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THE PERFORMANCE IMPACT OF STRATEGIC SIMILARITY IN HORIZONTAL MERGERS: EVIDENCE FROM THE U.S. BANKING INDUSTRY

KANNAN RAMASWAMY
Florida International University

This study examined the impact of strategic similarities between target and bidder firms on changes in postmerger performance. Set in the U.S. banking industry, the empirical examination shows that mergers between banks exhibiting similar strategic characteristics result in better performance than those involving strategically dissimilar banks.

The recent acquisition of the media powerhouse Capital Cities/ABC by Walt Disney Corporation, the entertainment giant; the merger of Chase Manhattan Bank with Chemical Bank; and the takeover of Lotus by IBM are some high-profile events of significance that have revived interest in examining the use of mergers as a vehicle to secure competitive advantage. Although the concept of mergers is not really new, comprehension of its antecedents and consequences is still far from complete (Lubatkin & Lane, 1996). Research in the field of mergers and acquisitions has yielded significant insights into the advantages and disadvantages associated with each of the components of this array of corporate strategy options. For example, several studies have shown that some level of product-market relatedness between target and bidder firms is a desirable characteristic that can help postmerger performance (e.g., Kusewitt, 1985; Lubatkin, 1987; Singh & Montgomery, 1987). Others have demonstrated that compatibility in production technologies, organizational cultures, product functions, customer groups, and so forth has important performance implications (cf. Chatterjee, Lubatkin, Schweiger, & Weber, 1992; Hopkins, 1987; Shelton, 1988). These are but a few themes of a considerably larger body of work that has attempted to further understanding of mergers. Despite the concentrated research attention that mergers have received, most of the work has been limited to *comparative* evaluation of one form of merger over another (e.g., Chatterjee, 1986; Lubatkin, 1983, 1987; Singh & Montgomery, 1987). Very little effort has been directed toward understanding performance differences that occur *within* each type of merger. Thus, although some evidence suggests that, on the

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average, related mergers outperform unrelated mergers, similar insights into why some related mergers succeed while others fail is lacking.

In this note, I attempt to overcome this shortcoming in the literature by focusing on horizontal mergers. Reporting a study set in the U.S. banking industry, I use the concept of strategic similarity to explain performance differences that arise following bank mergers. In a general sense, this study addresses the question, Why do some horizontal mergers succeed while others fail?¹

THEORY AND HYPOTHESES

The Relatedness Hypothesis: Traditional Views

Mergers and acquisitions are arguably the diversification alternatives that have been the most widely researched in the corporate strategy literature. These studies have been rich and varied, often encompassing several distinct perspectives, including industrial organization economics (e.g., Ravenscraft & Scherer, 1987), strategic management (e.g., Chatterjee, 1986; Lubatkin, 1987; Singh & Montgomery, 1987), and finance (e.g., Choi & Philipatos, 1983). The general consensus arising from these studies, with a few exceptions, is that "all things being equal, some product and market relatedness is better than none" (Lubatkin, 1987: 39). Despite the established evidence relating to the performance outcomes of different types of merger, such as related and unrelated ones, very little is known about within-type performance differences. This gap in the literature can be partly traced to the conceptualization and measurement of relatedness. Although readily available and widely used, the Standard Industrial Classification (SIC) and Federal Trade Commission (FTC) classifications of mergers into groups such as horizontal, vertical, product, conglomerate, and so forth are limited in their ability to provide insights into the complex nature of relatedness (Lubatkin, 1983, 1987).

Frameworks such as the SIC system and the FTC merger classification scheme rely on commonalities in products, market, or both between a bidder and a target as the primary basis of classifying relatedness. Consider, for example, the mergers of C&S/Sovran Bank with NationsBank (formerly NCNB) and the merger of Manufacturers Hanover with Chemical Bank. These banks offer the same products—financial and banking services—to very similar markets, institutional and individual customers (Rogers, 1993). Given the similarity in their product domains, all four banks would be categorized within the same four-digit code (SIC 6025) and the mergers typed as horizontal mergers. Although such a categorization might not necessarily be faulty, it is nevertheless suboptimal since it cannot indicate why these merg-

¹ A horizontal merger is a form of related merger that brings together two firms that are involved in the manufacture and/or sale of the same products and/or services. However, unlike the generalized classification of related mergers, horizontal mergers do not include any vertical growth or integration component (cf. Eckbo, 1980).

ers might have different degrees of success. These classification schemes provide an abbreviated framework for detecting the potential for product-related synergies, but they do not take into account other possible sources of synergy such as organizational strategy, culture, or management philosophy. For example, these approaches would not help explain whether the management style of Chemical Bank can act in tandem with that of Manufacturers Hanover, or whether the cost control orientation of NationsBank will be transferable to C&S Sovran Bank.

A few key studies have transcended the realm of sterile product-based definitions of relatedness to encompass critical organizational and strategic factors such as resource allocation patterns (Harrison, Hitt, Hoskisson, & Ireland, 1991), management philosophy (Datta, Grant, & Rajagopalan, 1991), and organizational culture (Chatterjee et al., 1992; Jemison & Sitkin, 1986; Nahavandi & Malekzadeh, 1993) in explaining postmerger outcomes. They show that valuable insights can be gained by broadening the conceptualization and operational definition of relatedness by stepping beyond the bounds of mere product-market considerations.

Strategy, Managerial Styles, and Resource Allocations: Alternative Views of Relatedness

Research in strategic management has repeatedly shown that organizations proactively design strategies to adapt themselves to the characteristics of their relevant external environments (Miles & Snow, 1978; Snow & Hrebiniak, 1980; Zajac & Shortell, 1989). Although these proactive strategies are firm specific, extensive empirical examinations have shown that common patterns of adaptive behavior recur. These frequently occurring patterns of behavior, referred to variously as generic strategies (Porter, 1980), strategic orientations (Miles & Snow, 1978), or strategic archetypes (Miller & Friesen, 1978) provide a standard approach for studying firm-specific features such as market orientation, risk propensity, and relative emphasis on cost control or innovativeness.

Strategy researchers have used resource allocation patterns as indicators of the underlying strategies that organizations pursue (Dess & Davis, 1984; Zajac & Shortell, 1989). For example, firms pursuing low cost strategies typically exhibit relatively lower levels of operational expenditure than other firms (Porter, 1980). Similarly, firms following strategies based on product innovation reflect higher levels of R&D spending. In essence, the core aspects of an organization's strategic direction are visible in the resource allocation decisions that top management makes. Consequently, if two firms exhibit very similar resource allocation patterns as measured across a variety of strategically relevant characteristics (e.g., risk propensity, marketing, efficiency), they can be considered to be strategically similar. This concept of strategic similarity can be particularly useful in studying the consequences of mergers. Its appeal lies in its ability to encompass a wide variety of organizational and managerial factors that go beyond the confines of product-market attributes.

Although many researchers have called for a transition from product-market approaches to more comprehensive conceptualizations of relatedness (cf. Jensen & Ruback, 1983; Salter & Weinhold, 1979; Shelton, 1988), the redirection of empirical effort toward that end remains sparse. Very few studies have attempted to recast the notion of relatedness to include factors of organizational, strategic, and managerial importance (cf. Chatterjee et al., 1992; Datta et al., 1991; Harrison et al., 1991). Chatterjee and colleagues (1992) examined the impact of "cultural fit" between the target and acquirer in a sample of mergers. Their results showed that mergers in which there was a match between the target and bidder on dimensions such as risk-taking attitude, reward orientation, innovation orientation, and autonomy orientation resulted in superior stockholder gains and that those that involved cultural mismatches did not perform as well. In a study conducted along similar lines, Datta and colleagues (1991) examined the performance impact of incompatibility in the management styles of acquirer and target firms. They found that inconsistency between the management teams of acquirer and target on factors such as decision-making approach, risk propensity, and time orientation was negatively related to postmerger performance. They reasoned that when mergers require an amalgamation of dissimilar management styles, a firm loses its ability to act in unison to realize the potential synergies arising from the merger, leading to poor performance. Thus, these two studies provide evidence that consistency in key elements of the managerial or subjective culture of merging organizations is an important driver of postmerger outcomes.

Harrison and colleagues (1991) also extended the traditional product-based definition of relatedness to encompass several key strategic variables. This effort used objective measures of resource allocation such as R&D intensity, administrative intensity, debt intensity, and capital intensity to measure relatedness. However, although these measures relate to potential synergies in operations, finance, and R&D, Harrison and coauthors found that *dissimilarities* between targets and bidders on these dimensions were actually positively related to postmerger performance. They suggested that these findings were probably a function of (1) synergies associated with uniquely valuable differences between the firms that bolster the competencies of the bidder, (2) the ability of the bidder to "leverage" the differences to respond to a wider array of environmental opportunities, and (3) the bidding process, which tends to inflate merger premiums for strategically similar targets, resulting in less than stellar benefits for the acquirer. Following a related vein, Harrison, Hall, and Nargundkar (1993) examined the performance impact of consistency in R&D resource allocations between individual lines of business comprising the portfolios of diversified organizations. Although this study did not deal with mergers, it nevertheless showed that allocation consistencies have a positive performance impact. Taken together, the few studies reviewed here show that the concept of relatedness can be extended beyond the traditional product-market confines to encompass a variety of

strategic dimensions and that new insights can be gained through such a redefinition.

Building on these studies, one can argue that mergers between firms emphasizing similar strategic characteristics will result in positive performance outcomes. For instance, if a firm competing on the basis of low cost and efficiency in operations were to merge with another organization with a set of similar competencies, the resultant firm would be better positioned to fully exploit the synergistic benefits of combining similar skills (Prahalad & Bettis, 1986). The cost control emphasis would become accentuated and lead to greater efficiencies, derived from better economies of scale and scope (Panzar & Willig, 1981; Post, 1994; Rose, 1989). Minimization of conflicts arising from disparities in core competencies would contribute to better performance (Chatterjee & Wernerfelt, 1988). Such performance outcomes would be difficult to achieve in mergers involving firms with widely divergent strategies (Lubatkin, 1983; Salter & Weinhold, 1979; Wernerfelt, 1984). Since divergence in strategic direction could indicate differences in the approaches that managements use to achieve competitive advantage, such variations might not be optimal. It is more likely that the postacquisition phase of such mergers will be characterized by conflicts and dissent regarding future courses of action. For example, management incompatibility might lead to opposing views on critical decisions such as eliminating redundancies arising from the merger, deployment of personnel, or rationalizing product lines (cf. Datta et al., 1991). Given their distinctly different strategic approaches, the management teams of the target and bidder would find it difficult to reach consensus on critical aspects of operations that are crucial for the realization of synergies. Although this could be equally true in horizontal mergers between strategically similar firms, the potential for conflict is relatively low in such instances. It must be acknowledged that in some types of mergers, such as conglomerate and vertical mergers, the particular objectives underlying a union might render dissimilarities preferable. For example, in the case of conglomerate mergers, complementarities might be beneficial since the merger might cut across industry lines, thus offering wider scope to "leverage" dissimilarities in strategies. Even in the case of vertical integration, strategic differences between a target and a bidder might not be so detrimental, since such a merger could involve two different settings where the requirements for success might vary (Harrison et al., 1991). However, in the case of horizontal mergers, the negative impact of strategic dissimilarity is likely to be significant. Research on "cultural incompatibility" also offers tangential support for the similarity hypothesis.

The notion of cultural incompatibility (Buono & Bowditch, 1989; Chatterjee et al., 1992; Nahavandi & Malekzadeh, 1993) has often been invoked to explain the negative performance outcomes associated with some mergers. Since "organizational culture is believed to permeate every aspect of organizational life . . . [such as] the types of decisions made in a firm, its organizational policies and procedures, and its strategy considerations" (Buono &

Bowditch, 1989: 142), it could be argued that differences between target and bidder in strategic characteristics will reflect underlying cultural differences. Further, since organizational strategy options are filtered through the lens of the prevailing culture (Buono & Bowditch, 1989; Nahavandi & Malekzadeh, 1993), mergers between strategically dissimilar firms would include some level of cultural mismatch as well. Consequently, these differences would render integration efforts difficult to implement and limit the possibility of harnessing potential synergies. However, the impact of strategic dissimilarities and attendant cultural differences on postmerger performance might vary across merger types. For example, horizontal mergers involve a much closer and intensive interaction between the bidder and target organizations than do conglomerate mergers (Nahavandi & Malekzadeh, 1993), and therefore, cultural mismatches might have greater consequences in horizontal mergers. In essence, strategic differences may be manifestations of underlying cultural differences and hence less desirable.

Prahalad and Bettis (1986) used the concept of "dominant logic" to reach similar conclusions. They suggested that members of the top management team of an organization share a dominant logic that arises through shared experience and organizational learning. This dominant logic is defined "as the way in which managers conceptualize the business and *make critical resource allocation decisions*—be it in technologies, product development, distribution, advertising, or in human resource management . . . stored as a cognitive map (or set of schemas) among the dominant coalition . . . expressed as a learned problem-solving behavior" (1986: 490–491). Building on this concept, they argued that the dominant logic plays a critical role in the manner in which an organization utilizes its resources and achieves competitive advantage since it constantly filters managerial action and colors all top management decisions. Thus, the ability of top management to manage its acquisitions is viewed as a function of the extent to which the logics of a target and a bidder are similar. Since strategic similarity presupposes the existence of similar dominant logics (Harrison et al., 1991, 1993), mergers between strategically similar firms are likely to provide greater benefits than mergers involving organizations pursuing dissimilar strategies. Further, such mergers limit the need to develop and maintain multiple logics, change existing logics, or resolve cognitive conflicts that could arise from merging strategically dissimilar firms—all processes that are long drawn and difficult to implement (Kiesler & Sproull, 1982; Prahalad & Bettis, 1986). Hence, the dominant logic approach also favors strategic similarity as a precondition for achieving better postmerger performance. Thus, it can be hypothesized that:

Hypothesis 1. Mergers between target and bidder firms emphasizing similar strategic characteristics will result in better performance than mergers between targets and bidders emphasizing dissimilar strategic characteristics.

An important feature of the above hypothesis is its treatment of strategic

characteristics. Although these characteristics (e.g., risk propensity, marketing emphasis, operational efficiency) do indeed represent distinct areas of an organization's operations, they are treated as a collective construct for two reasons. First, most of the literature on strategy depicts a firm's strategic posture as a composite of key strategic attributes (e.g., Miles & Snow, 1978; Miller & Friesen, 1978; Porter, 1980). Thus, it is quite difficult to untangle the aggregate picture to determine the relative importance of each element comprising a firm's strategy since there is little theoretical precedent to enable such a process. Consequently, any prioritization of the strategic variables is more of an empirical issue. Second, the hypothesis suggests an overall negative effect when there is a mismatch in the strategic characteristics of a target and a bidder. It is based on the premise that matches lead to the creation of value through the realization of synergies and that mismatches, irrespective of the characteristic, undermine performance since they do not foster synergy. Given these reasons, I do not present separate theoretical hypotheses for each strategy construct constituent.

METHODS

Testing of the hypothesis was carried out on a sample of mergers that occurred in the banking industry. Secondary objective data spanning a period of seven years (1984–90) were used. I employed hierarchical regression analysis to examine the performance impact of similarities between target and bidder on a variety of strategic attributes.

Research Setting and Sample

Banking has historically remained one of the most highly regulated industries in the United States. Mergers, branching, and interstate expansion have been heavily regulated by federal and state government agencies for a substantial part of this industry's history. However, banking has been witnessing important changes since 1980 (Hawawini & Swary, 1990; Rose, 1989), when the Depository Institutions Deregulation and Monetary Control Act (DIDMCA) was passed. This act reduced the level of regulatory oversight in the industry by setting aside interest rate ceilings, increasing federal deposit insurance, and rationalizing reserve requirements, changes that infused a degree of competitive vigor (Rose, 1989; Roussakis, 1989). Soon mergers became a viable growth option in the banking sector. Thus, this industry provided the ideal setting for examining the role of strategic similarity in influencing postmerger success within a single environment.

The sample included all intrastate mergers involving Federal Deposit Insurance Corporation (FDIC) member banks consummated in 1987. The choice of the time frame, 1987, was primarily driven by sample availability constraints. Starting with 1981, the year following the passage of DIDMCA, I analyzed the frequency of mergers over successive one-year periods. It was my intent to determine an optimal year that would yield a reasonably large sample of mergers involving banks that were not parties to other mergers for

a three-year period either before or after a single merger event. The analysis showed that 1987 provided the largest sample that met the above criterion. Before making a final choice of time frame, I examined trends in the fundamental features of the banking industry, such as deposits, loans, employment, interest income, and profitability. The finding that there were no sharp variations on these critical parameters supported the choice of 1987 as the focal year.

To be included in the sample (1) both the target and the bidder bank had to have been independent entities at the time of the merger and (2) the bidder had to not have been involved in any merger for the three years prior to 1987 and the three years after 1987. These criteria enabled the precise examination of the effects of a single merger in isolation (Choi & Philipatos, 1983; Lubatkin, 1987), avoiding any extraneous influences. A final sample of 46 mergers (comprising 92 banks) meeting these conditions was identified. Of these 46 mergers, 43 involved banks operating in the same county. The other three cases involved banks operating in neighboring counties within the same state. Hence, for the most part, the competitive conditions faced by the targets and bidder can be assumed to have been quite similar.

Data and Measures

Objective secondary data relating to both target and bidding banks were collected for the period 1984–90. Most of the data used in the analysis were obtained from the annual compilations of *The Bank Quarterly* and statewide annual reports of banks published by Sheshunoff Information Services. This information was supplemented with data obtained from the Call and Income Reports filed by each FDIC member bank and the *Data Book—U.S., States, Counties, Other Areas*, an FDIC publication.

Measuring Strategic Characteristics through Resource Allocations

The strategic orientation of an organization reflects the pattern of resource allocation decisions that top management makes in navigating the firm through the multitude of environmental constraints to achieve competitive advantage. Within the context of the banking industry, these decisions relate to five broad areas of importance: market coverage, marketing posture, risk propensity, operational efficiency, and client mix (Bowden, 1980; Rose, 1989; Roussakis, 1989). I measured these areas using a set of five ratio indicators. The measures (1) encompassed domains of decision making that were largely within the purview of bank managers, (2) captured key aspects of resource allocation that are specifically relevant to the banking industry, and (3) characterized observable aspects of realized strategies that have been demonstrated to influence bank profitability.

Market coverage. The number of branches that a bank operates within a territory is an important element of strategy that affects its competitive effectiveness. Although some banks operate a relatively large number of branches to improve the level of service they offer their clientele, others concentrate operations in a smaller number of branches to control costs.

Both approaches have their own unique benefits, but the choice nevertheless reflects the underlying approach that a bank's management is pursuing to realize competitive advantage, hence an element of overall strategy. A bank's market coverage was measured as the ratio of the number of individual branch facilities that it established in a given county to the total number of branches that all banks operated in that county.

Operational efficiency. The analysis of operating cost is seminal to understanding the dynamics of operating synergies that acquirers might be able to realize. In banking, these synergies arise from integrating backroom operations that process individual financial transactions, information systems that track loans, deposits, and customer data, rationalizing branching structure, and the ability to spread these costs over a larger deposit base given the merger of the acquirer's operations with the target. Since operational costs reflect the relative efficiency (or inefficiency) of a firm's systems, their analysis provides valuable insights into management's operations philosophy and consequently the potential for postmerger efficiency gains. This attribute was measured as a ratio of overhead expenditure to total bank revenues (overhead/revenues), an indicator that is often used in banking studies (cf. Hawawini & Swary, 1994; Rose, 1989).

Emphasis on marketing activity. Marketing is widely acknowledged as an adaptive boundary-spanning function indicative of the extent of the external focus of organizations (Miles & Snow, 1978; Porter, 1980). Although some organizations place a significant emphasis on marketing by using a wide array of advertising and sales promotion campaigns, other firms set aside much smaller outlays for pursuing marketing activities. Researchers have argued that this differential emphasis is a fundamental indicator of strategic differences between firms. I used the ratio of marketing expenditure to total bank revenues (marketing expenditure/revenues) to measure this element of bank strategy.

Client mix. Banks face a lot of choices in terms of the clientele they wish to attract. Some banks position themselves as "wholesale" banks by focusing primarily on commercial and industrial customers, and others shape themselves as "consumer" or "retail" banks by emphasizing individual consumers. This dichotomy between wholesale and retail banking is fundamental to any analysis of bank strategy (Compton, 1991; Rose, 1989; Stemper, 1990), since the nature of skills and resources associated with each type of operation differs significantly. On the one hand, servicing a large consumer clientele might necessitate higher levels of expenditures for branch operations and processing costs, given the large volume of transactions that are likely to be encountered. On the other hand, wholesale banking requires fairly high levels of core capital, a sophisticated sales force, and a much larger battery of financial analysts for evaluating creditworthiness (Hempel, Coleman, & Simonson, 1986). The ratio of business loans to consumer loans (Bowden, 1980; Rose, 1988) was used to capture each bank's client mix.

Risk propensity. The top management team of a bank has significant control over the level of asset risks that the bank assumes. The level of core

capital that is set aside for making loans exemplifies management's degree of aggressiveness. Conservative banks ensure that they have a large cushion between the volume of capital and the volume of loans outstanding, and aggressive banks push their lending volume to the maximum limit that is feasible within the general guidelines established by the FDIC. Bank analysts use a ratio of core capital to loans outstanding as an indicator of a bank's risk propensity (e.g., Rose, 1988).

Measuring Performance

Profitability measure. I measured performance using accounting measures of profitability since some surveys of merger decisions have indicated that managers primarily seek to improve profitability through mergers (Ingham, Kran, & Lovestam, 1992; Rose, 1989). Both *ex ante* and *ex post* outcomes were measured over a three-year period. It can be argued that three years is not long enough for synergistic gains to materialize, but I was forced to limit the time frame to three years because a significant proportion of banks in the sample had further acquisitions beyond that point. Therefore, adding additional years, samples, or both would have violated the "clean data" criterion suggested by Choi and Philipatos (1983) and Lubatkin (1987).

Meeks and Meeks (1981) observed that of all the accounting measures of profitability, return on assets (ROA) is the least sensitive to the upward or downward estimation bias that can be induced by changes in leverage or bargaining power resulting from a merger. They suggested that these biases can be further minimized if the merger year is dropped from computations of profitability since it is difficult to pinpoint an exact date on which the accounts of both target and bidder were combined. *Ex ante* performance was derived as the revenue-weighted mean of the ROA of both a target and a bidder firm over a three-year period (1984–86) preceding their merger. As Harrison and colleagues observed, "Combining statements in the pre-acquisition period overcomes the bias toward attributing merger related success or failure to performance differences that would have existed even if a merger had not occurred" (1991: 181). *Ex post* profitability of the bidder was computed similarly, but for the 1988–90 period. Change in performance following the merger was the difference between premerger and postmerger performance.

The statistical literature (e.g., Allison, 1990; Cohen & Cohen, 1983; Cronbach & Furby, 1970) identifies two potential problems when change scores are used. First, there is the problem of "floor/ceiling" effects, which relates to the magnitude of change. Banks that were performing well prior to a merger might not be able to improve their performance as much as the low performers simply because their base rate of performance was higher. Second, the prechange value is invariably correlated with the postchange value. Therefore, using the magnitude of change as the dependent variable could lead to spurious effects if the model does not account for the *ex ante* effect. Although in this specific case, the correlation between pre- and post-

merger performance is logical, as a matter of precaution, I felt it prudent to use the premerger value as a control variable. Cohen and Cohen (1983) observed that such a control considerably alleviates the problem of naturally occurring correlations between pre- and postscores.

Control variables. Two control variables, namely, weighted average premerger ROA (premerger performance) and the size of a target vis-à-vis the bidder (relative size) were used in the analysis. Relative size was used as a control variable since prior research shows that larger firms might acquire smaller firms to realize scale-related synergies that would otherwise be difficult to obtain (Datta et al., 1991; Kusewitt, 1985). Hence, irrespective of strategic similarities or dissimilarities, the size differential might explain some variance in postmerger performance. Although it would have been ideal to use additional controls, such as the basis of the merger payments (cash or stock), and whether or not the merger was contested, such data were not readily available from the FDIC or other regulatory agencies.

DATA ANALYSIS

Prior to examining the central hypothesis of the study, I performed a correlation analysis of key variables intended to help me choose the appropriate analytical technique. The pattern of correlations among the strategy variables revealed statistically significant relationships between these indicators. Since the magnitudes of the correlations were quite high, it was apparent that some of the independent variables were multicollinear.

To overcome this shortcoming, I analyzed data using a hierarchical regression approach. It is a preferred analytical technique since it explicitly accounts for any overlap in the explanatory power of the independent variables.

Hierarchical Regression Analysis

The mean scores of each bank on all five measures were first computed for the period 1984–86. I determined difference scores on each of these measures using the distance metric proposed by Drazin and Van de Ven (1985). This metric computes the absolute value of the difference between two entities on a given characteristic as $\sqrt{(X_{Bs} - X_{Ts})^2}$, where X_{Bs} is the score of the bidder on the s th variable and X_{Ts} is the score of the target on the same variable. The difference measures corresponding to the five strategy variables were used as independent variables, regressed against change in performance following the merger.

The control variables, premerger ROA and the size of a target compared to a bidder (relative size), were entered first. The independent variables were then entered one at a time. Since there was no theoretical rationale for determining the order of entry of the independent variables, there was no need to use any preordained sequence.

RESULTS

The results of the hierarchical regression analysis provide general support for the study's hypothesis. Strategic dissimilarities between target and

TABLE 1
Univariate Statistics and Correlation Matrix for Explanatory Variables

Variable	Mean	s.d.	1	2	3	4	5	6	7
1. Market coverage	0.11	0.14							
2. Marketing expenditures/revenues	3.57	1.61	-.23						
3. Risk propensity	10.09	2.76	-.11	.43**					
4. Overhead/revenues	9.64	3.86	-.27	.82***	.44**				
5. Client mix	53,739.4	112,502	-.15	-.08	.12	-.05			
6. Premerger performance	2.51	10.82	.30	-.67***	-.45*	-.84***	.03		
7. Postmerger performance	6.87	11.36	.27	-.65***	-.49*	-.67***	.22	.63***	
8. Relative size	4.60	3.65	.07	-.15	.06	.55***	-.02	.19	-.14

* $p < .05$

** $p < .01$

*** $p < .001$

TABLE 2
Results of Hierarchical Regression Analysis of Strategic Dissimilarities
and Change in Performance Following Mergers^a

Variable	Model 1	Model 2
Control variables		
Relative size	-0.08	-0.05
Premerger performance	-0.45**	-0.80***
Strategy variables		
Market coverage		0.03
Overhead/revenues		-0.19*
Marketing expenditures/revenues		-0.30**
Client mix		-0.27*
Risk propensity		-0.23*
Model R ²	0.18	0.47
ΔR^2		0.29
F	5.56***	6.19***
Chow's ΔF		19.81***

^a Model 1 includes the control variables only. Model 2, the complete model, includes both the control and strategy variables.

- * $p < .05$
- ** $p < .01$
- *** $p < .001$

bidder firms did have a negative influence on performance following mergers.² The control variable representing size differences between the target and bidder banks was not significant. However, the other control variable, premerger ROA, was significant, explaining 18 percent of the variance in performance change following the mergers. This finding is consistent with the relatively high correlation ($r = .63$) between pre- and postperformance measures. It is also in line with some of the previous studies on mergers and acquisitions that have reported significant effects for ex ante performance indicators (see, for example, Harrison et al. [1991] and Rose [1988]). The negative sign on the ROA coefficient is explained by the fact that the dependent variable is a change score derived as the difference between post-merger and premerger ROA and hence reflective of the floor/ceiling effects discussed earlier. In other words, since banks that were performing well prior to the mergers cannot be expected to improve their performance as much as banks that were performing poorly, the negative link is logical. The five-measure set of strategy variables explained 29 percent of the variance in performance change following a merger. This finding makes a persuasive

² Addressing the robustness of the findings, an anonymous reviewer suggested that the analysis be repeated with standardized strategy variables. I used Fisher's Z transformations for this purpose prior to deriving the difference scores. These scores were then used as the independent variables in the analysis. The pattern of results was similar to that obtained using unstandardized variables.

case for using strategy indicators to characterize bidder-target relatedness in studies of postmerger performance.

DISCUSSION

The results of the hierarchical regression analysis demonstrate the ability of strategic variables to explain variance in postmerger performance changes. They provide evidence that similarities in strategic characteristics, reflected by consistency in the resource allocation patterns of bidder and target firms, have a positive influence on postmerger performance. Differences between target and bidder on important elements of bank strategy, such as risk propensity, marketing emphasis, operational efficiency, and mix of clients, were found to be detrimental to performance change following a merger. Some of these findings are discussed below.

The findings regarding marketing emphasis and operational efficiency underscore the negative effects of dissimilarity. They show that differences between target and bidder banks in their orientation toward operational efficiency have an adverse impact on performance change following a merger. It is plausible that when an efficiency-oriented bank takes over another that emphasizes customer service as an important aspect of its overall strategy, the resultant organization is likely to be stifled by the acquirer's imposition of its own cost control and monitoring systems. This could hamper the target's focus on service in several ways. For example, the acquirer might seek to impose cost discipline by trimming the number of branches it operates, eliminating personalized customer benefits, and reducing overall service levels. These measures would be counterproductive for the target's side of the operations, which had relied on extensive branch operations and customer extras as part of its drive toward superior customer service. The scale-related synergies that were expected would not materialize easily in such a situation.

Dissimilarities in the client mix served by a target and a bidder had a negative performance impact, as expected. It is plausible that the limited complementarities between the banking industry's wholesale segment (commercial banking) and its retail segment (consumer banking) do not generate sufficient synergies to exert a positive impact on performance. Retail-oriented banking requires a set of skills and competencies that are quite different from those required to run a profitable wholesale banking operation. For example, the sheer volume of individual customers served by a retail bank translates into significant demands for service-oriented infrastructures and varying levels of capital exposure, cost control, and marketing intensity that are not paralleled in wholesale banks. In essence, the fundamental principles of managing a portfolio of consumer loans and services might be quite different from the approach to wholesale banking, so merging the two types might not help realize adequate synergies. Rose reinforced this contention, observing that a significant number of bank mergers fail because "acquirers seek the wrong 'fit' in terms of an acquisition target—A whole-

sale-oriented bank may reach out for smaller retail banks, only to find that it lacks the management techniques and professional skills to control its acquisitions and keep their earnings growing" (1989: 143).

The negative performance consequences of incompatible risk patterns is supported by prior studies on organizational culture and leadership. Several studies in these areas have shown that CEOs who exhibit a high level of risk propensity are not ideal candidates for the leadership of conservative organizations (e.g., Thomas, Litschert, & Ramaswamy, 1991). Extending this notion to the organizational level, it would be defensible to argue that the takeover of a conservative bank by an aggressive one is likely to be fraught with difficulties because the risk-prone management of the bidder would find it difficult to persuade the executive cadre of the target to unlearn this conservative stance. Further, the bidder would find it difficult to take advantage of the skills that it has honed under risk-prone conditions. The findings of Chatterjee and colleagues (1992) support this conclusion. They found that cultural incompatibility between target and bidder, measured as a function of risk-taking attitude, among other things, was negatively related to postmerger outcomes. Other researchers have also suggested that such fundamental differences do manifest themselves during the process of acculturation when target and bidder firms are integrated (e.g., Buono & Bowditch, 1989; Datta et al., 1991; Nahavandi & Malekzadeh, 1993), and the resulting conflicts undermine the realization of promised synergies that fueled the merger.

The findings relating to the performance effects of differences in market coverage did not support the overall hypothesis of declining performance in the face of dissimilarities. It is probable that this is a reflection of the typical branching structure of the banks that formed the sample. Previous studies have shown that in the banking industry, bigger bidders prefer small bank takeovers (Hawawini & Swary, 1990) since economies of scale can become significant even at comparatively lower levels (<\$ 100 million in deposits) of operations (Clark, 1988). Hence, these results could be mirroring the drive to increase the size of operations to the minimum threshold level at which economies of scale start to come into play. Since most of the banks in the sample had relatively modest branching structures, it is probable that any increase in size that resulted from a merger could have been desirable.

Although the present results are internally consistent, they contradict findings reported by Harrison and colleagues (1991) and discussed earlier. In a multi-industry examination of mergers occurring over a 20-year (1970–89) period, they found that dissimilarities, *not* similarities, in R&D, asset, administrative, and debt intensities were positively associated with postacquisition performance. The divergent findings can be partly traced to the fundamental differences in the contexts that these studies explored and the types of mergers that were the subject of examination. In contrast to Harrison and colleagues (1991), who examined a multiplicity of manufacturing industries, this study used a single service industry as its research site. It is possible that the relative homogeneity of the recipe for success in banking might

not favor the realization of synergistic benefits arising from complementarities in the resources of target and bidder. In the more heterogeneous manufacturing sector, such complementarities might, however, be valuable. Further, the extent to which their context allows mergers to be contested could also explain differences in findings. The sample used by Harrison et al. was largely composed of industry contexts in which contestability was feasible, but the case was quite different in the banking industry that was used in this study. For example, during the period of the study, banks headquartered in 14 of the 20 states that constituted the sample imposed constraints on branching. Although some states allowed limited intrastate branching, others only permitted unit branching, thereby eliminating establishment of multiple full-service banking facilities. Hence, the regulatory framework might have limited the possibility of an auction among equally interested bidders for a single target. Consequently, it might not have been necessary for a bidder to choose a strategically dissimilar target or search for private synergies to avoid significant premiums, a situation common in settings in which mergers can be easily contested.

The specific types of mergers examined by the two studies could also have a bearing on the contrasting results. Harrison and colleagues (1991) examined related and unrelated mergers; this study, however, was limited in its focus to horizontal mergers only. Although the related category used by Harrison and colleagues (1991) would be the closest to the horizontal category used here, they are not fully comparable. Unlike related mergers, horizontal mergers do not include any vertical component.³ Consequently, in contrast to horizontal mergers, the related type as defined by Harrison et al. might actually benefit from resource complementarities rather than from similarities, because of the vertical component. It is plausible that while Harrison and colleagues identified the key resource allocation parameters on which differences are desirable, this study uncovered areas in which similarities add value. Hence, the possibility of differences on certain dimensions complementing similarities in others must await further examination.

Despite the caution and diligence exercised in developing the design for this study, it is not without limitations. For instance, the use of objective strategy characteristics does not allow the characterization of intended strategies. Some researchers would argue that intended strategies are critical since they embody the objectives behind a merger. Further, the relatively short time frame used in the study might not have allowed acquirers to

³ For example, using two-digit SIC codes as the indicator of relatedness, a merger involving a firm in SIC 3510 (engines & turbines) and another in SIC 3523 (farm machinery) would be classified as a related merger. However, it could have a vertical component if an engine manufacturer were to acquire a firm manufacturing farm equipment, such as tractors, or vice versa. Another example would be a merger between a firm in SIC 2800 (chemical & allied products) and another in SIC 2834 (drugs & pharmaceutical). Here, too, there could be vertical integration forward or backward because fine chemicals manufactured by the firms in SIC 2800 form the feed stock for the pharmaceutical firms classified under SIC 2834.

realize all the synergies associated with the mergers. This design limitation, meant to enhance internal validity, does indeed limit generalizability. It is also conceivable that the particular mode of integration chosen by an acquiring firm could have a bearing on postmerger performance. One firm might choose a hands-off approach and maintain autonomy for a newly acquired target; another might choose to fully integrate the operations of the target so that its original identity is completely absorbed into the bidder's operations. These alternative integration approaches can have important performance consequences that this empirical effort did not consider.

This study provides strong support for the dominant school of thought that emphasizes similarities in strategic characteristics as a precondition for superior postmerger performance. Results suggest that analyzing the congruence between target and bidder on key strategy features might be a useful approach to understanding the concept of relatedness. In contrast to conventional approaches that rely entirely on product-market attributes, the use of other strategically relevant factors extends the realm of relatedness to encompass crucial areas of operations in which matching managerial skills and competencies could add value (Prahalad & Bettis, 1986). These insights are likely to be lost if an aggregate approach, such as one based on SIC codes or FTC categories, is used instead.

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Kannan Ramaswamy is an associate professor in the Department of Management and International Business at Florida International University. He received his Ph.D. degree from the R.B. Pamplin College of Business at Virginia Polytechnic Institute and State University. His current research interests center around corporate strategy issues in global organizations and organizational adaptation to environmental change.