

Value Creation Following Merger and Acquisition Announcements: The Role of Strategic Emphasis Alignment

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WEB APPENDIX

Event Study Methodology. Unanticipated events cause a change in the firm's security price as soon as the market learns of the events. The magnitude of the change is an unbiased estimate of the value of the event to the firm's expected future cash flow. Event studies have been widely used to study marketing-related events' effects on firm's stock market prices (e.g., Lane and Jacobson 1995). The event study method compares the actual stock return on the event day for firm i with the return that would be expected if the event had not taken place [$E(R_{it})$]. The stock return is the percentage change in the stock price between time $t-1$ and t .

$$(1) \quad R_{it} = \frac{P_{it} - P_{it-1}}{P_{it-1}}$$

The expected return $E(R_{it})$ to firm i at time t can be described as a linear function of the returns from a benchmark portfolio of marketable assets R_{mt} . The benchmark portfolio in our case is the value-weighted market portfolio reported in CRSP for a given date. We used daily data on the stock market returns of each target and acquirer in the database over a 240-day period ending ten days prior to the event day to estimate the expected returns (Fama, 1970):

$$(2) \quad E(R_{it}) = \alpha + \beta R_{mt}$$

The difference between the actual return and the estimated expected return provides a measure of abnormal return e_{it} for the shares of acquirer (or target) i at time t .

$$(3) \quad e_{it} = R_{it} - E(R_{it}) = R_{it} - (\hat{\alpha}_i + \hat{\beta}_i R_{mt})$$

Cumulative Abnormal Returns (CAR). Our analysis is based on the excess return between the opening stock price the day before the announcement and the closing stock price the day after the announcement, that is, an event window of event day -1 (t_1) through event day $+1$ (t_2). Some merger announcements may have occurred after the close of the stock market, and that is why the possible effect of the day after is also taken into account. We also aggregate the abnormal returns over the event period (t_1, t_2) to obtain the cumulative abnormal return (CAR) as shown in equation 4. We compute the CAR for both the acquirer and the target separately.

$$(4) \quad CAR = \sum_{i=-1}^{i=+1} e_{it}$$

Portfolio Abnormal Returns. The portfolio abnormal returns are estimated as follows:

$$(5) \quad \left[\text{CAR}_{\text{acquirer}} * \left(\frac{\text{Acquirer MVE}}{\text{Total MVE}} \right) \right] + \left[\text{CAR}_{\text{target}} * \left(\frac{\text{Target MVE}}{\text{Total MVE}} \right) \right]$$

where the total market value of equity (i.e., MVE) is the target MVE plus the acquirer MVE. The MVE is computed by taking the number of shares outstanding and multiplying by the share price of the firm ten days prior to the announcement date.

Table A1

**PORTFOLIO ABNORMAL RETURNS
DESCRIPTIVE STATISTICS (N=206)**

	Portfolio Abnormal Returns
Mean	.020
Standard Deviation	.050
Maximum	.27
Minimum	-.15
Median	.008
10 th Percentile	-.040
90 th Percentile	.080

Table A2
CUMULATIVE ABNORMAL RETURNS OVER
DIFFERENT EVENT WINDOWS (N=206)^a

Event Windows	Acquirer Cumulative Abnormal Return	Target Cumulative Abnormal Return
Days -3 to +3	.010 (1.14)	.151 (9.06) ^{***}
Days -2 to +2	.019 (2.08) ^{**}	.122 (8.32) ^{***}
Days -1 to +1	.014 (1.91)	.140 (8.99) ^{***}
Days -1 to 0	.012 (1.80)	.080 (6.75) ^{***}
Days 0 to +1	.010 (1.57)	.124 (8.40) ^{***}
Days -1 to +2	.015 (1.92)	.134 (8.93) ^{***}
Days -1 to +3	.014 (1.56)	.131 (8.87) ^{***}
Days -3 to +1	.012 (1.34)	.136 (8.97) ^{***}
Days -2 to +1	.019 (2.05) ^{**}	.130 (8.80) ^{***}

*** p<.01 ** p<.05

Note: As shown above, the abnormal returns to the target are generally positive whereas the acquirer abnormal returns are non-significant and sometimes positive.

^a Numbers in parentheses in column cells represent the associated t-statistics for a test of the null hypotheses that the mean of the cumulative abnormal return is zero.

Table A3
THE IMPACT OF STRATEGIC EMPHASIS ALIGNMENT AND MOTIVE ON PORTFOLIO
ABNORMAL RETURNS^a

	All Industries (N=206)	Electronics Industry (N=97)	Foods Industry (N=68)	Chemicals, Detergents (N=41)
Intercept	0.002 ^b 0.210	-0.026 -1.810	0.009 1.290	0.010 0.99
A. Difference Between Acquirer S.E. and Target S.E.	0.130** 2.570	0.206** 2.630	0.185** 1.970	0.319** 2.240
B. Pure Consolidation Motive*A	-0.276*** -4.680	-0.387*** -4.320	-0.269*** -2.410	-0.341** -2.140
C. Unrelated Diversification Motive	-0.002 -0.190	0.013 0.420	-0.010 -1.210	-0.005 -0.610
D. Pure Consolidation Motive	0.031*** 4.120	0.074*** 4.490	0.025*** 2.760	0.001 0.120
E. Acquirer Strategic Emphasis (S.E.)	-0.006 -0.130	-0.038 -0.540	0.109 1.420	-0.002 -0.150
F. Acquirer Marketing Resources	0.000 -0.240	0.000 -1.10	0.000 0.470	0.000 0.470
G. Relative Size	0.000 0.140	0.000 0.560	0.000 -0.850	0.000 0.700
H. Industry Type-Electronics	0.003 0.032			
I. Industry Type-Foods	0.000 0.050			
F-Value	7.18*** (df=9,196)	6.32*** (df=7,89)	2.88*** (df=7,60)	3.42*** (df=7,33)
Adjusted R-Squared	.25	.28	.16	.26

Strategic Emphasis Difference Under Varying Motives (Simple Slope Analysis)

	All Industries	Electronics Industry	Foods Industry	Chemicals, Detergents
Strategic Emphasis Difference Under Consolidation Motive	-0.146*** -3.990	-.181*** -3.250	-0.084** -1.960	-0.022 -0.30
Strategic Emphasis Difference Under Diversification Motive	0.130** 2.570	0.206** 2.630	0.185** 1.970	0.319** 2.240

** $p < .05$; *** $p < .01$

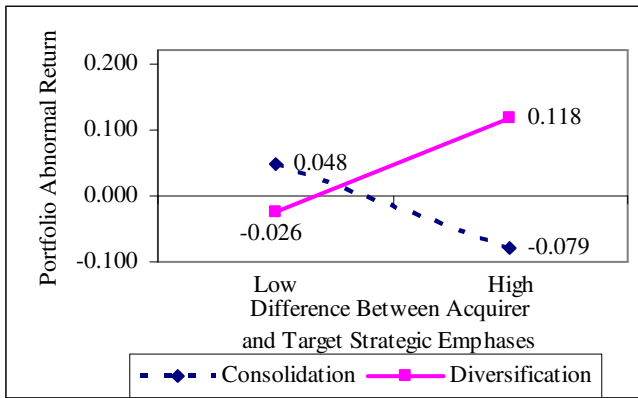
Note: The results presented here are based on estimating the following equation 1a (also referenced in footnote 6 of the paper):

$$[1a] \quad Y = \beta_0 + \beta_1(\text{Strategic Emphasis Difference}) + \beta_2(\text{Strategic Emphasis Difference} \times \text{Consolidation Motive}) + \beta_3(\text{Unrelated Diversification Motive}) + \beta_4(\text{Consolidation Motive}) + \beta_5(\text{Acquirer Strategic Emphasis}) + \beta_6(\text{Acquirer Marketing Resources}) + \beta_7(\text{Relative size}) + \beta_{8,9}(\text{Industry Dummy Variables}) + \varepsilon$$

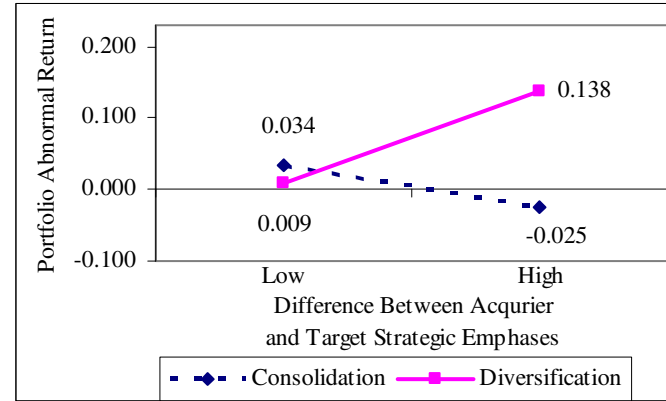
^aThe numbers in the top row are unstandardized parameter estimates. The italicized numbers are the associated t-values.

PORTFOLIO ABNORMAL RETURNS BY INDUSTRY: THE ROLE OF STRATEGIC EMPHASIS DIFFERENCE AND MERGER MOTIVE

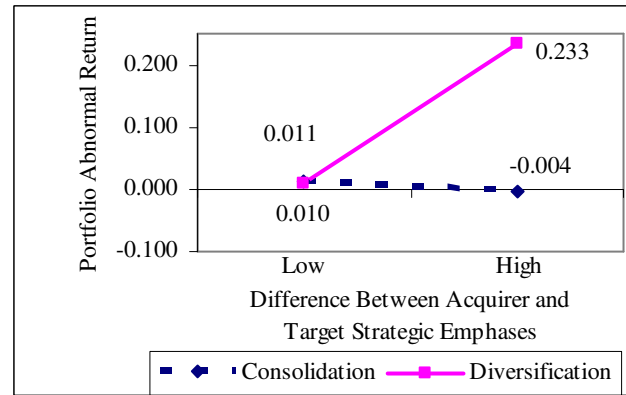
**Figure A
ELECTRONICS INDUSTRY**



**Figure B
FOODS INDUSTRY**



**Figure C
CHEMICALS INDUSTRY**



Note: Across both electronics and foods industries, when the merger motive is one of consolidation, a high strategic emphasis difference reduces the average portfolio abnormal return whereas a low strategic emphasis difference increases the return. This result does not hold for the chemicals industry context. Across all three industries, when the merger motive is one of diversification, a high strategic emphasis difference increases the return whereas a low strategic emphasis difference decreases the return.