy, III
- 84-102 "Business Strategy and the Management of the Plateaued Performer," by
John W. Slocum, Jr., William L. Cron, Richard W. Hansen, and Sallie
Rawlings
- 84-103 "Financial Planning for Savings and Loan Institutions -- A New Challenge,"
by Chun H. Lam and Kirk R. Karwan

84-104 "Bank Performance as the Economy Rebounds," by Jonathan A. Scott and
George H. Hempel