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# STRATEGIC BUSINESS FITS AND CORPORATE ACQUISITION: EMPIRICAL EVIDENCE

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## Abstract

This study examines various strategies for combining firm assets on the returns received by shareholders of merging firms. Thus, it links empirical finance literature with more conceptual business policy research.

A system of classifying the strategic fits between target and bidder businesses on the basis of changes in the product market opportunities for the bidder firm is tested on a sample of 114 mergers made by randomly selected bidders during 1962 to 1983. Multivariate regression analysis shows that acquisitions in which a high proportion of target businesses permit the bidder access to new but related customers and markets create the most value.

# STRATEGIC BUSINESS FITS AND CORPORATE ACQUISITION: EMPIRICAL EVIDENCE

## I. Introduction

An acquisition is a combination of the assets of target and bidder firms. Value is created when these assets are used more effectively by the combined firm than by target and bidder separately. Thus, a system of classifying acquisitions that measures the various types of strategic fit between target and bidder assets and the relative importance of different fits will serve to test hypotheses about the amount of value that mergers create, and will thereby provide managers with a clearer idea of which types of asset combinations create value and which do not.

Singh and Montgomery (1984) and Lubatkin (1984) both inquire whether mergers with different strategic characteristics create different returns for the shareholders involved. While using different methods of determining the strategic classification of mergers, neither study examines which asset combinations, which are the building blocks of mergers.

Singh and Montgomery (1984) use two strategic categories - related and unrelated - in their study. Lubatkin (1984) divides his merger sample into four strategic categories used by the F.T.C.: concentric, horizontal, vertical and conglomerate mergers. Although Lubatkin includes more strategic classifications than do Singh and Montgomery, both studies assign a single strategic classification to a merger, thus implicitly assuming that the same qualitative fit applies to all of the

assets of the target and the bidder. Such a single-parameter measure may, however, be quite inadequate.

A linear programming model of firm expansion in Shelton (1985) shows that economies of scope are created in acquisition when the multi-purpose nature of bidder and target assets is exploited. Because firms consist of a variety of contractually bound assets, it is hard to pinpoint the sources of value in a merger when a single category is used to summarize all of the types of asset combinations that exist in a merger. Even if a merger as a whole creates value, certain combinations of assets may destroy value.

The two papers cited above do conclude that cumulative residual analysis can be used successfully to test the relative value-creation potential of different strategic categories of mergers. Lubatkin also shows that certain related diversification strategies create more value than others and that related acquisitions do not always create more value than unrelated acquisitions. However, neither Lubatkin nor Singh and Montgomery control for factors other than strategy in their statistical work, incurring the risk that both value creation and strategic fit may be influenced by omitted factors.

In this paper, a new method of classifying acquisitions is presented which focuses on (i) how the assets of the target fit with the assets of the bidder, and (ii) how the assets of the target change the product market opportunities of the bidder. Also, multiple regression analysis will be used to control for other influences on value creation such as the presence of rival bidders and changes in merger regulation.

The following section discusses the data and the methodology used to calculate residuals. The strategic fit classification system is

presented in Sections III and IV. Hypotheses to be tested by the system and the regression model designed to test them will be explained in Sections V and VI. Section VII will discuss statistical results and Section VIII will present the conclusions.

## II. Data and Cumulative Residuals Methodology

The acquisitions in this study were obtained by randomly selecting bidding firms according to the methodology of Rumelt (1974, 1978). The initial universe of bidders was the 238 firms in Rumelt's 1978 database. Rumelt collected this sample by randomly selecting 100 Fortune 500 industrial companies in 1949, 1959 and 1969 and 50 of these companies in 1974. If a firm was selected in more than one random sample, it appeared only once in the data base. An additional random sample was taken of 100 Fortune 500 industrial companies in 1979 to include more mergers that occurred in the late 1970s and early 1980s.

These 238 plus 100 firms made 114 acquisitions during 1962-1983 that possessed the following characteristics:

(i) both target and bidder appear on the CRSP tapes;

(ii) sufficient line of business data is available for both target and bidder to determine the following information for each business unit: percentage of corporate revenue contributed, the products sold, and customers served.

The necessary line of business data were obtained through annual reports, prospectuses and Moody's Industrial Manual.

The abnormal returns to the stockholders involved in a merger were estimated using the market model employed by Dodd (1980):

$$R_{jt} = \alpha_j + \beta_j x R_{mt} + \epsilon_{jt} \qquad (1)$$

where: $R_{jt}$ = rate of return on stock j over period t, t=1 day;

$R_{mt}$ = rate of return on value weighted market portfolio over period t;

$\alpha_j = E(R_{jt}) - \beta_j x E(R_{mt})$;

$\varepsilon_{jt}$ = disturbance term of security j in period t, $E(\varepsilon_{jt})=0$;

$\beta_j = \text{cov}(R_{jt}, R_{mt})/\text{var}(R_{mt})$.

For each merger, $\hat{\alpha}_j$ and $\beta_j$ were derived by estimating $\alpha_j$ and $\beta_j$ for both the acquiring and acquired firms for a period of 250 trading days ending approximately three months before the merger press date.

A prediction error for each firm j, $PE_{jt}$, was calculated for each day around the date of the first public announcement of the merger using the equation $PE_{jt} = R_{jt} - \beta_j x R_{mt}$. Over 96% of $\hat{\alpha}_j$'s estimated were statistically insignificant. The period during which $\hat{\alpha}_j$ and $\beta_j$ are calculated is excluded.

Estimates of the value created by a given merger were obtained by summing the $PE_{jt}$ (abnormal change in the rate of return for stock j on day t) for the acquiring firm over a three day period around each merger announcement date to obtain a cumulative prediction error. The change in the market value of the equity of a given firm due to merger was determined by multiplying total market equity value by the sum of the $PE_{jt}$ ($\Delta$ equity value/equity value). A normalized measure of the total value created in the merger, NTVL, is defined by the following expression:

$$\frac{\Delta \text{ bidder equity value} + \Delta \text{ target equity value}}{\text{target equity value} + \text{bidder equity value}}$$

which is simply

$$\frac{PE_{bidder} * \text{bidder equity value} + PE_{target} * \text{target equity value}}{\text{target equity value} + \text{bidder equity value}}$$

The date of first public announcement is identical to the press date of Asquith (1983) and considered to be the first day that a merger rumor, discussion, tender offer, proposal, agreement or understanding appears in the Wall Street Journal (WSJ).

In cases where the WSJ reports tender offers, merger discussions or rumors previous to a merger plan or agreement, the announcement day is considered the day upon which first public mention of any merger-related information appears in the Wall Street Journal. If a target firm is pursued by more than one suitor, its stock price begins to rise at the announcement of the interest of the first bidding firm. Thus, for 31% of the mergers, the announcement date for the target firm is earlier than that for the bidder. The bidder's announcement date is the date upon which that particular acquirer first shows any interest in the target.

III. The Acquisition Classification System

The system of strategically classifying acquisitions described here is based on the related-complementary and related-supplementary concepts developed by Salter and Weinhold (1979). A pure related-complementary fit is vertical integration while a pure related-supplementary fit is horizontal integration. A related-supplementary target business provides the bidder primarily with access to new customers and markets rather than with new assets or products. Related-complementary target businesses provide the bidder with new products, assets or skills for product markets currently served by the bidder rather than with access

to new markets. Table 1 illustrates the four possible strategic fits between a target and a bidder business.

While the judgment of the researcher is crucial in using this system, the four concrete guidelines presented in Table 2 are used to determine whether and how product markets are related. These guidelines permit the researcher to examine technology, production and distribution channels in determining whether and how businesses are related. In order for one business to be related to another, at least three of the following four criteria must be fulfilled: (1) similar type of customers served, (2) similar type of product sold, (3) similar technology used in production, and (4) similar purpose served in use.

Customers are classified as either (1) consumer, (2) professional, (3) industrial, or (4) government. Customers are defined to be the intended end users of a product or service sold by a business. Professional customers include doctors, dentists, lawyers and other professionals.

Since businesses sell products at different stages of production, products can be grouped into three distinct categories: (1) retail or finished goods, (2) wholesale and intermediate goods, and (3) raw materials. Businesses producing products involving similar technology may be related even if the products in question are used by dissimilar customers. Thus, commercial aircraft and military jet fighters are considered related businesses even though consumers use one product and the government uses the other.

Finally, customers often use related products to perform similar functions or for similar purposes. As a result, the footwear market is related to the clothing market, but not to the household appliance

Table 1

Strategic Fits Between a Target
and a Bidder Business

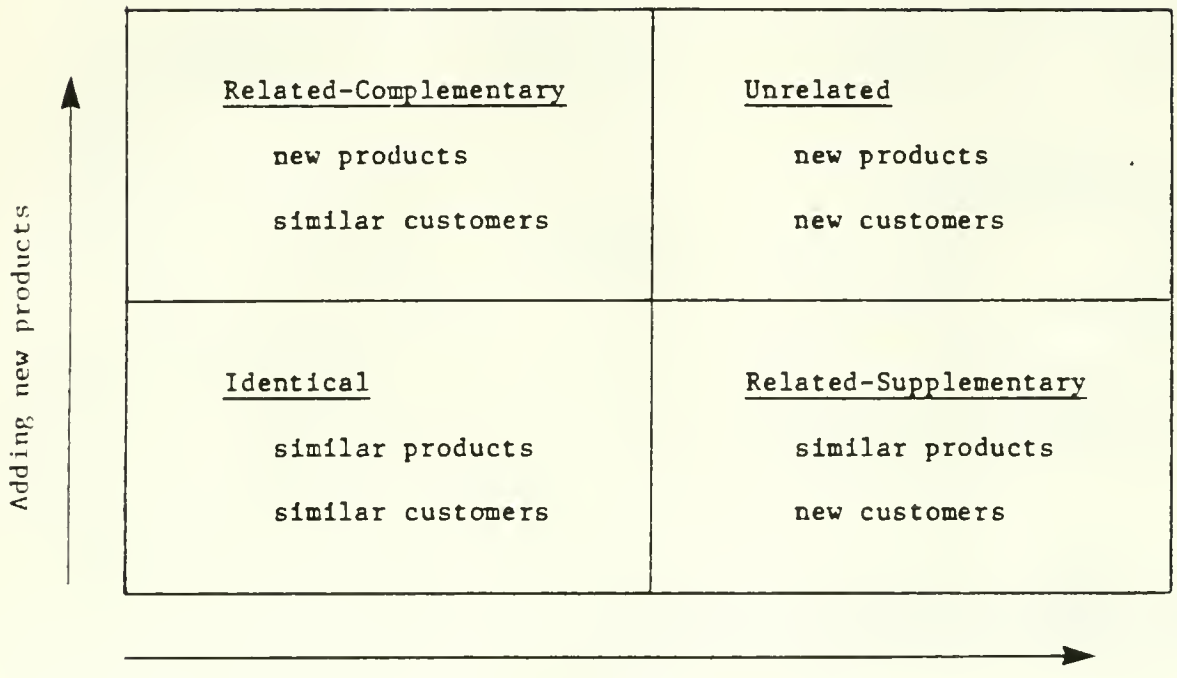


Illustration of possible ways that an acquired target business can change the product-market opportunities of a bidder business.

Table 2

Method of Determining Whether Target and Bidder Businesses are Related

Similar Customer Type?

| | | | |
|---|---|---|---|
| consumer | industrial | professional | government |

Similar Product Type?

| | | |
|---|---|---|
| retail, finished | wholesale, intermediate | material |

Similar Technology in Production?

Similar Purpose/Function Served in Use?

Affirmative answers to three or more questions indicates that the businesses are related.

Affirmative answers to fewer than three questions indicates that the businesses are unrelated.

market, even though consumers purchase shoes, suits and microwaves. Markets can be considered roughly equivalent to industries.

If two businesses are considered related using the criteria of Table 2, then the form of relatedness is determined by considering how the target business changes the product market opportunities of the bidder. If the target business permits entry into a new but related industry, then the fit is related-supplementary. If the target unit permits the bidder firm to expand its product line or strengthen its competitive position in a given market, or to integrate forward or backwards, then the fit is related-complementary.

Since a given strategic fit between two businesses will create more value in an acquisition the larger are the two businesses, businesses of target and bidder firms are classified as major or minor. A firm's major business unit is defined to be that business unit which contributes at least 10% more revenue than any of the other units. A firm can have multiple major business units, provided that at least one of its business units is a minor business. Table 3 presents a summary of the strategic fit categories.

A variable will equal one each time the strategic fit that it represents is observed once in an acquisition. If a particular fit is observed twice, for instance, in an acquisition (i.e., two minor target businesses identical to two minor bidder businesses), then the corresponding dummy variable will equal two.

By definition, major businesses contribute a higher percentage of corporate revenues than do minor businesses. This larger contribution occurs because major businesses use a larger percentage of corporate assets, use their assets more intensively or both.

Table 3

Universe of Strategic Fit Categories
Between a Target Business and a Bidder Business

| | Relative Size of Target Business | | | |
|---|---|---|---|---|
| Strategic Fit | Major | Major | Minor | Minor |
| Unrelated | MJTUMJB | MJTUMNB | MNTUMJB | MNTUMNB |
| Related-Supplementary | MJTSMJB | MJTSMNB | MNTSMJB | MNTSMNB |
| Related-Complementary | MJTCMJB | MJTCMNB | MNTCMJB | MNTCMNB |
| Identical | MJTIMJB | MJTIMNB | MNTIMJB | MNTIMNB |
| | Major | Minor | Major | Minor |
| | Relative Size of Bidder Business | | | |

Legend

Major Business = contributes at least 10% more to corporate revenues than any other business units

Minor Business = does not contribute 10% more to corporate revenues than other business units

MJT = major target business; MNT = minor target business
MJB = major bidder business; MNB = minor bidder business

I = identical fit, target sells similar products as bidder to similar customers

C = related-complementary fit, target sells new products to similar customers as bidder

S = related-supplementary fit, target sells similar products as bidder but to new customers

U = unrelated fit, target sells new products to new customers

The major business(es) of a corporation is its key investment. Even if a major business is currently not the focus of corporate management, significant amounts of managerial skill were invested to build the business and are are needed to manage the on-going concern.

Since major businesses are more important than minor businesses along two dimensions -- amount of assets or asset utilization intensity, and current or past management interest, fits involving one major business receive a weight of two and are weighted twice as heavily as minor/minor fits to account for the increased importance of these two dimensions. Fits involving two major businesses receive a weight of four and are weighted twice as heavily as major/minor fits since both businesses involved have the two key characteristics of major businesses.

Three versions of this weighting scheme were tested -- 9,3,3,1; 4,3,2,1; and 4,2,3,1. Only the 9,3,3,1 scheme performed better than the 4,2,2,1 system in any instance. However, the small average increases in $R^2$ for bidder and joint gains under the 9,3,3,1 scheme (3% and 5% higher for bidder and joint gains respectively) were coupled with a decrease of 9.7% in the $R^2$ for targets.

## IV. An Example - The Champion International/Hoerner Waldorf Merger of 1976

The acquisition of Hoerner Waldorf by Champion International discussed in Shelton (1985) is presented here to illustrate the use of the system for classifying strategic fits. Table 4 displays products produced and customers served by line of business for both the target and the bidder. Data one year prior to the year of acquisition is used because that is the most recent data available for the target firm.

Table 4

Champion International/Hoerner Waldorf Merger
of 1976

1975 Line of Business Data for Bidder and Target

Bidder-Champion International

| Businesses | Building Materials | Papers | Furnishings |
|---|---|---|---|
| % of Corporate Revenue | 46% | 41% | 13% |
| Products: | plywood, fir specialities, doors, lumber, logs, veneer, adhesives, floor installation materials, bleached kraft market pulp | fine papers, other papers and board, milk cartons, other packages, envelopes, office products | furniture, carpets |
| Customers: | furniture and furniture manufacturers, homeowners, building and retail construction | commercial printing, graphic arts, food, cosmetic and pharmaceutical industries, general business, data processing | households, hotels/motels, U.S. government, churches, outdoor patio and leisure furniture markets, home and contract carpet markets |

Source: 1975 Annual Report.

Table 4 (continued)

Target - Hoerner Waldorf

| Businesses | Corrugated Containers | Mill Products | Consumer Packages | Grocery Bags | Lumber |
|---|---|---|---|---|---|
| % of Corporate Revenue | 51% | 17% | 16% | 11% | 5% |
| Products: | corrugated boxes | paper, pulp, kraft packaging products, paperboard, semi-chem corrugating medium | colorful packages for food | shopping bags, grocery bags, multiwall sacks | dimension lumber, other consumer and industrial wood products |
| Customers: | food and beverage industries, appliance and recreational product manufacturers | Container, Consumer Packages and Bag Divisions | food industry | grocery stores | furniture, construction |

Source: 1975 Annual Report.

In Table 5, each target and bidder business has been classified by relative size and the strategic fits between them have been determined. An example of an identical fit between target and bidder businesses is provided by the Consumer Packages business of Hoerner Waldorf and the Papers business of Champion International. Both businesses manufacture food packages for the food industry, as Table 4 shows. Even though the Papers business also produces other products for other customers, the addition of the Consumer Packages business does not represent a change in products produced or clients served.

The Lumber division of Hoerner Waldorf is a related-complementary fit with the Furnishings group of Champion. Both businesses serve the furniture and household construction markets, but the addition of the Lumber business broadens the line of products offered to these customers. The Lumber business also provides opportunities for backward vertical integration, which is a related-complementary fit, since the position of Champion in the furnishings market can be strengthened.

The Corrugated Containers business of the target is related-supplementary to the Building Materials business of the bidder because the addition of this business primarily provides access to new markets and new customers rather than new products. The Containers business adds a single new product yet permits entry into several different industries.

Two unrelated businesses are Grocery Bags of Hoerner Waldorf and Furnishings of Champion International. While both businesses sell finished goods to consumers, the technologies used in production are dissimilar and the products serve very different functions.

Table 5

Strategic Fits in Champion International/Hoerner Waldorf Merger

| Target (Hoerner Waldorf) Business | Relative Size | Bidder (Champion) Business | Relative Size | Strategic Fit |
|---|---|---|---|---|
| Corrugated Containers | Major | Building Materials | Major | Related-Supplementary |
| " | " | Papers | Major | Related-Supplementary |
| " | " | Furnishings | Minor | Unrelated |
| Mill Products | Minor | Building Materials | Major | Related-Complementary |
| " | " | Papers | Major | Related-Complementary |
| " | " | Furnishings | Minor | Unrelated |
| Consumer Packages | Minor | Building Materials | Major | Unrelated |
| " | " | Papers | Major | Identical |
| " | " | Furnishings | Minor | Unrelated |
| Grocery Bags | Minor | Building Materials | Major | Unrelated |
| " | " | Papers | Major | Related-Complementary |
| " | " | Furnishings | Minor | Unrelated |
| Lumber | Minor | Building Materials | Major | Identical |
| " | " | Papers | Major | Unrelated |
| " | " | Furnishings | Minor | Related-Complementary |

The four examples discussed above are a fraction of the fifteen strategic fits between the five target businesses and the three bidder businesses. Seven different types of strategic fits are represented among the fifteen strategic fits presented in Table 5.

Using the previously discussed weighting scheme, the number of total businesses fits is 30, which equals 4 x 2 major target/minor bidder fits, 2 x 1 major target/minor bidder fits, 2 x 8 minor target/major bidder fits and 1 x 4 minor target/minor bidder fits. The total number of identical fits becomes 2 x 2 minor target/major bidder fits or 4, which is equivalent to 13.3% of the total weighted fits. The three minor target/major bidder related-complementary fits and the single minor target/minor bidder related-complementary fit yields a total of 7, or 23.3% of total weighted fits.

The two related-supplementary fits equal a weighted total of 8, or 26.7%, since both of these fits occur between major businesses. The Unrelated fits consist of 3 minor target/major bidder fits, 1 major target/minor bidder fit and 3 minor target/minor bidder fits for a total of 11, or 36.7%, of the total weighted fits. The proportions of weighted fits are summarized here:

| Total Weighted Fits | Identical | Related-Complementary | Related-Supplementary | Unrelated |
|---|---|---|---|---|
| 30 | 4 | 7 | 8 | 11 |
| 100% | 13.3% | 23.3% | 26.7% | 36.7% |

V. Hypotheses

The following two hypotheses will be tested:

H1: The strategic fits between the businesses of the bidder and the target in an acquisition explain some of the variance in the value created in mergers.

If this hypothesis is true, then the coefficients on the strategic business fit variables in a regression equation explaining the gains to merger should be statistically significant from zero, and some should differ statistically from others. Hypothesis One suggests that the opportunities for the acquiring firm to create value with the acquired firm's assets is evaluated by the capital markets when the merger is announced and that these strategic fits are a significant source of value creation. The acquisition fit provides the capital markets with information for making an unbiased estimate of the expected value created in the merger.

H2: Strategic business fit can be ranked in descending order of value creation potential as follows: Identical, Related-Supplementary, Related-Complementary, and Unrelated.

If this hypothesis is true, then the coefficient on the percentage of identical fits should be the largest fit coefficient, followed by the coefficients for the other fit variables, each of which will be successively smaller. The coefficient on the percentage of unrelated fits variable should be negative.

Opportunities for creating economies of scope increase if the assets of the target firm are closely related to those of the bidder. In the identical fit category, the bidder and target are in the same

business. If the assets of the two businesses are unrelated, then little possibility exists for developing economies of scope, although value can be created in the presence of market imperfections as discussed in Shelton (1985).

Even though related supplementary and related-complementary fits both provide opportunities to reduce marketing and production costs, related-supplementary fits provide greater opportunities to use excess capacity in managerial creativity. Related-complementary fits provide the opportunity to strengthen or consolidate a market position. Serving current customers better with new products and improved technology creates value, but most of assets involved continue to be used as they were previously. Exceptions to the rule exist for related-complementary fits, but in general, consolidating a position in an existing market requires less managerial creativity than expanding into new markets.

The focus of related-supplementary fits is on expansion into new markets with new customers. Success comes from intensively using managerial creativity or entrepreneurial ideas in order to use existing bidder assets most effectively in exploiting the new markets made available by acquiring the target. Related-complementary and related-supplementary fits may provide opportunities to cut costs by equivalent amounts, but related-supplementary fits offer more intense utilization of entrepreneurial ideas.

Thus, related-complementary and related-supplementary fits differ with respect to the type of assets which are used most intensively and the change in the product market opportunities of the bidder. While both fits should create positive value and therefore have positive coefficients, the related-supplementary coefficient should be larger.

VI. Regression Model

The hypotheses discussed peviously will be tested using the following regression model. This basic model controls for the effects of merger regulation, subsequent divestiture and other factors while examining the effects of strategic business fit.

$$NTVL = \alpha+\beta_1 RS+\beta_2 RCP+\beta_3 I+\beta_4 \text{ TIME} + \beta_5 RIV+\beta_6 EQF+\beta_7 PER+\beta_8 \text{ DIVEST}$$

where:

NTVL = normalized dollar value created by the merger, sum of the value created for target and bidder shareholders divided by the sum of target equity and bidder equity;

RS = weighted percentage of related-supplementary strategic fits;

RCP = weighted percentage of related-complementary strategic fits;

I = weighted percentage of identical strategic fits;

TIME = dummy variable equal to one if the merger occurred after the passage of the Williams Act in October 1969;

RIV = dummy variable equal to one if other firms were also bidding for the target;

EQF = dummy variable equal to one if common stock was used to finance the merger;

PER = price earnings ratio of the target firm divided by the price earnings ratio of the bidder;

DIVEST = dummy variable equal to one if the target firm, or a large portion thereof, was subsequently divested.

The dependent variable, NTVL, is derived using the market model technique discussed earlier to identify the gains created by merger. This variable represents the dollar gain created in an acquisition per dollar of equity involved in the transaction.

Asquith, Bruner and Mullins (1983) and Schipper and Thompson (1983) found that the market for mergers changed when Congress passed the Williams Act and other regulations between July 1968 to October 1969. These regulations reduced the freedom of action of acquiring firms in executing merger offers and reduced the gains to bidding firms.

However, this legislation may have increased the gains to merger activity as a whole in addition to possibly altering the distribution of gains. By requiring bidders to file statements about their plans for the target firm and allowing target shareholders a fixed period in which to withdraw tendered securities, the Williams amendments may have reduced the occurrence of strategically unsound mergers. To control for these changes, the sample of acquisitions is divided into two time periods -- pre- and post-October 1969. The TIME, or Post-Williams Act, dummy will equals 1 for acquisitions made during the second period.

The RIV variable indicates the presence of rival firms involved in bidding for the target firm. The existence of multiple bidders should increase the gain to target shareholders via an auction effect.

However, if competitive bidding indicates that the target firm has exceptionally good prospects for creating value, i.e. either high quality assets or very scarce assets, then the RIV variable could serve as a proxy for value-creation potential not measured by strategic fit.

The EQF variable is designed to capture the effects of financing on the value created by a merger. If the bidder firm issues or exchanges

equity to finance the merger, uncertainty about the success of the bid may exist that would not be present in a strictly cash offer. This additional uncertainty could increase the reservation price of risk-averse target shareholders. Therefore, a small negative coefficient is expected.

If a merger is motivated by earnings manipulation techniques, then the strategic fit variables will not explain significant changes in value creation. The PER variable would then be significant and negative in explaining the changes in value caused by these mergers.

If an acquisition is retained by the acquiring firm until the end of the sample period-1983, then the bidder is assumed to have gained sufficient value or utility from the merger so that keeping the target served the bidder's purposes better than selling it. However, divestiture of the acquisition indicates that the strategic fits did not lend themselves to value creation, the implementation was faulty or both. The divestiture dummy provides an ex-post test of the initial market valuation of the acquisition.

This ex-post test is not perfect since it is less stringent for acquisitions which occur later in the sample period. In addition, other factors influence divestiture such as changes in the competitive environment and organizational learning by the bidder firm. Despite the limits of the test, one would expect less successful acquisitions to be divested and more successful acquisitions to be retained. The DIVEST dummy should have a negative coefficient.

## VII. Statistical Results

Table 6 shows that strategic fits are important in determining the total gains created in acquisition. As the proportion of related-supplementary fits in an acquisition increases, more value is created. Conversely, less value is created in acquisitions with a high proportion of unrelated fits. No statistically significant differences exist between acquisitions with a high percentage of identical fits and those with a high proportion of related-complementary fits.

Mergers in which rival bidders were present yielded increased gains to targets and bidders combined. The presence of rival bidders seems to indicate that the target being pursued has value-creation potential, such as high quality assets, beyond that measured by the strategic fit categories.

Capital markets are highly efficient since strategic fit information is promptly impounded in the stock prices of bidder and target firms during the three day period surrounding, and including, the merger press date. This three day time period produced better statistical results than any of the thirteen other time intervals that were tested in Shelton (1985).

Approximately 27%, or 31, of the mergers in the sample had different announcement days for target and bidder. This occurred when a bidder previous to the ultimately victorious bidder showed interest in the target. In these instances, strategic fit information regarding a bidder other than the victor may have been impounded into the stock price of the target firm. To control for this effect, the first regression model in Table 6 was rerun with interaction terms for the strategic fit categories, and dummy variables noting targets with announcement dates that differed from those of the winning bidders. The major change caused

TABLE 6

Estimated Coefficients from Regression of Announcement Period Returns for Target and Bidders on Weighted Strategic Fits between Target and Bidder Business Units in 114 Acquisitions during 1962 to 1983 (t - statistics in parentheses)

Dependent Variable = (Δ in Bidder Equity + Δ in Target Equity)/(Bidder Equity + Target Equity) measured over the following days:

| | t=-1,1 | t=-1,1 |
|---|---|---|
| Independent Variables | | |
| Constant (1) | -.033<br>(-1.87) | -.03<br>(-1.59) |
| Mismatched % Weighted Related - Supplementary | NA | .01<br>(.23) |
| Mismatched % Weighted Related Com-lementary | NA | .015<br>(.503) |
| Mismatched % Weighted Identical | NA | .037<br>(.913) |
| Mismatched % Weighted Unrelated | NA | -.015<br>(-.741) |
| % Weighted Related - Supplementary | .051<br>(2.37) | .056<br>(2.29) |
| % Weighted Related - Com-plementary | .0291<br>(1.58) | .036<br>(1.67) |
| % Weighted Identical | .0373<br>(1.58) | .032<br>(1.67) |
| Divested | -.004<br>(-.31) | -.003<br>(-.237) |
| Equity Financed | .0199<br>(1.21) | .016<br>(.931) |
| Rival Bidders | .035<br>(3.75) | .0481<br>(2.98) |

TABLE 6 (continued)

| | t=-1,1 | t=-1,1 |
|---|---|---|
| Target P-E Ratio/Bidder P-E Ratio | .0016<br>(1.54) | .0013<br>(1.2) |
| Post-Williams Act | -.008<br>(-.983) | -.0062<br>(-.735) |
| Adjusted $R^2$ | .151 | .14 |
| Mean of Dependent Variable | .003 | .003 |

t = 0 is day of first public announcement of merger

(1) Constant incorporates the efect of % Weighted Unrelated Strategic Fits.

by controlling for mismatched announcements dates was a slight increase in the coefficient and t-statistic of the related-complementary variable and a decrease in the t-statistic of identical variable.

## VIII. Conclusions

Since a merger often consists of various types of asset combinations, the strategic fit system presented here provides a means of measuring the value creation impact of these asset combinations. The results of this study show that strategic business fit is an important determinant of the value created in acquisitions. Although the combined gains for bidder and target in the average merger are positive but close to zero according to Jensen and Ruback (1983), acquisitions in which a high proportion of the target businesses provide the bidder with access to new but related customers and product markets consistently create more value than average. If a high proportion of the target businesses are unrelated to those of the bidder, then less value is created than average.

Business fits in which the assets of either the target or the bidder are used more intensively -- identical, related-complementary and related-supplementary -- create value. However, related-supplementary fits, which exploit excess capacity in managerial creativity in addition to other assets, create the most value.

The strategic fit system permits more accurate determination of the source of value creation in mergers because it provides a means of analyzing the component asset combinations of mergers. As a result, it is a tool for both managers and scholars to use in evaluating acquisitions and divestitures.

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