

# The Effect of Divergent Corporate Governance on Global Diversification Wealth Effect across Industries

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## ABSTRACT

*The more profound global diversification wealth effect for acquiring firm shareholders in the last decade as well as corporate governance characteristics are found varying with the industry affiliations of the acquirers. The divergent corporate governance across industries appears to explain the differential wealth effect. Manufacturing industries benefit the most through globalization but their gain is not affected by corporate governance factors. Both are believed to be the consequence of their industry characteristics, such as more abundant firm-specific and information-based assets, internalization, and ownership advantages. Corporate governance characteristics do impact cross-border diversification firm value gain for non-manufacturing firms. Better corporate governance scheme in place does lead to greater shareholder wealth increase. Among non-manufacturing industries, external corporate governance system is especially vital for non-service firms.*

## INTRODUCTION

The International Business literature suggests substantial benefits from global diversification (e.g., Caves, 1971; Dunning, 1973; Buckley and Casson, 1976). Specifically, foreign direct investments (FDI) or international mergers and acquisitions (M&A) should lead to positive shareholder wealth effect. Nevertheless, the literature produces less than convincing empirical evidence confirming theoretical prediction. Earlier studies tend to find foreign mergers and acquisitions just marginally beneficial for bidders (e.g., Doukas and Travlos, 1988; Morck and Yeung, 1992; Doukas, 1995; Seth, Song, and Pettit, 2000) as they report by and large little or statistically insignificant (and sometimes negative) wealth effect for U.S. acquirers.

More recent research, however, presents two sets of vastly distinctive findings. On one hand, global diversification discount is documented in terms of negative acquiring firm excess values (EV) (e.g., Dennis, Dennis, and Yost; 2002; Doukas and Kan, 2006). Global diversification is believed to destroy firm value at least from shareholders' perspective. However, EV associated with global diversification might also be positive (e.g., Bodnar, Tang, and Weintrop, 1999). In addition, significant cumulative abnormal returns (CAR) for acquirers are reported in studies on M&A activities in the 1990s (e.g., Kiyamaz, 2003; Choi and Tsai, 2006). These results obviously point to shareholder wealth increase through cross-border diversification. Given the sharp contrast in empirical evidence, it is worth noting that the favorable findings are more in line with the arguments in Villalonga (2004) and Holmstrom and Kaplan (2001) which conclude that U.S. corporations have increasingly pursued more shareholder-friendly policies in the 1990s. Cross-border diversification clearly leads to better realization of potential benefits for bidders in the last decade than in the previous periods such as 1970s and 1980s. It is certainly worth the effort to investigate the reason behind the phenomenon of increasing global diversification

wealth effect in the 1990s. In concentrating on the latest merger wave, 1992-2000, however, the mixed evidence logically begs for answers to another question as well. What could help reconcile the aforementioned contradicting findings?

Consequently, this paper attempts to explore these issues. First of all, industry difference, to an extent, may account for the divergent findings in the realization of cross-border diversification benefits. Theoretically, manufacturing industries would gain more through foreign direct investments due to internalization and ownership advantages based on the conventional International Business framework. Global diversification gains, owing to internalization and ownership advantages, benefit corporations with firm-specific or information-based assets more. Given the relative abundance of these kinds of assets, manufacturing firms in particular seem poised to reap the most benefits for diversifying their operations globally. The proposed investigation in industry difference is also in line with the finding in Harris and Ravenscraft (1991) that cross-border takeovers are more likely to take place in R&D intensive industries (more likely manufacturing). As a result, there ought to be a positive relation between the desirability of international diversification by manufacturing industries and shareholder wealth gain. Hence, a study consisting of more prevalent manufacturing firms is likely to have a more favorable report in regard to global diversification wealth effect and vice versa. It is quite plausible that the divergent findings in the literature are at least in part the consequence of industry difference. Nevertheless, industry difference has not yet been fully examined in the existing studies. Furthermore, it is suggested that corporate governance might be a contributing factor to the increase of acquiring firm value in the 1990s (e.g., Holmstrom and Kaplan, 2001; Villalonga, 2004). What has not been proposed is the possibility that industry difference in corporate governance impacts the global diversification wealth effect as well. Therefore, this study will also examine the distinctions in corporate governance across industries and their relation to shareholder wealth gain.

The remainder of this paper is organized as follows. Section II reviews related work in the literature. Section III discusses the data sources and estimating methodologies. Section IV reports and interprets the empirical results. Section V summarizes the findings of this paper.

## LITERATURE REVIEW

This section first reviews the pertinent literature regarding global diversification wealth effect for acquirers. The research on earlier international M&A activities tends to conclude international diversification not necessarily leading to substantial acquiring firm value creation as suggested by the conventional International Business theories. Some studies in more recent cross-border acquisitions depict a more encouraging scenario, but a few others report international diversification discount for acquiring firms. It is also noted that the more favorable outcomes correspond to a period in the last decade which exhibits fundamentally different corporate governance systems. This paper suggests that industry differences, particularly in corporate governance, may help reconcile the controversy and mixed results in regard to global diversification wealth effect in the existing literature.

There is almost a consensus in the domestic M&A literature that M&A activities destroy acquiring firm value but create substantial wealth for target shareholders (e.g., Walker, 2000; Graham, Lemmon, and Wolf, 2002). In the foreign M&A front, targets still enjoy relatively healthy firm value gain, although it appears to be not as profoundly for acquirers. Studies in activities occurring in earlier decades (e.g., 1970s and 1980s) tend to reveal less than satisfactory results for bidders in spite of favorable predictions by the International Business theories. Among a long list of potential international diversification

benefits, some are considered to be the most substantial, for instance, internalization and ownership advantages. Nonetheless, earlier studies examining acquirers' cumulative abnormal returns in their full samples have generally failed to verify these potential gains. Doukas and Travlos (1988), in their pioneer foreign M&A study, find U.S. acquirers with negligible overall gain upon their acquisition announcements from 1975 to 1983. Datta and Puia (1995) report negative cumulative share returns for U.S. acquirers during 1978-1990. Cakici, Hessel and Tandon (1996) are unable to discover any positive wealth effect (regardless of significance) for U.S. bidders for 1983-1992. Seth, Song and Pettit (2000) report small positive, but statistically insignificant wealth effect for U.S. acquiring firms during the period of 1981-1990. Moeller and Schlingemann (2005) find that international acquisitions trade at a discount relative to domestic acquisitions during the period of 1985-1995 and that bidder returns are positively related to takeover activity and the legal system in the target country. However, contrary to the other studies examining earlier periods, Morck and Yeung (1992) report substantial gain for U.S. acquirers in their full sample for 1978-1988. More recent studies focusing mostly on the M&A activities in the 1990s do convey more favorable information for acquiring firms. Kiyamaz (2003) presents a finding of moderate wealth gain of 0.57% (CAR (-1, 0)) for U.S. acquirers during the period of 1989-2000. Choi and Tsai (2006) report a much more sizable, CAR (-1, 0) at 1.08%, and significant overall acquiring firm wealth effect during the latest 5<sup>th</sup> merger wave from 1992 to 2000. It is suggested that the increase of global diversification gain in the last decade is related to the improved corporate governance schemes. For instance, Holmstrom and Kaplan (2001) describe various innovations in capital markets, takeover activities, and corporate governance in the 1990s that have induced U.S. corporations to focus on shareholder values. They argue that "U.S. corporations have voluntarily pursued shareholder-friendly policies in the 1990s," which was "greatly aided by lucrative stock option plans" and other incentive-based compensation and ownership systems as well as regulatory changes (Holmstrom and Kaplan (2001, p.136).

Recently, a slew of research based on acquiring firm excessive value measure (rather than CAR) following Berger and Ofek (1995) contributes more to the controversy on the realization of global diversification gain. Denis, Denis and Yost (2002), for instance, link valuation discounts to both international and industrial diversification for U.S. firms in the period 1984-1997. Click and Harrison (2000) also present evidence regarding value destruction for U.S. multinational firms. Doukas and Kan (2006) report global diversification discount as well for shareholders (but not for bondholders). In contrast, Bodnar, Tang, and Weintrop (1999) find a small premium for firms with international operations over a comparable single-activity domestic firm during the similar sample period. It is worth pointing out again that these studies differ in research design. However, Choi and Tsai (2006) also note that "... the event study may not be exactly comparable to diversification discount studies in research designs because, in addition to the difference in valuation measures used, the former does not directly control for the effects of consolidation of operations. Two are comparable, however, to the extent that the valuation effects of such consolidation are reflected in market reactions following the announcement of international acquisitions."

Although, as noted in the previous section, the issue regarding the impact of industry difference on cross-border diversification wealth effect has not been fully examined, a handful of studies have focused on specific industries. Among them, financial industries garner the most attention perhaps because their lagging behind other industries in FDI puzzles or their unique characteristics interest many researchers. Amihud, DeLong and Saunders (2002) find significant negative abnormal returns associated with acquirers for cross-border bank mergers during 1985-1998. Kiyamaz (2004) reports insignificant firm

value increase for US bidders in financial sectors on the M&A announcements. Waheed and Mathur (1995) show a wealth effect of -0.17% for US banks expanding abroad during 1963-1989.

## DATA AND METHODOLOGY

The standard event study procedure is used to measure the market-based wealth effects on a sample of 369 U.S. corporations acquiring foreign targets between 1992 and 2000. Stock prices and other variables are retrieved from CRSP, the *Standard and Poor's CompuStat North America*, *PDE*, and *ExecuComp* datasets as well as *Compact Disclosure* CDs. The full sample is formed by first including all U.S. firms conducting international mergers and acquisitions, as listed in *Mergers and Acquisitions*, in the initial sample over the period from 1992 to 2000. We then exclude any partial acquisitions, cleanups, or increasing stakes of previous partial acquisitions. The event date,  $t = 0$ , is the date when the news of international acquisitions first appears in the *Wall Street Journal*. Given the publication lag of one day, this means that  $t = -1$  is the day when the firm actually makes an announcement. The acquisition cases that are not reported in the *Wall Street Journal* are eliminated from the sample. To ensure a "clean" sample, free from any confounding effects, acquirers with any major concurrent corporate event occurring within the 15-day period prior to the acquisition announcement also are excluded. The *Wall Street Journal* Index is again consulted for this purpose. Finally, the remaining acquisitions will be retained only if stock prices for the acquirers are available on CRSP tapes. The final sample consists of a total of 369 U.S. acquisitions overseas completed over the period of 1992–2000. Table 1 provides a brief descriptive statistics for the sample.

**Table 1. Descriptive Sample Statistics**

International M&As by U.S. Firms: Number of Cases by Industry, Year, and Country/Region											
<i>Two-Digit SIC</i>	01-09	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80-89	99	<i>Total</i>
<i>Frequency</i>	1	16	83	117	31	27	24	57	11	2	369
<i>Year</i>	1992	1993	1994	1995	1996	1997	1998	1999	2000	<i>Total</i>	
<i>Frequency</i>	37	28	37	34	42	42	62	59	28	369	
<i>Country/Region</i>	Asia	Africa	Canada	Central/ South America	UK	Western Europe	Eastern Europe	Australia/New Zealand	<i>Total</i>		
<i>Frequency</i>	15	3	54	35	115	116	15	16	369		

Industry definition by two-digit SIC codes: 01-09: Agriculture, forestry, and fishing; 10-19: Mining and construction; 20-29: Manufacturing (food, tobacco, textile, wood, paper, printing, chemicals, petroleum refining); 30-39: Manufacturing (rubber, leather, metal, machinery and computer, electronic, transportation and miscellaneous equipment); 40-49: Transportation, communications, electric, gas, and sanitary service; 50-59: Wholesale and retail trade; 60-69: Finance, insurance, and real estate; 70-79: Services (lodging, personal, business, automotive, repair, motion pictures, recreation); 80-89: Services

(health, legal, educational, social, museums, membership organizations, research and management, not classified services); 99: Nonclassifiable establishments.

This study follows the standard event method and uses the U.S. market index in calculating abnormal returns of U.S. acquiring firms. Firm  $i$ 's abnormal return on each trading day  $t$ , ( $AR_{it}$ ) is measured by:

$$AR_{it} = R_{it} - a_i - b_i R_{mt} , \quad (1)$$

where  $R_{it}$  is stock  $i$ 's daily return and  $R_{mt}$  is the return on the equally weighted U.S. market index from the Center for Research in Security Prices (CRSP). The market model parameters,  $a_i$  and  $b_i$ , are estimated by regressing each firm's returns on the market returns over a 200-day interval starting from the 260<sup>th</sup> to 61<sup>st</sup> trading day prior to announcement at day 0. The daily average abnormal return ( $AR_t$ ) for each day  $t$  for the entire sample of  $N$  firms is calculated by:

$$AR_t = \frac{1}{N} \sum_{i=1}^N AR_{it} . \quad (2)$$

For the purpose of calculating Z-statistics, the average standardized abnormal return ( $ASAR_{it}$ ) is computed first as:

$$ASAR_t = \frac{1}{N} \sum_{i=1}^N \frac{AR_{it}}{S_{it}} . \quad (3)$$

$S_{it}$  is the estimated standard deviation for firm  $i$ , obtained by:

$$S_{it} = \left[ S_i^2 \left[ 1 + \frac{1}{L} + \frac{(R_{mt} + \overline{R_m})^2}{\sum_{k=1}^L (R_{mk} - \overline{R_m})^2} \right] \right]^{\frac{1}{2}} , \quad (4)$$

where  $S^2$  is the residual variance for stock  $i$  from the market model regression,  $L$  is the number of observations during the estimation period,  $R_{mk}$  is the return on the market portfolio for the  $k_{th}$  day of the estimation period,  $R_{mt}$  is the return on the market portfolio for day  $t$ , and  $\overline{R_m}$  is the average return of the market portfolio over the estimation period. The Z-statistics are calculated as:

$$Z_t = \sqrt{N} ASAR_t , \quad (5)$$

$$Z_{t_1, t_2} = \frac{\sqrt{N}}{\sqrt{t_2 - t_1 + 1}} \sum_{t_1}^{t_2} ASAR_t . \quad (6)$$

$Z_t$  is used to test whether the average standardized abnormal return is equal to zero, while  $Z_{t_1, t_2}$  tests whether the average cumulative standardized abnormal return over the interval  $t_1$  and  $t_2$  is equal to zero.

## EMPIRICAL RESULTS

The wealth effects for acquiring firms in terms of daily abnormal return (AR) and cumulative abnormal return (CAR) are first measured for the full sample and for major industrial affiliations and reported in Table 2. Based on the complete sample, column 1 of Table 2 shows highly significant AR (-1) and AR (0) at 1%-level-surrounding the announcement over day -1 and day 0, at 0.77% and 0.31%, respectively. In contrast, Doukas and Travlos (1988) find insignificant daily AR of 0.05% and -0.08% over the same two-day period. As reviewed in the earlier section, most existing studies report negligible or insignificant, if not negative, firm value gain. For those reporting significant increase, Morck and Yeung (1992) find AR (0) of 0.29%. Markides and Oyon (1998) obtain AR (-1) of 0.12% and AR (0) of 0.26%. Markides and Ittner (1994) reports ARs of 0.13% and 0.19% for these two days. Kiyamaz (2003) show the same two days of ARs at 0.13% and 0.44% respectively, but only the latter is significant. The measure of cross-border acquiring firm abnormal returns around the announcement day in the present study indicates value creation during the latest merger wave. This evidence is consistent with the argument of Holmstrom and Kaplan (2001) that better corporate governance was in place in the 1990s and hence raised investors' confidence and expectation on the outcomes of such important corporate decision.

Column 1 of Table 2 also reports sizable two-day cumulative abnormal return CAR (-1, 0), +1.08%, highly significant at 1%-level. In contrast, of the few positive findings in the existing studies, CAR (-1, 0) in Markides and Oyon (1998) and in Markides and Ittner (1994) are only +0.38%, significant at 5%, and +0.32%, significant at 10%, respectively. It almost doubles the 0.57% found in Kiyamaz (2003). Once again, investors clearly showed confidence in U.S. bidders acquiring foreign targets during the latest merger wave, 1992-2000, to create shareholder value. In addition to better corporate governance, investors apparently view strategic alliances such as foreign M&As enhancing firms' ability to compete and perform better in the global economy of the 1990s. Compared to the existing literature, the present study documents far more convincing results pertinent to positive global diversification wealth effect.

Nevertheless, one of the primary attempts in this paper is to explore industry differences. To see whether there is differential wealth effects for different industries, ARs and CARs are measured for various industry affiliations. Table 2 reports ARs and CARs in three major industry subsamples. Since manufacturing firms appear to potentially benefit more from global diversification due to internalization and ownership advantages, sample firms are first divided into manufacturing and non-manufacturing firms. Moreover, due to the heightened attention given to the financial industry in the literature as reviewed earlier, to gain more insightful comparison with the existing studies, non-manufacturing firms are further divided into financial and non-financial groups. Judging by the high significance and magnitude of AR (-1), AR (0), and CAR (-1, 0), the market evidently responds more favorably toward bidders in manufacturing industries. The explanation clearly lies on firm-specific or information-based assets. Manufacturing firms are more likely to possess an abundance of such assets, which imply more ownership advantages and greater need for internalization and hence lead to greater firm value increase through cross-border diversification. This result is also in line with the finding of positive wealth effect associated with firm-specific and largely information-intensive assets, or internalization hypothesis, in Morck and Yeung (1992). Non-manufacturing firms, in comparison, experience a wealth effect far less than the sample mean surrounding the announcement. In particular, no statistical significant firm value gain presents for financial industries. No noticeable wealth gain for financial firms is consistent with the existing studies focusing solely on financial sectors (e.g., Amihud, DeLong and Saunders, 2002; Kiyamaz,

2004; Waheed and Mathur, 1995). Kiymaz (2003) also reports variations in firm value increase across different industries. Overall, the industry subsample results in the present study show fundamental differences in global diversification wealth effect across industries.

**Table 2. Market Returns of U.S. International Mergers and Acquisitions by Industry**

This table shows results for sample groups based on industrial classification. The results for acquiring firms include daily average abnormal returns (AR) surrounding announcement day, and cumulative abnormal returns (CAR) and their corresponding Z-values (two-tail test) for specific time intervals based upon the standard event study methodology.

Event Day/ Interval	Full Sample (N=369)	<u>Manufacturing</u> (N=200)	<u>Non-</u> <u>Manufacturing</u>	
			Financial (N=25)	Non-Financial (N=144)
<i>Daily Abnormal Return (%)</i>				
AR (-5)	-0.1432 (-1.5555)	-0.210* (-1.6552)	0.081 (-0.1372)	-0.089 (-0.4822)
AR (-4)	-0.1315 (-0.0544)	-0.243 (-0.6958)	0.133 (0.9418)	-0.023 (0.5147)
AR (-3)	-0.0160 (0.1376)	-0.200 (-0.2938)	0.085 (0.8327)	0.223 (0.2197)
AR (-2)	-0.0089 (-0.6251)	-0.195 (-1.5250)	-0.262 (0.1210)	0.293 (0.7431)
AR (-1)	0.7728*** (4.3363)	0.821*** (2.9907)	0.415 (0.8097)	0.768*** (3.0795)
AR (0)	0.3070*** (2.7817)	0.594*** (4.2248)	0.052 (0.2528)	-0.048 (-0.6314)
AR (+1)	-0.2493 (-0.8158)	-0.062 (0.2390)	-0.157 (-0.1620)	-0.527 (-1.5200)
AR (+2)	-0.4227* (-1.8187)	-0.258 (-0.6389)	-0.282 (-0.2428)	-0.680** (-2.0572)
AR (+3)	-0.0348 (0.6904)	0.186* (1.815)	0.590** (2.2954)	-0.450** (-1.9908)
AR (+4)	0.0898 (0.7584)	0.027 (0.7841)	-0.105 (-0.3882)	0.211 (0.4518)
AR (+5)	0.1530 (1.0445)	0.126 (1.3893)	0.413 (0.395)	0.1454 (-0.1301)
<i>Cumulative Abnormal Return (%)</i>				
CAR (-1, 0)	1.080*** (5.0332)	1.416*** (5.1022)	0.468 (0.7513)	0.719* (1.7311)
CAR (-1, 1)	0.830*** (3.6386)	1.354*** (4.3039)	0.311 (0.5199)	0.194 (0.5359)

Manufacturing industries comprise firms with SIC 2000 – 3999 and Financial industries include firms with SIC 6000 – 6999. Non-Financial industries are firms not in manufacturing (SIC 2000 – 3999) and not in Financial industries (SIC 6000 – 6999).

\*\*\* Denotes significance at the 1%-level. \*\* Denotes significance at 5%-level. \* Denotes significance at 10%-level.

Given the divergent wealth effect across industries and the importance of corporate governance on global diversification wealth gain in the 1990s, it is essential to determine whether there exist also differential corporate governance characteristics among industry groups. The differential corporate governance characteristics if present might help explain the divergent wealth effect across industries. Since the primary distinction appears to exist between manufacturing and non-manufacturing industry according to both the theoretical arguments and empirical evidence, the test of differences will be

performed accordingly. Regarding the selection of corporate governance variables, Holmstrom and Kaplan (2001) identify various innovations in the 1990s occurring in corporate governance both internal and external to the firm. External governance systems such as institutional investors have played a more prominent role as monitoring agents. Incidentally, during this time period, there emerged also more effective internal governance structures such as independent boards, incentive-based managerial compensation and ownership schemes. Consequently, a slew of corporate governance variables are chosen in executive ownership, executive stock option, executive long-term compensation, agency cost, institutional ownership, insider ownership, and governance index. The latter three are also used in the study such as Doukas and Kan (2006). More detailed variable definitions are provided in Table 3. Overall, based on ANOVA test reported in Table 3, almost half of these corporate governance measures show statistical difference between manufacturing and non-manufacturing firms in executive ownership, insider ownership, and governance index, while executive stock option is only marginally insignificant. The governance index is a broad corporate governance measure constructed and made popular by Gompers, Ishii, and Metrick (2003). Generally, the lower the governance index, the better the governance system in place. The somewhat surprising result based on the significant variables is the better corporate governance system in non-manufacturing industries, especially, as indicated by the highly significant governance index.

**Table 3. Univariate ANOVA Test of Differences in Corporate Governance Variable Means between Manufacturing and Non-Manufacturing Industries**

This table shows the mean values of each variable for manufacturing and non-manufacturing firms. The *F* values test the null of identical coefficients across groups. Numbers shown in bold indicate significant differences in the mean values at least at the 10% level. \*\*\* denotes significance at 1% level, \*\* significance at 5% level, and \* significance at 10% level.

Corporate Governance Variable	Definitions	Group Means		<i>F</i> Ratio
		Manufacturing (N=200)	Non-Manufacturing (N=169)	
Executive Ownership	<i>The percentage of the company's shares owned by top five executives</i>	<b>0.0238</b>	<b>0.0674</b>	<b>14.01***</b>
Executive Stock Option	<i>The ratio of the average executive's stock options granted to the top five executives to total compensation using Black-Scholes model</i>	0.3777	0.4322	2.45
Executive Long-Term Compensation	<i>The average long-term executive compensation over their total compensation using the Black-Scholes model</i>	0.5011	0.5095	0.07
Agency Cost	<i>the ratio of operating expense to total expense</i>	0.5134	0.5382	1.44
Institutional Ownership	<i>The average number of shares held by institutions divided by the average number of shares outstanding for the acquiring firm</i>	0.5425	0.5107	1.52
Insider Ownership	<i>The average number of shares held by insiders divided by the average number of shares outstanding for the acquiring firm</i>	<b>0.1165</b>	<b>0.1738</b>	<b>6.27**</b>
Governance Index	<i>Corporate governance index as in Gompers, Ishii, and Metrick. (2003)</i>	<b>10.2083</b>	<b>9.0380</b>	<b>6.84***</b>

Long-term compensation includes payments under the company's long-term incentive plan and restricted stock grants. Total compensation includes salary, bonus, other annual cash compensation, the value of restricted stock granted, the value of stock options granted, and the long-term incentive payouts and all other payments, as defined by the Standard Poor's ExecuComp dataset.

The presence of significant difference in corporate governance characteristics between industry groups raises the possibility that it might explain at least in part the divergent global diversification wealth effect. To verify, a regression is run on the firm wealth effect measured by CAR (-1, 0) and results are reported in Table 4. In addition to the same corporate governance measures as explanatory variables, three control variables are also used to take into account the market valuation, firm size, and industrial diversification effect. The result on the full sample indicates executive ownership the overall most dominating factor affecting shareholder wealth gain. It is understandable as the increase of the management stake in the firm lessens the agency problem associated with the M&A decision and raises investors' confidence in the management's intention to maximize shareholder wealth. When examining further, it is somewhat surprising that corporate governance is not critical for the manufacturing firm value increase while manufacturing industries garner the most wealth gain in cross-border diversification. The plausible explanation is that investors consider globalization more critical in the global economy of the 1990s for manufacturing firms and the industries stand to benefit the most from the process as predicted by the theories such that investors can overlook their corporate governance characteristics. In sum, cross-border diversification benefits are believed to outweigh agency costs for manufacturing industries. In contrast, the relative scarce of firm-specific and information-intensive assets for non-manufacturing firms should promote investors to be concerned with their corporate governance characteristics. Indeed, the result indicates that better corporate governance system does lead to greater firm value gain for non-manufacturing industries as the governance index shows significant negative coefficient and executive ownership is significant as well. Since corporate governance factors are more critical for non-manufacturing firms, they are further divided into smaller groups based on their SIC codes to discover any interesting results for specific non-manufacturing industries (not all subsample results are reported). Among them, the most intriguing results are between service and non-service industries. Service industries exhibit similar corporate governance pattern to that of non-manufacturing firms discussed above. External governance system such as institutional ownership, along with insider ownership, appears to play a more important role for non-service firms.

Finally, it is a matter of some interest that the firm size has a significant positive impact on global diversification wealth effect for the service and non-service firms (under non-manufacturing category) but it is significant negative for manufacturing firms. The economy of scale appears to be essential for both service and non-service firms (under non-manufacturing category). The plausible explanation for the negative size effect for manufacturing industries is that investors consider increasing operational inefficiency for large manufacturing firms expanding abroad, which require a larger resource base for risk and more complex organization management as well as experience in international business, outweighs the benefits from the economy of scale. Although there exist industry differences in wealth effect and in corporate governance characteristics, industrial diversification in general does not enhance global diversification wealth gain except for non-service firms (under non-manufacturing category).

**Table 4. Determinants of Shareholder Wealth for U.S. Acquiring Firms**

This table performs cross-sectional regressions of shareholder wealth measured by CAR (-1, 0). The sample size is 369. Corporate governance variable definitions are presented in Table 3. There are three control variables. Target is in related industry is a dummy variable, equal to 1 if the target is in a different industry based on the two digit SIC codes, 0 otherwise. Book to market is the book value of equity divided by the market value of equity in t-1 for the acquiring firm. Firm size is the total sales of the acquiring firm in natural logarithm. The *t* statistics are in parentheses.

\*\*\* Denotes significance at the 1%-level. \*\* Denotes significance at the 5%-level. \* Denotes significance at the 10%-level.

	Full Sample (N=369)	Manufacturing (N=200)	Non-Manufacturing		
			All Non- Manufacturing (N=169)	Service (N=69)	Non-Service (N=100)
<i>Intercept</i>	-3.11 (-1.00)	8.11* (1.74)	-11.58** (-2.10)	-46.75** (-2.48)	-18.37** (-2.57)
Executive Ownership	10.70* (1.91)	6.50 (0.72)	24.73** (2.55)	43.51* (2.07)	11.99 (0.96)
Executive Stock Option	2.95 (1.31)	2.64 (1.18)	5.27 (0.91)	17.47 (1.26)	-2.70 (-0.39)
Executive Long-Term Compensation	-0.57 (-0.25)	0.74 (0.32)	-2.65 (-0.46)	-5.22 (-0.31)	1.07 (0.16)
Agency Cost	1.09 (0.50)	-4.12 (-1.38)	0.16 (0.04)	6.00 (0.60)	-3.79 (-0.97)
Institutional Ownership	1.94 (0.91)	1.32 (0.56)	5.38 (1.13)	17.59 (0.78)	8.15* (2.29)
Insider Ownership	2.00 (0.71)	-1.70 (-0.42)	4.14 (0.93)	14.36 (0.96)	8.34** (2.47)
Governance Index	-0.07 (-0.56)	-0.005 (-0.03)	-0.65** (-2.19)	-2.59** (-2.80)	0.21 (0.55)
Target is in related industry	0.30 (0.41)	-1.01 (-1.26)	2.09 (1.25)	3.06 (0.90)	4.94** (2.55)
Book to market	2.81 (1.64)	0.96 (0.56)	10.41** (2.32)	22.95 (1.41)	1.12 (0.21)
Firm size	0.04 (0.14)	-0.94** (-2.55)	0.99 (1.68)	6.01** (2.68)	1.15* (2.17)
<i>F</i> -Statistics	1.49	1.24	2.13*	2.87**	2.56*
<i>R</i> <sup>2</sup> (%)	11.74	14.00	46.06	82.69	76.20
<i>R</i> <sup>2</sup> -adj.(%)	3.86	2.69	24.48	53.84	46.45

Manufacturing industries comprise firms with SIC 2000 – 3999 and Service industries include firms with SIC 7000 – 9999. Non-Service industries are firms not in manufacturing (SIC 2000 – 3999) and not in Service industries (SIC 7000 – 9999).

### CONCLUDING REMARKS

The global diversification wealth effect for acquiring firm shareholders has been profound during the fifth merger wave, 1992–2000. However, it varies with the acquirers' industry affiliations. Such variation is found in part owing to divergent corporate governance characteristics across industries. Overall, the most prominent factor is the management's stake in the firm. Industry subsamples reveal more intriguing results. The most surprising is the negligible impact of corporate governance factors on manufacturing firms' wealth gain while they stand to gain the most through globalization. Apparently, investors are convinced that the need for and the benefits of cross-border diversification in the global economy of 1990s, such as internalization and ownership advantages more critical and pertinent to manufacturing industries, outweigh the concerns of agency problems. On the other hand, corporate governance is imperative for the increase of non-manufacturing firm shareholder wealth. Especially, of

the non-manufacturing industries, external governance scheme shows particular importance for non-service firms.

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