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COMPETITIVE AND COLLECTIVE STRATEGIES:

AN EMPIRICAL EXAMINATION OF STRATEGIC GROUPS

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ABSTRACT

This study investigates strategic groups during a post-deregulation period. The research setting is a sample of U.S. savings and loan firms. Six dimensions are used to measure both competitive and collective strategies at the business-level. Four strategic groups are identified. In one grouping, firms have taken very few strategic initiatives in response to deregulation. Traditional associations between strategic emphasis and performance are evident in this grouping. Firms in a second group have responded to deregulation by taking a number of strategic initiatives. In this group, however, the traditional relationships between strategy and performance are no longer apparent. New associations with performance do also not exist. The two remaining groups contain single firms that responded to deregulation by pursuing extreme strategies. The implications are discussed.

INTRODUCTION

Firm strategic change often occurs in response to external events such as new technologies or regulatory decrees (Cool, 1985; Fiegenbaum, 1987). For analytic purposes, therefore, it is often appropriate to distinguish between those periods when there is relatively little external change and those periods when significant, important external change occurs. Resulting patterns in strategic actions should reflect strategic convergence in a stable period. In contrast, in a period influenced by external change, patterns should reflect strategic reorientations (Tushman & Romanelli, 1985).

A change in the external environment does not mean that firms in an affected industry will necessarily change their strategies. Some firms are likely to make changes but others may continue to pursue their current strategies. The firms that decide to change are also likely to vary in terms of the emphasis they place on some strategic dimensions and the tendencies they may have to shun some other possibilities. A consequence is that within an industry, the range and the complexity of possible strategic responses to an external change is potentially large and varies from essentially little or no change to potentially massive changes on particular dimensions. A further consequence is that the strategic groups that have previously characterized an industry are likely to be gradually reformed. The resulting process will eventually lead to some winners and losers, and it would be very valuable from both theoretical and practical viewpoints to be able to identify firm characteristics that could distinguish one from the other. Thus the process of industry reorientation set in motion by external events poses many strategically important questions. Are there new groupings, for example and what explains them? What consequences do these groupings have in terms of newly emering strategic patterns? How well are the new strategic groups perfoming?

This study investigates strategic groups in the U.S. savings and loan industry. More specifically, it is concerned with those groupings that have resulted from the deregulation of the industry during the 1980s. The study extends and complements the strategic group literature in two ways. First, by evaluating strategic groups in a post-deregulation environment, the focus is on a time period of strategic instability. This is in contrast to recent research, where stable strategic time periods (SSTPs) have been chosen to study strategic group structures (Cool & Schendel, 1987; Fiegenbaum & Thomas, 1990). Secondly, the types of strategies examined include both competitive and collective strategies at the business level. This is in contrast with most strategic group research which is mainly concerned with competitve strategies, though Fombrun and Zajac (1987) have argued that collective strategies reflecting interorganizational linkages should also be examined.

STRATEGIC GROUPS IN UNSTABLE TIME PERIODS

A number of researchers used the concept of SSTPs to study the dynamics of strategic groups, namely the extent to which changes in group strategy, in group membership, and in the number of groups obtain over time. For example, Mascarenhas (1989) used a subjective procedure to identify three periods of stability, and then formed strategic groups within these periods. Cool and Schendel (1987) and Fiegenbaum and Thomas (1990) used statistical procedures in their studies to identify four and nine SSTPs, respectively. Once the SSTPs had been identified, these studies analyzed changes in group structures by comparing group compositions of adjacent stable time periods. Thus the unstable time periods, where the strategic reorientation actually takes place, were treated as a black box.

We take issue with the prescription that meaningful strategic group research "must...be focused upon identifying periods of homogeneity and similarity in competitive strategic behavior..." (Fiegenbaum & Thomas, 1990, p. 198). In our opinion, this prescription calls for a premature procedural closure because the literature on strategic adaptation and change suggests that it is the unstable time periods that should be the focus of heightened research and also practical interest.

Two theories of organizational adaptation relevant for an understanding of strategic change processes are the *theories of incrementalism* (Quinn, 1980) and *quantum change* (Miller & Friesen, 1984). According to incrementalism, firm managements adjust to environmental challenges in a step by step, incremental manner and this usually over long periods of time. Similarly, the notion of quantum change suggests that firms often resist necessary changes for long time periods until the incongruence of a firm's strategy with its environment is all-apparent and can no longer be denied. At this point, dramatic (quantum) change will occur (Fiegenbaum & Thomas, 1993). Both theories suggest that a strategic reorientation is a gradual process characterized by inertia, delays, resistance, and cautious experimentations with new strategic options.

We believe that studying strategic groups during such periods of reorientation can lead to a better understanding of strategic change processes. At a minimum, the basic conflict between inertia and change should be manifest in the strategic group patterns. In a deregulatory context, at least two types of strategic groups can be expected to exist: those that hold on to strategies that were effective prior to deregulation, and those that experiment with new strategic options. Some empirical evidence also lends support to this argument. Zajac and Shortell (1989) found for a sample of U.S. hospitals that, after a change of the Medicare Payment System, many hospitals which had pursued a defender strategy (Miles & Snow, 1978) prior to the system change, subsequently pursued a prospector or analyzer strategy. Other hospitals continued to pursue defender strategies. Similarly, in a study of the U.S.

railroad industry, Smith and Grimm (1987) found that firms adopted new strategies only hesitantly after deregulation. We propose therefore, that:

Proposition 1:   During a post-deregulation period, at least two types of strategic groups are manifest: those that hold on to previously established strategies and those that experiment with new strategic options.

The literature has generally assumed that the relationship between strategic group membership and economic performance changes over time and as a result of environmental discontinuities. However, the empirical evidence across industries for this general conclusion is inconsistent (Cool & Dierickx, 1993). For example, while Fiegenbaum and Thomas (1990) found evidence of performance differences across strategic groups in their study of the insurance industry, Cool and Schendel (1987) found no such differences in their study of the pharmaceutical industry.

So far as periods of strategic transition and instability are concerned, it can be argued that old strategic patterns may become less effective over time if, when compared to new strategic approaches, the latter have a better alignment with the changed environmental conditions. However, the potential superiority of new strategic patterns may not be manifest during transitional periods. Rather, it may only become evident during subsequent stable time periods when new relationships between strategic emphases and performance have had time to establish themselves. That is, organizations may need time to develop the distinctive competencies (Snow & Hrebiniak, 1980) necessary to improve performance in a drastically changed environment (Zajac & Shortell, 1989). Strategic changes observable during a post-deregulation period are likely to reflect tentative experiments rather than established patterns of viable strategies. Therefore, during unstable strategic time periods, prior strategies are probably still identifiable, but they may have become less effective. On the other hand, the effectiveness of new strategic approaches is not yet evident. This leads to two related propositions:

Proposition 2a: During a post-deregulation period, there should be no difference in the short-term performances achieved by different strategic groups.

Proposition 2b: During a post-deregulation period, strategic groups pursuing previously established strategies will display clearer patterns of strategy-performance relationships than groups with new strategic approaches.

COLLECTIVE STRATEGIES IN DEREGULATED ENVIRONMENTS

In addition to adopting competitive strategies, organizations may also choose to cooperate strategically by pursuing collective strategies (Astley & Fombrun, 1983; Bresser & Harl, 1986). Firms may favor cooperation when they perceive they have a limited ability to cope, individually, with the complicated demands that stem from environments characterized by multiple interdependencies and unpredictable change (Bresser, 1988; Emery & Trist, 1965). Multiple interdependencies and unpredictable change are typical of deregulated environments, and since such environments also provide new opportunities for cooperation, it can be predicted that:

Proposition 3:   During a post-deregulation period, the use of collective strategies will be frequent.

Harrigan (1988) and Bresser (1988) have argued that a firm's use of collective strategies should complement its use of competitive strategies. Fombrun and Zajac (1987) have provided evidence in support of this idea through a multi-level analysis of strategic groups. For a sample of firms from the financial services industry, they were able to identify several strategic groups that made extensive use of collective strategies side by side with competitive business-level strategies. The types of collective strategies considered ranged from informal cooperation agreements to formal contracts and joint ventures. Combinations of competitive and collective strategies should be particularly evident during periods where firms make a heightened use of collective strategies. Thus it follows:

Proposition 4:   During a post-deregulation period, strategic groups will exist that represent combinations of competitive and collective strategies.

There is no empirical evidence concerning the relationship between collective strategies and performance during a deregulatory period. However, Dollinger (1990) has reasoned about how collective strategies in general may affect performance. He argued that if cooperative behavior is pursued by only a few firms in an industry, these firms are likely to understand how, for them, cooperation is positively related to performance. As collective strategies become more prevalent, however, they may be needed simply as prerequisites to prevent poor performance. Yet as collective strategies are utilized, performance should increase. Since the utilization of collective strategies is expected to be widespread in deregulated environments, the following proposition results:

Proposition 5: During a post-deregulation period, the use of collective strategies will be associated with positive performance.

METHOD

Research Setting: The U.S. Savings and Loan Industry

Due to a comprehensive deregulation during the 1980s, the American savings and loan industry provides an excellent setting for testing the propositions developed above. Traditionally, the central mission of firms in the savings and loan industry (S&Ls) was to take in small deposits and make these funds available as home-mortgage loans within a particular region. This process took place within a regulated environment wherein only a limited operation of competitive forces was permitted (Phillips, 1975). However, as a result of unanticipated and large changes in interest rates during the 1970s, the capital base of the industry was jeopardized. Congress responded by deregulating the industry, implicitly challenging firms to become more competitive. The deregulation process began with the implementation of the provisions of the Financial Institutions Regulatory and Interest Rate Act of 1978 and continued with the Garn-St. Germain Depository Institutions Act of 1982. By January 1984, this deregulatory process was essentially complete (USL, 1989). The effect of these various Acts was to erase many of the barriers to competition that existed within and between the different industries making up the financial services sector. In the case of savings and loan institutions, the specific effects included the removal of the constraints on interest rates which S&Ls were permitted both to pay and to charge. Broad new investment powers also permitted S&Ls to make nonmortgage commercial and consumer loans in addition to traditional residential mortgage loans (Balderston, 1985; Eichler, 1989; Haveman, 1992).

Because of these and other related deregulation Acts, the industry environment within which S&Ls operated became much more interdependent and, as a result, also more competitive. Case studies suggest some of the different approaches firms used to respond in attempts to cope with these new competitive challenges (Bennett, 1988). Some became more like commercial banks, offering a wide array of financial products to diverse customer groups. Others focused on more sophisticated forms of mortgage banking. Some emphasized the provision of services through their branch facilities along with an increased emphasis on personnel training. Still others minimized the changes they introduced, focusing attention on retaining their long-term depositors who were less interest-rate sensitive and who provided the bank with a lower cost source of funds. These various efforts suggest that the S&Ls chose to adopt traditional, competitive business level strategies (Porter, 1980).

The increased freedoms provided by deregulation not only encouraged banks to adopt new competitive postures but also to explore the pursuit of various collective strategies (Astley & Fombrun, 1983; Fombrun & Zajac, 1987). As S&Ls exhausted the opportunities in their immediate regional markets, for example, they could build cooperative relationships with outsiders or specialists to tap larger geographic areas. Examples include the occasions when S&Ls use brokers to generate deposits, and either to sell off or to purchase loans (White, 1991). After selling loans, firms may continue the cooperative relationship with the buyers by providing loan administration services particularly as they have the needed facilities available in their branch networks. Similar types of arrangements may be made for the servicing of loans that have been purchased.

Given this history, the S&L industry provides an appropriate arena for examining strategic groups and the interplay of competitive and collective strategies during a time period characterized by strategic instability.

Sample

The data source for the study are the financial reports submitted on a quarterly basis to the Federal Home Loan Bank (FHLB) by New York and New Jersey savings banks and savings and loan associations from 1984 through 1988. The period of 1984 to 1988 was chosen because it corresponds with an inherently instable strategic time period when many S&Ls sought to reorient themselves in a highly competitive business environment: As mentioned above, the post-deregulation period started in 1984. It ended in 1989 when Congress reregulated the industry by enacting legislation that specified a set of net worth standards for thrifts, and additional limitations regarding S&L business operations (White, 1991).

To be included in the sample, institutions had to have existed over the entire five-year period and the data on them had to be complete. The resulting database includes 218 thrifts, representing 83.5 percent of all thrift institutions operating in New York and New Jersey as of December 1988. Data from the New York/New Jersey district were chosen because this region was not typical of some specific S&L-problems prevalent at the time, such as a high number of failures due to real estate speculation or bad investments. In fact, only six S&L firms from the district were involved in mergers between 1984 and 1988, and none of these mergers was mandated by the FHLB-Board.

To eliminate any temporary effects reflecting atypical fluctuations in variable values, the data are averaged across the 20 quarterly periods from 1984 through 1988. Through this procedure it is possible to depict how the S&Ls have evolved over the entire post-deregulation period without giving too much attention to any one specific point in time.

Operationalization of Variables

To ascertain S&L strategies in as much detail as possible, we selected all those variables from the database that suggested a particular strategic emphasis in terms of either business scope or resource commitments (Cool & Schendel, 1987). The result was 14 indicators of competitive strategy and 7 indicators of collective strategy (see Appendix A).

Competitive Strategy Variables

The measures of competitive strategy reflect aspects of Porter's (1980) generic strategies. Four variables measure differentiation. Two measure branch attractiveness in terms of current expenses and the value of fixed assets (office buildings, furniture, etc.) per branch. Two additional indicators of differentiation include income derived from nontraditional S&L services, and marketing expenses per branch. Six variables represent cost leadership. Assessments of operational efficiency are indicated in terms of the number of deposit accounts and the dollar value of deposits per branch. Other cost leadership indicators include the size of low interest deposits as a proportion of total financial liabilities, and two alternative assessments of the cost of funds: the relative size of interest charges on deposits, and the relative size of interest charges on deposits and borrowed money combined. Personnel expenses per branch are another cost measure. Strategic focus (or breadth) is captured by the amounts of conventional home mortgage, commercial, and consumer loans relative to total S&L assets, and the amounts of commercial and consumer loans as compared to the size of the S&Ls' traditional mortgage loan business.

Collective Strategy Variables

The measures of collective strategy are examples of pairwise cooperation reflecting exchange relationships with noncompetitors (Nielsen, 1988; Oliver, 1990). The specific variables include broker-originated deposits as a proportion of total liabilities, mortgage loans serviced for and by others as a proportion of total mortgage loans, loan servicing fees received as a proportion of total income, loan servicing fees paid as a proportion of total expenses, and loans sold or loans purchased, each as a proportion of total mortgage loans (see Appendix A).

Dimensions of Strategy

Pearson correlations for the competitive and collective strategy variables suggested patterns in the variable interrelationships (see Appendix B). To identify underlying patterns, the data were subjected to factor analyses using principal component analysis with varimax rotation.

Table 1.   Varimax-rotated Matrix of Competitive Strategy Variables

Variables	Branch Differentiation	Strategic Breadth	Cost Leadership (Deposits)
	Factors		
Branch Attractiveness (Expenses)	**.908**	.115	−.019
Branch Attractiveness (Investment)	**.817**	.118	−.038
Nontraditional Services	**.784**	−.041	−.049
Marketing Expenses	**.804**	.090	−.161
Branch Efficiency (Accounts)	**.889**	−.048	−.116
Branch Efficiency (Deposits)	**.890**	.014	.044
Low Interest Deposits	−.091	−.041	**.936**
Cost of Funds (Deposits)	−.026	−.022	**−.893**
Cost of Funds (All Funds)	.324	.235	**−.403**
Personnel Expense	**.935**	.132	−.059
Conventional Lending	−.057	**−.624**	−.303
Commercial Lending	.195	**.696**	−.186
Consumer Lending	−.058	**.829**	−.095
Non-Conventional Lending	.025	**.972**	−.087
Eigenvalue	5.369	2.620	2.029
Percent of Cumulative Variance	39.8	57.9	71.6

Table 1 shows the factor analysis of the 14 competitive strategy variables. A scree plot indicated that a three-factor solution accounting for 71.6 percent of the total variance is appropriate. Variables that load highly on *branch differentiation*, the first factor, include four that were expected to be indicators of differentiation and three that were expected to indicate a cost leadership emphasis. S&Ls scoring high on branch differentiation have invested in their branches to make them more attractive, have high marketing expenses, and attract relatively high amounts of income from nontraditional services. The number of accounts and the size of the deposits are both relatively high in these branches indicating operational efficiency. However another cost factor, personnel expense, is relatively high.

All the focus/breadth variables load on the second factor, *strategic breadth*. S&Ls scoring high on strategic breadth deemphasize traditional mortgage lending, having broadened their lending activities by emphasizing commercial and consumer lending. Thrifts with low scores on this factor are more focused, continuing to concentrate on mortgage lending.

Three cost leadership variables load highly on factor three, *cost leadership/deposits*. S&Ls that score highly on this factor have, relative to other banks in the sample, minimized their costs of funds. Low interest rate deposits represent a relatively large share of their total financial liabilities so that their interest charges on these deposits as well as their other costs of funds are relatively low.

Table 2. Varimax-rotated Matrix of Collective Strategy Variables

Variables	Factors		
	Portfolio Restructuring	External Loan Servicing	Deposit Brokering
Acquired Deposits (Liabilities)	.223	.036	**.971**
Loans Serviced (For Others)	**.975**	−.009	.149
Loans Serviced (By Others)	−.008	**.887**	.079
Servicing Fees (Received)	**.961**	.003	.181
Servicing Fees (Paid)	.077	**.871**	−.038
Loans Sold	**.913**	−.020	.167
Loans Purchased	**.868**	.162	.026
Eigenvalue	3.516	1.573	1.034
Percent of Cumulative Variance	53.2	75.4	87.5

These three dimensions of competitive strategy suggest that the scope and resource commitment variables originally chosen can be reduced to three dimensions which reflect Porter's (1980) generic strategies. The first factor combines aspects of differentiation and cost leadership. In contrast, factors two and three are "pure" strategic dimensions according to Porter's typology, representing focus/breadth or cost leadership decisions respectively.

The fact that the first factor is based on a combination of differentiation and cost leadership variables is not uncommon. Other studies obtained similar results (e.g., Kim & Lim, 1988; Miller & Friesen, 1986), and such combinations have been explained conceptually by Hill (1988) and Murray (1988). The factor loadings of "branch differentiation" suggest that within the S&L industry, successful differentiation of a branch network is associated with branch efficiency. However, to accomplish a combination of both differentiated and also more efficient branch operations, increased commitments to personnel expenditures are apparently required.

Table 2 shows the results of a factor analysis of the collective strategy variables. A scree plot suggested a three-factor solution, accounting for 87.5 percent of the total variance, is appropriate. Variables indicating an emphasis on both the purchase and the sale of mortgage loans, as well as two additional variables indicating an emphasis on servicing loans for others all load strongly on a first factor, *portfolio restructuring*. S&Ls with high scores on this factor are actively engaged in restructuring their asset portfolios and also obtain income by servicing loans for other institutions. Factor two, labeled *external loan servicing*, has two variables with high loadings indicating that an S&L is placing an emphasis on using the loan servicing activities that are provided by other institutions. A third factor, *deposit brokering*, loads on a single variable indicating the relative emphasis an S&L is placing on using brokers to originate deposits. An emphasis on deposit brokering usually means that an S&L in need of deposits cannot generate sufficient funds in its local market

to support the growth of its lending business and so seeks a cooperative arrangement to solve this problem.

Standardized factor scores (Mean = 0; S.D. = 1) are used in all subsequent analyses involving the six dimensions of strategy. Intercorrelations are shown in Appendix C.

Performance Variables

Two often used performance measures are used in this study: return on assets and proportional growth in assets (Lenz, 1980). ROA relates an S&L's net income to its total assets, and growth in assets is defined as the percent change in assets between two adjacent periods. While return on assets provides an indication of S&L profitability, growth in assets provides a general indication of how the S&Ls' volume of business may be changing following deregulation.

Size

Consistently in the literature, firm size has been shown to have an important impact on organizational behaviors and structures (Gerwin, 1981). Thus, it is included as a control variable. A number of indicators of size (total assets, total deposits, number of branch offices) were all found to be highly correlated. The size measure chosen for this study was the total number of branch offices operated by an S&L since this variable had the highest intercorrelations with other indicators of firm size.

Analyses

Descriptive statistics, cluster analyses, and regression analyses are used to test the propositions developed. To identify strategic groups, a *cluster analysis* was performed with the six dimensions of strategic conduct as input. Because of the size of the data set, a two-step procedure was employed. First, the SAS procedure FASTCLUS (SAS Institute, 1985) was used to provide an efficient disjoint clustering of large data sets on the basis of squared Euclidian distances; in this study, it produced 50 preliminary clusters. These clusters were then subjected to an agglomerative hierarchical cluster analysis using Ward's (1963) minimum variance method. Ward's method was chosen because it has the best overall performance in recovering known clusters in simulation studies (Milligan, 1981). Minimum variance methods have also been the approach of choice in previous empirical studies seeking to identify strategic groups or underlying patterns in strategy (e.g., Cool & Schendel, 1987; Hambrick, 1983; Kim & Lim, 1988).

The problem of determining the appropriate number of clusters (Everitt, 1980) was solved by looking for consensus among three statistics that estimate

appropriate numbers of clusters in a population: Sarle's (1983) cubic clustering criterion, the pseudo F-statistic (Calinski & Harabasz, 1974), and the pseudo t-square statistic (Duda & Hart, 1973). Additionally, t-tests comparing the cell means with the total sample means help determine the unique characteristics of each cluster.

RESULTS

Strategic Groups

The three selection statistics suggested slightly different cluster solutions. The pseudo t-square statistic indicated a three- or a five-cluster solution best represented the data. The cubic clustering criterion suggested a one- or a four-cluster solution. The pseudo F-statistic also indicated that a four-cluster solution might be most appropriate. As a result, the three-, four-, and five-cluster solutions were compared.

In the four- and five-cluster solutions, two clusters consist of a single outlying case and in both these solutions, the first cluster is identical. They differ in that the very similar second and third clusters of the five-cluster solution are collapsed to be the second cluster of the four-cluster solution. In the three-cluster solution an outlying case is merged into the first cluster, but the two larger clusters are virtually identical with those obtained in the four-cluster solution.

Given these similarities, the four-cluster solution is used and shown in Table 3. Cluster 1 ($n = 56$) consists of S&Ls that place some emphasis on branch differentiation and strategic breadth along with external loan servicing relative to the total sample means. They also have higher costs of deposits and seem to be somewhat larger than the average thrift institution. These results suggest that these firms have attempted to establish a strategic emphasis that is different from the classical line of business. Instead of narrowly focusing on mortgage lending, these firms have experimented with new lines of loan business, they were concerned with branch differentiation and efficiency, and they made use of external loan servicing arrangements. Since these firms appear to have pursued prospector and/or analyzer strategies (Miles & Snow, 1978), we shall refer to this cluster of firms as the "initiators."

S&Ls in Cluster 2 ($n = 160$), in contrast, have little distinctiveness so far as strategic emphasis is concerned. They deemphasize branch differentiation and focus on traditional mortgage lending while avoiding all three collective strategies. The S&Ls in cluster 2 also tend to be smaller than the average S&L considered in this study. These results suggest that these S&Ls have not established a strategic emphasis which differs from the classical S&L business since industry deregulation. Their main line of loan business is still traditional

Table 3. Cluster Analysis of Strategic Dimensions

	Strategic Groups[a]			
	Cluster 1 (n = 56)	Cluster 2 (n = 160)	Cluster 3 (n = 1)	Cluster 4 (n = 1)
Panel A: Strategic Dimensions				
Branch	.872***	−.328***	1.073	2.435
Differentiation	(1.276)	(.610)		
Strategic	.591**	−.204***	.820	−.772
Breadth	(1.478)	(.654)		
Cost Leadership	−.319**	.136	−2.220	−.581
(Deposits)	(.749)	(1.044)		
Portfolio	.013	−.087*	1.185	12.882
Restructuring	(.475)	(.472)		
External	.879***	−.301***	−.511	.252
Loan Servicing	(1.247)	(.645)		
Deposit	.154	−.130***	11.990	−.172
Brokering	(1.087)	(.157)		
Panel B: Size, Performance[b]				
Organizational	.409+	−.148***	−.257	.878
Size	(1.701)	(.523)		
Return on	−.145	.057	−.878	−.130
Assets	(1.275)	(.886)		
Growth in	.136	−.054	.101	.860
Assets	(1.177)	(.933)		

Notes: a   For clusters 1 and 2 means are reported first; standard deviations are in parantheses below each mean. Clusters 3 and 4 show the true values for the respective outlying cases.

b   The variables in Panel B are not included in the cluster procedure. To facilitate comparisons, the variables are standardized (mean = 0, s.d. = 1).

***, ** indicate that the cell mean is significantly different from the total sample mean

*, +   at .001, .01, .05, and .08 levels respectively, using t-tests.

home-mortgage lending. We shall refer to this cluster of firms as the "defenders."

So far as the single case clusters 3 and 4 are concerned, both are extreme in the emphasis they place on particular collective strategies. Both firms can be considered prospectors. The firm in cluster 3 places extraordinary emphasis on deposit brokering and also emphasizes branch differentiation and portfolio restructuring. Its cost of funds are very high as is evident from the cost leadership (deposits) value. The firm in cluster 4 is excessively involved in portfolio restructuring activities. In addition, it emphasizes branch differentiation and traditional mortgage lending, but its cost of funds also are high.

Taken together, these results support Proposition 1. One large group (cluster 2) was found that appears to hold on to previously established, pre-deregulation strategies. The firms in cluster 1 and the two single-firm "groups" are experimenting with new strategic options.

Strategic Groups and Performance

To test for the performance implications specified in Proposition 2a, evidence can be derived from Table 3. The two multifirm groups (clusters 1 and 2) do not differ significantly from one another with respect to either profitability or growth in assets. However, there is evidence that the extreme emphases pursued by the two single-firm groups (clusters 3 and 4) were not effective, at least on the long run and from a regulatory point of view. Both S&Ls were eventually considered as firms in trouble, and they were taken over by the Office of Thrift Supervision (OTS) after the study period was over. There is, therefore, support for Proposition 2a, the short-term performances of strategic groups in a deregulated environment do not differ.

To test further performance implications, regressions were calculated using the performance measures as dependent variables and the six dimensions of strategy as independent variables. For control purposes, firm size was included as an additional independent variable. Table 4 shows the correlations and regression results for the total sample and for the clusters 1 and 2 distinguished in Table 3.

The results in Table 4 for the two multi-firm strategic groups reveal that the correlation and regression coefficients for the defenders (cluster 2) are almost identical with those obtained for the total sample. The results indicate that the best way for defenders to enhance profits is by focusing on conventional mortgage lending and by maintaining a low-cost-of-deposits position: strategic breadth has a negative and cost leadership (deposits) a positive association with return on assets. Of the collective strategy variables, external loan servicing is strongly and negatively related to return on assets. With regard to growth in assets, portfolio restructuring is positively related, indicating that the buying and selling of loans is used as a means to further an S&L's growth within the defender group. Cost leadership (deposits) shows a negative association with growth in assets, suggesting that defender-S&Ls with a low cost of deposits position may not be pursuing growth aggressively. External loan servicing is negatively associated with growth in assets.

In contrast, for the initiators (cluster 1), there are few significant associations between the measures of strategy and performance. The exception is external loan servicing which is negatively related to return on assets. Thus, the regression results support Proposition 2b. During a post-deregulation period, the defender group displays a clearer pattern of strategy-performance relationships than the initiator group.[1]

Collective Strategies

Given the neglect of collective strategies in strategic group research, Propositions 3 to 5 were developed to better understand the significance of

Table 4. Correlations and Regression Results for Indicators of Strategy and Performance

	Total Sample (n = 218)				Cluster 1: Initiators[b] (n = 56)				Cluster 2: Defenders[c] (n = 160)			
	Pearson-Correlations[a]		OLS-Regressions[1]		Pearson-Correlations[b]		OLS-Regressions[1,2]		Pearson-Correlations[c]		OLS-Regressions[1,2]	
	ROA	GIA	ROA	GIA	ROA	GIA	ROA	GIA	ROA	GIA	ROA	GIA
Intercept			.179*** (.011)	2.400*** (.145)			.180*** (.043)	2.373*** (.521)			.151*** (.022)	2.769*** (.271)
Branch Differentiation	.01	.13	.010 (.010)	.145 (.127)	.21	.12	.006 (.021)	.081 (.255)	.07	.07	.006 (.017)	.186 (.212)
Strategic Breadth	−.18	.05	−.019* (.009)	.080 (.123)	−.07	.09	−.006 (.017)	.090 (.211)	−.16	.05	−.047** (.016)	−.007 (.204)
Cost Leadership (Deposits)	.15	−.16	.015+ (.009)	−.294* (.124)	−.04	−.11	−.010 (.035)	−.028 (.419)	.16	−.16	.024* (.010)	−.356** (.125)
Portfolio Restructuring	−.02	.45	.003 (.009)	.852*** (.124)	−.03	.10	−.048 (.063)	.465 (.757)	−.04	.54	−.008 (.022)	2.282*** (.274)
External Loan Servicing	−.40	−.16	−.056*** (.010)	−.360** (.127)	−.43	−.23	−.064** (.022)	−.278 (.266)	−.30	−.24	−.066*** (.016)	−.579* (.202)
Deposit Brokering	−.01	.06	−.002 (.011)	.092 (.147)	.15	.19	.004 (.025)	.380 (.297)	−.10	−.06	−.068 (.071)	1.297 (.886)
Organizational Size	−.11	.02	.000 (.001)	−.006 (.010)	−.01	.13	.000 (.001)	.012 (.015)	−.11	−.12	.001 (.001)	−.041* (.020)
Adjusted R-Square			.16	.23			.10	.00			.13	.37

Notes: ROA = Return on Assets; GIA = Growth in Assets
   [a] For r ≥ .13, p < .05
   [b] For r ≥ .26, p < .05
   [c] For r ≥ .16, p < .05
   [1] Unstandardized regression coefficients are reported first; standard errors are in parentheses below.
   [2] A Chow-test shows that the regressions involving clusters 1 and 2 are significantly different from one another at the 1 percent-level for GIA; they are insignificant for ROA.
   ***, **, *, + indicate that the coefficient is significant at the .001, .01, .05, and .10 levels, respectively.

Table 5. Frequency of Collective Strategies

	Percentage of S&Ls utilizing the strategy
Acquired Deposits (Liabilities)	15
Loans Serviced (For Others)	75
Loans Serviced (By Others)	89
Servicing Fees (Received)	64
Servicing Fees (Paid)	66
Loans Sold	72
Loans Purchased	78

such interorganizational arrangements. For a test of Proposition 3, the frequencies with which S&L firms in the sample utilized each of the seven collective strategies originally distinguished were inspected. As can be seen from Table 5, with the exception of the use of brokered deposits, all of the collective strategies identified are frequently used by S&Ls. This supports Proposition 3.

The information contained in Table 3 provides support for proposition 4, which predicts combinations of competitive and collective strategies. The initiator group combines competitive strategies such as strategic breadth and branch differentiation with an emphasis on external loan servicing. The two firms represented in clusters 3 and 4 make extensive use of at least one type of collective strategy, and simultaneously pursue competitive strategies such as branch differentiation, and strategic breadth or focus.

When consulting Table 4, it is apparent that external loan servicing is consistently and negatively associated with performance. By contrast, portfolio restructuring seems to improve an S&L's growth in assets, particularly when the firm is a defender. Thus, given these inconsistent results, Proposition 5 is not supported.

DISCUSSION

Contemporary strategic group research has recommended restricting its analyses to stable strategic time periods (Cool & Schendel, 1987; Fiegenbaum & Thomas, 1990). The results of the present study, however, suggest that the study of strategic groups during unstable strategic time periods also may be useful. In particular, such studies may allow for a better understanding of strategic reorientation processes. By contrasting strategic groups that continue to pursue traditional strategic patterns with those that experiment with new

options, the general directions in which an industry is evolving can be ascertained. Trends in strategic reorientation can be detected early, so that a prognosis of future, viable strategic patterns is facilitated.

In terms of the strategies that have been pursued by firms in the S&L industry during the post-deregulation period of 1984 to 1988, there are two multifirm and two single-firm strategic groups evident in the New York/New Jersey region. The relatively larger group continues to pursue traditional strategies and appears to include the more conservative S&Ls. These banks are comparatively small, have devoted relatively little effort to differentiating their branches, and they have tended to concentrate their lending activities in traditional mortgage markets. As a group, these banks have also shied away from involvement in collective strategies. In response to deregulation, therefore, these firms have changed little and seem to have adopted a defender position (Miles & Snow, 1978).

The second multifirm group of S&Ls includes larger, more aggressive firms. These strategic initiators have invested more heavily not only in differentiating their branches but also in broadening the types of investments they are prepared to make. Specifically, they used their new strategic freedom to emphasize commercial and consumer lending. Additionally, they do not have a low cost position so far as deposits are concerned, may be because as a part of their strategies, they have sought to attract deposits through higher interest rates. With regard to collective strategies, they have also made extensive use of external loan servicing. In response to deregulation, therefore, this group of firms has attempted numerous changes, suggesting more of a prospector approach according to Miles and Snow (1978). Similarly, the extreme emphases typical of the two single-firm groups also indicate that prospector strategies have been pursued.

As far as performance is concerned, the results do not suggest an advantage to either defender or prospector groups. However, there is evidence indicating that the groups differ with regard to their strategy-performance patterns. With respect to the relatively large defender group, there are strong predictive relationships. Specifically, a focus on traditional home mortgage lending together with low costs of deposits seems to augment return on assets, while the best strategy to enhance growth is through portfolio restructuring. It appears that these relationships reflect the traditional basis for success within the S&L industry.

So far as the smaller initiator group is concerned, however, with one exception the measures of competitive and collective strategy do not show statistically significant relationships with performance. It seems that changes introduced by the initiator group have had the effect of nullifying traditionally recognized relationships to performance. However, at the same time this study provides no hint that a new pattern of relationships with performance is emerging.

Why are the strategically initiating firms not better performers? Simply assuming they are pursuing wrong strategies does not take account of the uncertainties that are typical of a post-deregulation period. During such a period of strategic reorientation, it is likely that the strategically initiating S&L firms are still searching for viable and effective ways to pursue profit and growth goals. Although such firms may have abandoned some of their past patterns of strategic conduct, as a group they have not yet established consistent new patterns. This is in agreement with Zajac and Shortell's (1989) observations concerning the ways hospitals responded to a regulation jolt. They suggested that in the drastically changed, regulatory environment, it took time for hospitals to develop the distinctive competencies needed to improve performance. Similarly, Smith and Grimm (1987) concluded from their study of the deregulated railroad industry that firms needed a relatively long time to adjust after decades of stable regulation.

Similar to Fombrun and Zajac's (1987) findings, it was found that collective or interorganizational strategies are widespread in the S&L industry. Additionally, our strategic group compositions demonstrate that such strategies can help determine strategic groupings and are usually pursued in conjunction with business-level competitive strategies. We would argue that collective strategies should be included more regularly in strategic group research.

As far as the collective strategy-performace link is concerned, the only consistent finding in the analyses is the negative relationship between external loan servicing and both return on assets and growth in assets. One can speculate as to the possible reasons for this result. The transactions underlying external loan servicing activities are often participations in loan syndications which are managed by firms that compared to the typical S&L, are often more powerful both in terms of size and also in terms of financial sophistication. By carefully evaluating the terms of the servicing agreements, however, one might think it would be possible for S&Ls to avoid unfavorable terms. Nevertheless, the consistent negative relationships suggest that external loan servicing was a particularly hazardous endeavor for thrift institutions during this period. This may indicate that shortly after deregulation, S&L managers were entering into such new arrangements without understanding them well and without subjecting them to sufficient scrutiny and control (White, 1991). In addition, it is possible that they were being exploited by financial institutions from the investment banking community who had greater strategic power and expertise (Oliver, 1990; Porter, 1980).

The possible relationships between collective strategies and performace remain a source of ambiguity. The results obtained here suggest that the extent to which potential benefits result from collective strategies depends not just on the opportunities but additionally on management skills. Through involvement in collective strategies, S&Ls are allowing themselves to be

involved with skilled financial players and to be affected by economic conditions that may vary across different regions and over time.

A comparison is instructive. While our study focuses on S&Ls located in New York and New Jersey, Haveman's (1992) study investigated S&Ls in California. Our study shows positive relationships between asset growth and portfolio restructuring, and negative relationships between performance measures and external loan servicing. Haveman (1992) found positive relationships between performance and collective activities involving the purchase of broker-originated securities. These varied results emphasize the contrasting impacts which collective strategies may have on performance. They also suggest that it may not suffice to explain the performance consequences of collective strategies based on a single factor such as their prevalence within an industry (Dollinger, 1990). How collective strategies may be managed individually and jointly with competitive strategies so that they result in consistent benefits is an important area for future research.

In terms of caveats, this study has focused on one particular industry in a narrowly defined geographic region. Additionally, it has used objective data for a specific time period. While objective data are often considered desirable, in times of strategic instability and reorientation it may be that more subjective and conceptional understandings is what determines strategic success. Hence, a valuable extension of strategic group research may be the consideration of executives' cognitive maps (Bogner & Thomas, 1993). When confronted with environmental instability and change, managers may be guided in their strategic decision making more by their cognitive constructions than by "objective" group structures that can be derived from financial data.

APPENDIX A:
VARIABLE OPERATIONALIZATIONS

Variable Name	Variable Description*
COMPETITIVE STRATEGY VARIABLES	
Differentiation	
(1) Branch Attractiveness (Expenses)	Dollar value of expenses for office occupancy, furniture, fixtures, & equipment per branch
(2) Branch Attractiveness (Investment)	Dollar value of fixed assets (office buildings, leasehold improvements, furniture, fixtures, and equipment) per branch
(3) Nontraditional Services	Income from nontraditional services per branch
(4) Marketing Expenses	Marketing expenses per branch
Cost Leadership	
(5) Branch Efficiency (Accounts)	Number of deposit accounts per branch

(6) Branch Efficiency (Deposits) — Dollar value of deposits per branch

(7) Low Interest Deposits — Dollar value of deposits in NOW, Super NOW, other transaction accounts, money market accounts, & passbook accounts as a percentage of total financial liabilities

(8) Cost of Funds (Deposits) — Interest charges on deposits as a percentage of the value of all deposits

(9) Cost of Funds (All Funds) — Interest charges on deposits and borrowed money as a percentage of the total value of deposits and borrowings

(10) Personnel Expense — Operating expenses for directors fees, officers, & employees compensation per branch

Focus/Breadth

(11) Conventional Lending — Net mortgage loans as a percentage of total assets

(12) Commercial Lending — Net commercial loans as a percentage of total assets

(13) Consumer Lending — Net consumer loans as a percentage of total assets

(14) Non-conventional Lending — Net commercial and consumer loans as a percentage of net mortgage loans

COLLECTIVE STRATEGY VARIABLES

(15) Acquired Deposits (Liabilities) — Broker-originated deposits as a percentage of total liabilities

(16) Loans Serviced (For Others) — Mortgage loans serviced for others as a percentage of total (net) mortgage loans

(17) Loans Serviced (By Others) — Mortgage loans serviced by others as a percentage of total (net) mortgage loans

(18) Servicing Fees (Received) — Loan servicing fees received as a percentage of total income

(19) Servicing Fees (Paid) — Loan servicing fees paid as a percentage of total expenses

(20) Loans Sold — Loans and participations sold as a percentage of total (net) mortgage loans

(21) Loans Purchased — Loans and participations purchased as a percentage of total (net) mortgage loans

Note: * To control for the effects of institution size and inflation, the variables are expressed as ratios or percentages, using appropriate denominators (e.g., number of branches, total assets, total income).

APPENDIX B: PART 1

Means, Standard Deviations, and Intercorrelations[d] of Competitive Strategy Variables ($n = 218$)

Variables	Means	s.d.	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Branch Attractiveness (Expenses)	38.14[a]	22.87[a]													
2. Branch Attractiveness (Investment)	460.98[a]	308.11[a]	.71												
3. Nontraditional Services	20.49[a]	21.24[a]	.72	.59											
4. Marketing Expenses	10.11[a]	10.07[a]	.69	.66	.53										
5. Branch Efficiency (Accounts)	7.03[b]	3.64[b]	.76	.70	.58	.64									
6. Branch Efficiency (Deposits)	44.33[c]	27.04[c]	.75	.66	.60	.68	.89								
7. Low Interest Deposits	40.06	10.17	-.09	-.13	-.14	-.23	-.04	-.18							
8. Cost of Funds (Deposits)	1.85	.11	-.02	.04	-.02	.07	.02	.17	-.78						
9. Cost of Funds (All Funds)	0.13	.15	.38	.18	.33	.33	.16	.20	-.36	.13					
10. Personnel Expense	100.81[a]	58.70[a]	.87	.75	.71	.77	.79	.82	-.15	.01	.33				
11. Conventional Lending	71.96	10.13	-.09	-.07	-.01	-.04	-.11	-.04	-.16	.16	-.07	-.06			
12. Commercial Lending	0.76	1.48	.25	.22	.12	.24	.14	.14	-.16	.09	.38	.28	-.28		
13. Consumer Lending	4.00	3.52	.06	.11	-.06	.03	-.01	-.07	-.12	.09	.03	.09	-.30	.34	
14. Non-Conventional Lending	7.28	7.73	.13	.14	-.01	.13	.05	.02	-.11	.06	.20	.16	-.50	.65	.88

Notes:
a Data are in dollars in thousands per branch
b Data are accounts in thousands per branch
c Data are dollars in millions per branch
d Correlations > .13 are significant at $p < .05$

APPENDIX B: PART II

Means, Standard Deviations, and Intercorrelations[a] of Collective Strategy Variables ($n = 218$)

Variables	Means	s.d.	15	16	17	18	19	20
15. Acquired Deposits (Liabilities)	0.12	.61						
16. Loans Serviced (For Others)	16.17	45.41	.36					
17. Loans Serviced (By Others)	13.68	13.90	.08	−.01				
18. Servicing Fees (Received)	0.36	.98	.39	.87	−.01			
19. Servicing Fees (Paid)	0.22	.33	.03	.07	.55	.09		
20. Loans Sold	1.69	3.72	.35	.82	.01	.89	.06	
21. Loans Purchased	1.13	3.25	.25	.81	.18	.80	.12	.67

Note: [a]Correlations > .13 are significant at $p < .05$

APPENDIX C:

Intercorrelations of Strategic Dimensions and Organizational Size

	Branch Differen- tiation	Strategic Breadth	Cost Leadership (Deposits)	Portfolio Restruc- turing	External Loan Servicing	Deposit Brokering
Branch Differentiation						
Strategic Breadth	.00					
Cost Leadership (Deposits)	.00	.00				
Portfolio Restructuring	.22	.08	−.08			
External Loan Servicing	.14	.12	−.11	.00		
Deposit Brokering	.13	.04	−.17	.00	.00	
Organizational Size	.23	.17	−.20	.07	.25	.55

Note: Correlations > .13 are significant at $p < .05$

NOTE

1. Firm size has only one significant association and, therefore, does not seem to be major predictor of S&L-performance. Within the defender group, it is the smaller thrifts' assets that grow more vigorously than those of the larger firms.

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