Historical Working Papers   Cox School of Business

1-1-1983

Bank Performance in the Emerging Recovery: A Changing Risk-Return Environment

Jonathan A. Scott
Southern Methodist University

George H. Hempel
Southern Methodist University

BANK PERFORMANCE IN THE EMERGING RECOVERY:
A CHANGING RISK-RETURN ENVIRONMENT

Working Paper 83-802*

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 author. This working paper may
not be produced or distributed without the written consent of the
authors. Please address all correspondence to Jonathan A. Scott or
George H. Hempel.

Bank Performance in the Emerging Recovery:
A Changing Risk-Return Environment

Jonathan A. Scott

George H. Hempel

Southern Methodist University

One sure sign that an economic recovery is progressing is when the President or some member of his cabinet complains that bank loan rates are too high relative to market interest rates. President Reagan has been no exception. In February of this year the President was very active in chiding banks to lower their lending rates (footnote 1).

In past recoveries, loan rates have usually fallen, but have lagged behind other market rates. For example, in January of 1975, the prime rate averaged 10.05 percent, while the Treasury bill rate averaged about 6.50 percent. By January 1976, the prime had only fallen to 7.00 percent, but the bill rate had dropped to 5.30 percent. This lag of loan rates in adjusting to other market rates occurs, in part, 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 (footnote 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.

In this paper we argue that loan rates are unlikely to fall as much (relative to market rates) 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 as it has in the past 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, have raised the cost of producing loans which have been passed on to the borrowers.

The combined effect of these events will most likely make previously acceptable return targets achievable only by taking on significantly more risk. Banks could charge 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 limits the effectiveness of these strategies. Banks might also lower expenses to achieve its previously acceptable return targets, but the most research to date suggests that economies of scale in the banking industry are limited. The purposes of this paper, then, are to examine the reasons why the decline in lending rates at this stage of the business cycle may be less (relative to market rates) than previous data would suggest, to identify the types of risk banks may be forced to take if previously acceptable return targets are to be maintained, and to discuss the implications of these findings for bank management.

Higher Relative Cost of Funds

The introduction of MMDAs and Super-Now Acounts has had a dramatic effect on the deposit composition of most banks. For example, the MMDAs are estimated to have grown to $350 billion by early June since they were authorized last December. Table 1 shows an example balance sheet for a sample $100 million bank as of December 15, 1982, and June 15, 1983. For this bank, Super NOW accounts grew $2 million and MMDAs grew $18 million in the period from December 15, 1982 through June 15, 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 December 15, 1982, and June 15, 1983. The roughly 2 percent decline in most rates during this six month period would have resulted in a decline in interest expense from slightly over $7.0 million in mid-December to $6.1 million by mid-June if the mix of funding sources had not changed (footnote 3). Table 3 illustrates that, rather than declining, the bank's actual cost of funds rose slightly ($7.06 million) by June because of its

Table 1

Typical National Bank

12/15/82

Assets		Liabilities and Net Worth	
Cash and Due From	7	Demand Deposits	23
Short-term Invest	15	NOW Accounts	4
Long-term Invest	15	Passbook Savings	16
Loans	60	Time Deposits	45
Premises	3	Borrowings and OL	6
		Equity	6
Total	100	Total	100

6/15/83

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 NOWs	2
New Use	10	Passbook Savings	10
Loans	60	Money Market Accts	18
Premises	3	Time Deposits	42
		Borrowings and OL	5
		Equity	7
Total	110	Total	110

Table 2

Assumed Annual Percent Costs and Returns

	12/15/82	6/15/83
Demand Deposits	0.0	0.0
NOW Accounts	5.5	5.5
Super NOWs		7.0
Passbook Savings	5.5	5.5
Money Market Accts		8.0
Time Deposits	12.0	10.0
Borrowing and OL	9.0	9.0
Short-term Invest	9.0	8.0
Long-term Invest	12.0	10.0
Loans	14.0	12.0

1. The NOW and passbook savings account rates are the statuatory 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

	12/15/82	Loans 6/15/83	S-T Invest 6/15/83
Interest Income	$11.55	$11.10	$10.70
-Interest Expense	$7.04	$7.06	$7.06
Interest Margin	$4.51	$4.05	$3.65
+Other Income	$0.50	$0.60	$0.60
-Other Expenses	$3.00	$3.10	$3.10
Operating Income	$2.01	$1.55	$1.14
Taxes(46%)	$0.92	$0.71	$0.53
Net Income	$1.09	$0.83	$0.62
ROA	1.09%	0.76%	0.56%
ROE	18.09%	11.92%	8.83%

changing mix of funds.

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 hreturn 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 non-decreasing interest costs can be covered by not letting lending rates fall. An adequate net interest margin may be achieved only at the expense of accepting increased credit risk. However, loan demand at the beginning of a recovery is typically weak and some new funds may have to be placed in investments which typically earn lower rates of return than loans. Return on asset targets are being squeezed, therefore, 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 might 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 .76 percent and it return on equity falls to 12 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 9 percent. Such a solution promotes improved credit risk and better interest sensitivity matching (after all, MMDA's are interest sensitive), but this solution reduces ROA to .56 percent and ROE to 8.83 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 securites. 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 munincipal securities is yet
another way to mitigate declining interest margins,
especially given the high recent yields on these
securities. This higher yield is required primarily
because of the higher credit risk is such securities.
Furthermore, the projected financial condition for state
and local governments in the near future is uncertain at
best. Increased investment in long-term munincipals,
then, exposes the bank not only to additional interest
rate risk, but also to additional credit risk. The cost
of attempting to maintain profitability may be steep in
terms of the addtional risk.

Banks could avoid taking on more risk to maintain
profitablity 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 weak at this stage of the
expansion 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. A significant reduction in
expenses 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 $25
million in assets (footnote 4). 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 profitablity.

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, Pub. L. No.
95-598, the Bankruptcy Reform Act of 1978. 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,
however, 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 were passed on 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 effect 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, setoff) 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 over 1000 small businesses (in each 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) (footnote 5). The spread between secured and unsecured loans fell about 65 basis points, 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 rates also fell, about 40 basis points on average. 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

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 |
	Pre-Code	Post-Code	Post-Code
Secured vs. Unsecured	106	40	46
Corporate vs. Non-corporate	92	55	0

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

Table 5

Small Business Credit Experience: Before
and After the Bankruptcy Code Change

	April 1980		April 1982
	Percent Reporting		
Percent of Initial Loan Request Made	Pre-Code	Post Code	Post-Code
100%	85	88	90
90-99	0	*	*
65-89	2	3	1
50-64	3	2	1
under 50	4	1	5
No answer	5	4	2
Most Recent Loan Request			
Accepted	70	81	86
Rejected	11	5	5
On Hold	3	2	2
No answer	16	13	7
Collateral Status			
Required	50	50	49
Not Required	50	50	51
Loan Size Distribution ($1000)			
Under 5	20	23	25
5-10	23	19	16
10-20	21	21	23
20-40	18	17	15
40-100	12	11	12
100-300	4	5	6
300 or more	1	3	3

* less than .5 percent

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

above unsecured loan rates by approximately the same amount as they were after the Code change in the first quarter of 1980 (about 45 basis points).

To complete the analysis, evidence is presented in Table 5 regarding small business credit experience before and after the Code change. Loan turndowns did not rise after the Code change, nor did any shortfall in the initial amount of the loan request increase. The loan size distribution did not change, nor did the proportion of loans secured. The data suggest, then, that banks adjusted to the increased costs of making loans precipitated by the new Code through higher loan interest rates. This adjustment by itself would not allow loan rates to fall as far as they have (relative to market rates) in previous economic recoveries. And, because the law essentially reduces the cost of defaulting for borrowers, overall credit risk has increased for banks.

Conclusion

In this paper we argue that loan rates may continue to remain high relative to market rates even as the economy continues to recover. Deregulation of the liability side of the balance sheet has not allowed the cost of funds for most banks to decline as much as in previous recoveries. Thus the historical lagging relationship between bank lending rates and other market rates may not occur during this recovery. The new bankruptcy Code has also affected loan rates by raising expected bad debt losses and expected foreclosure costs.

We also argue that the combination of the lack of a significant decline in the cost of funds with limited lending opportunities in a nascent 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 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. Above average risk may now have to be taken to attain what was once an average return on assets' target. 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 if they recognize that a new set of risk-return tradeoffs has emerged.

Footnotes

1. For example, Hobart Rowan, "Reagan Says Lower Rates Up to Banks," Washington Post, February 24, 1983.

2. R. 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.

3. The $6.1 million interest expense figure is computed by applying the 6/15/83 interest costs to the 12/15/82 balance sheet amounts (and thus assumes no asset growth as well as no change in funding mix).

4. A. S. McCall ("Economies of Scale, Operating Efficiencies and the Organizational Structure of Commercial Banks," Journal of Bank Research 11(Summer 1980)) gives an excellent summary of the extant research on economies of scale in banking.

5. A more detailed discussion of these results is in "The Effect of the Bankruptcy Reform Act of 1978 on Small Business Loan Pricing," Edwin L. Cox School of Business Working Paper No. 83-602 by Jonathan A. Scott.

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

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

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 Integenerational 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