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9 Foreign Mergers and Acquisitions in the United States

Deborah L. Swenson

Foreign direct investment expenditures in the United States peaked in 1989 at $123.4 billion. While $71.2 billion of this investment represented new foreign enterprises created through acquisitions of existing U.S. assets or establishment of U.S. operations, fully 84 percent of the new business value occurred through acquisition. Compared with the quadrupling of foreign investment during the 1980s, the recent decline in foreign direct investment is slight. If there is any puzzle in these numbers, it is the prominence of acquisition in foreign investment activities and its dramatic increase during the 1980s.

Most theories of foreign direct investment (FDI) posit that firms invest abroad either to rationalize activities which are more effectively controlled within a single firm or in response to imperfect markets. Most variants of these arguments are based on the notion of firm decisions (e.g., internalization of transactions, or foreign direct investment as a step in the product life cycle). Implicit in these theories is the assumption that the investing firm possesses some superior abilities that enable it to pursue expansion across national borders.

Recent foreign direct investment experience in the United States is difficult to explain using these theories of the firm. We have to modify our understanding of firm motivations to encompass firm motivations for acquisition and the implications of changes in corporate control. Foreign acquisition may reflect changes in world markets that require foreign firms to acquire abilities, technologies, or firm structures which they need for effective worldwide competition but which are more costly to develop internally. Alternatively, if we assume that many acquisitions are disciplinary in nature, the prevalence of acquisition may imply that foreign acquisitions occur in cases where the foreign firms have superior control abilities.[1]

1. Baldwin and Caves (1991) studied Canadian firms, finding evidence consistent with their hypothesis that foreign acquisitions are motivated by issues of firm operation rather than by differential abilities at control.

In order to explain the complexities of foreign direct investment which are obscured in the aggregate statistics, this paper analyzes a panel of U.S. mergers and acquisitions that occurred between 1974 and 1990. More than 30 percent of the transactions involved the purchase of U.S. firms by foreign bidders. The benefit of comparing foreign and domestic transactions is that one can distinguish where foreign transactions are different and can use these differences to better understand the current and evolving motivations guiding foreign investments. Two particular aspects of the domestic and foreign acquisitions are used as evidence: target shareholder wealth gains in domestic and foreign acquisitions, and the financial information of domestic and foreign targets.[2]

In order to assess the importance of increased acquisition activity, this paper proceeds as follows. Section 9.1 examines the importance of foreign acquisitions relative to overall foreign direct investment in the United States and relative to the universe of acquisition activity in the U.S. market. Following aggregate descriptions, section 9.2 describes the creation of the acquisition sample which is used to analyze foreign acquisitions. The second section also presents some comparative financial information and transactions details involving the targets of foreign and domestic acquisitions. Section 9.3 concerns the measurement of shareholder gains in corporate control contests and documents the presence of a premium in foreign transactions. Finally, section 9.4 uses premium information and target firm characteristics to explain how foreign acquisitions differ from domestic acquisitions and how this accords with theories of foreign direct investment. Section 9.5 provides a brief conclusion.

9.1 Foreign Activity in the U.S. Market for Corporate Control

Although the flows of foreign direct investment to the United States abated somewhat at the close of the 1980s, the new levels far exceeded FDI expenditures of previous decades. When we look at statistics on FDI expenditures in the United States, a few patterns emerge. These patterns are not just evident in the aggregate but hold when the FDI expenditures of individual countries are examined independently. As table 9.1 indicates, the primary form of investment in terms of dollar value is acquisition of existing U.S. assets, as opposed to greenfield investments. The second notable feature of FDI directed toward the United States is that acquisition expenditures have expanded tremendously during the 1980s, while greenfield expenditures have not shown a similar increase. Japan is the one exception; Japanese expenditures on new establishments rose dramatically after 1985. Nonetheless, as was true for the other major investors, Japanese investors spent substantially more on acquisition than

2. Kogut and Chang (1991) and Harris and Ravenscraft (1991) consider the influence of target industry conditions on the propensity of foreign investment and on the shareholder gains in foreign acquisitions. Neither study considers the actual operational or financial information of the target firm.

Table 9.1 **Foreign Direct Investment in the United States, by Investor Country and Investment Type, 1980–1990 ($ millions)**

	Canada		France		Germany	
	ACQ*	EST†	ACQ	EST	ACQ	EST
1980	$ 1,743	$213	$ 516	$ 83	$ 1,186	$ 238
1981	5,100	984	801	104	800	349
1982	914	282	359	124	315	285
1983	718	354	167	128	378	206
1984	2,185	402	145	186	476	210
1985	2,494	420	593	161	2,142	127
1986	6,091	708	2,403	88	1,167	184
1987	1,169	107	1,949	96	4,318	347
1988	11,162	198	3,691	508	1,849	241
1989	4,196	206	3,295	174	2,216	219
1990	1,675	201	10,771	114	2,003	159
	Netherlands		United Kingdom		Japan	
	ACQ	EST	ACQ	EST	ACQ	EST
1980	$ 783	$867	$ 2,793	$ 273	$ 521	$ 75
1981	408	163	5,309	869	469	147
1982	139	191	2,002	1,126	137	450
1983	360	132	1,448	918	199	193
1984	460	102	2,964	751	1,352	454
1985	579	192	6,023	708	463	689
1986	4,406	295	7,699	872	1,250	4,166
1987	204	188	14,648	494	3,340	3,666
1988	2,067	147	22,237	321	12,232	3,956
1989	3,351	279	21,241	1,806	11,204	6,206
1990	2,189	177	12,200	898	15,875	4,584

Sources: U.S. Department of Commerce (1988, 1991), Bureau of Economic Analysis supplements to *Survey of Current Business,* May.

*ACQ = Value of acquisition activity.

†EST = Value of establishment activity.

on establishment in most years, and their cumulative expenditure through the decade was heavily directed toward acquisition purchases.

The prominence of acquisitions is now widely known. It is also well known that the number of acquisitions between U.S. firms expanded greatly in the 1980s. However, the relative importance of foreign acquisition in the U.S. market for corporate control remains to be examined. It might be the case that foreign firms will always be present in a certain percentage of all acquisition activity in the United States. If this were true, then foreign acquisitions could be explained by aggregate takeover activity alone. On the other hand, if foreign acquisitions are a changing percentage of the U.S. market for corporate control, we must seek explanations for these fluctuations. The most probable ex-

planations lie either in the economic conditions prevailing at the time of takeover or in industry conditions of the target industries.

Table 9.2 investigates the role of foreign acquisitions, first as a percentage of the number of domestic transactions announced, and second as a percentage of the value of domestic transactions. The percentage of foreign takeover announcements relative to domestic announcements ranges from a low of 1.9 percent in 1972 to a high of 15.7 percent in 1988. When we compare cumulative transaction value of foreign acquirers as a percentage of the transaction value of domestic acquisitions, the low of 6.4 percent is found in 1985 and the peak is found in 1990, with a value of 44.1 percent. In all but one year, the percentage value embodied in foreign transactions has been higher than the percentage of transactions undertaken by foreign acquirers, indicating that foreign acquirers purchase targets that are, on average, larger than the targets of domestic acquirers.

Table 9.2 highlights two important aspects of foreign direct investment. First, foreign firms do not play a constant role in the U.S. merger and acquisition market. In the early 1970s, foreign acquirers were virtually absent from the market for corporate control. They were larger players in the periods spanning 1978–81 and 1987–90. In general, these two periods correspond to times when the U.S. dollar was relatively weak. The extent of fluctuations in the percentage of foreign activities even in the various subperiods, however, suggests that we must search for explanations in many areas besides exchange rates. The second notable feature of foreign takeover activity is the extent to which expanded acquisition activity reflects a trend toward very highly valued transactions. Over time, the increase in transaction value is far more pronounced than the increase in the number of transactions.

Aggregate statistics demonstrate the changing composition and nature of foreign investment. Not only do foreign acquisitions play a larger role in overall foreign direct investment, but foreign firms are also responsible for an increasing portion of the total U.S. market for corporate control. In order to explore the meaning of these changes, we now examine a set of domestic and foreign acquisitions in the United States. By looking at the specifics of a large number of individual transactions, we search for patterns which are responsible for the broad trends seen in aggregate measures of foreign direct investment.

9.2 Data

Initial firm identification began with the quarterly takeover rosters from the publication *Mergers and Acquisitions* between the years 1968 and 1990, although the final sample only includes acquisitions taking place between 1974 and 1990.[3] With the exception of management buyouts, all transactions which

3. Between 1968 and 1974, there were almost no listed foreign acquisitions of U.S. firms, and those listed did not meet the other selection criteria. As a result, the analysis in this study begins with 1974.

Table 9.2 **Comparison of U.S. Acquisition Activity of Domestic and Foreign Acquirers, 1972–1990**

	Number of Transactions		Number with Value > 100 M		Number with Value > 1,000 M		Total Value of Transactions (1987 $ billions)		Relative Value of Foreign Transactions	
	DOM*	FOR†	DOM	FOR	DOM	FOR	DOM	FOR	Number‡	Value§
Year										
1972	4,713	88	15	—	—	—	$ 43.0	—	1.9%	—
1973	3,892	148	23	5	—	—	40.4	—	3.8	—
1974	2,688	173	11	4	—	—	27.8	—	6.4	—
1975	2,113	184	12	2	1	—	20.7	$ 3.3	8.7	15.9%
1976	2,098	178	34	5	1	—	33.6	4.6	8.5	13.4
1977	2,062	162	38	3	—	—	33.6	5.5	7.9	16.4
1978	1,907	199	63	17	1	—	46.3	10.4	10.4	22.5
1979	1,892	236	72	11	3	—	57.5	8.9	12.5	15.5
1980	1,702	187	72	22	4	—	51.9	9.9	11.0	19.1
1981	2,161	234	89	24	8	4	80.9	23.8	10.8	29.4
1982	2,192	154	101	15	6	—	58.2	6.0	7.0	10.3
1983	2,408	125	128	10	10	1	77.0	6.8	5.2	8.8
1984	2,392	151	177	23	16	2	117.7	16.6	6.3	14.1
1985	2,804	197	249	21	33	3	179.0	11.5	7.0	6.4
1986	3,072	264	295	51	24	3	153.3	25.3	8.6	16.5
1987	1,812	220	239	62	26	10	123.3	40.4	12.1	32.8
1988	1,951	307	292	77	33	12	184.2	53.4	15.7	29.0
1989	2,081	285	245	83	27	8	167.1	36.9	13.7	22.1
1990	1,808	266	125	56	13	8	66.5	29.3	14.7	44.1

Sources: Merrill Lynch Business Brokerage and Valuation, *Mergerstat*SM *Review; Economic Report of the President.*

*DOM = Domestic acquirers.

†FOR = Foreign acquirers.

‡Numerical comparison computed by dividing each year's number of foreign takeover announcements by the number of domestic takeover announcements.

§Value computed by dividing each year's dollar volume of foreign transactions by that year's dollar volume of domestic transactions.

listed buyer nationality and the acquisition price paid per share were included. Two other information criteria had to be met for the firm to be included in the sample of acquired firms. Calculation of target shareholder gains required listing of the acquisition announcement date in *The Wall Street Journal* and daily stock returns information for each target. All firms with insufficient or nonexistent Center for Research in Securities Prices (CRSP) daily stock return information were eliminated from the sample.[4]

Table 9.3 provides details regarding the 703 transactions that met the infor-

4. Most of the deletions were over-the-counter stocks not included on the CRSP tapes. A few other firms were omitted because their stock was delisted within the event window used for analysis.

Table 9.3 **Time and Country Distribution of Acquisitions in the United States, 1974–1990**

A. Time Distribution

Year	Number of Acquisitions		
	Domestic	Foreign	Total
1974	2	2	4
1975	6	7	13
1976	18	4	22
1977	26	21	47
1978	33	18	51
1979	36	25	61
1980	20	13	33
1981	28	17	45
1982	17	10	27
1983	28	6	34
1984	53	11	64
1985	44	7	51
1986	51	16	67
1987	30	20	50
1988	48	24	72
1989	29	15	44
1990	8	10	18
Total	477	226	703

B. Country Distribution

Acquirer	Total Acquisitions
United States	477
United Kingdom	85
West Germany	24
Canada	23
France	17
Japan	16
Netherlands	15
Switzerland	12
Australia	7
Sweden	6
Italy	6
Hong Kong	3
Belgium	3
Other foreign*	9
Total	703

*Includes two acquisitions each performed by firms from Saudi Arabia and New Zealand and one acquisition by firms from Kuwait, Bermuda, Taiwan, Denmark, and Ireland.

mational requirements of this study. Panel A displays the data set representation of foreign and domestic acquisitions across time. The trends seen in the sample broadly reflect aggregate trends in foreign acquisitions in the United States. In the aggregate, foreign acquisition activities were most intense in the late 1970s to early 1980s and again in the late 1980s. This trend appears in the sample too, with more transactions appearing during these time periods.[5]

Of the 703 observations in the sample, 477 (68 percent) involve the acquisition of U.S. firms by another domestic firm. The nationalities of the remaining 226 acquisitions are presented in panel B. In the sample, foreign acquisitions were completed by bidders from nineteen different countries. Among the foreign bidders, British firms are most heavily represented in the sample, followed in importance by West German and Canadian firms.

Table 9.4 displays the characteristics of foreign and domestic acquisitions in the sample, and tests whether differences in the foreign and domestic samples are statistically significant. In each comparison, we provide a *t*-statistic and an industry-adjusted *t*-statistic. The first *t*-statistic tests whether the difference between the foreign and domestic populations is statistically significant. The industry-adjusted value tests whether the domestic and foreign groups are different after controlling for industry effects.

Panel A of table 9.4 concentrates on the transaction characteristics of foreign and domestic acquisitions. In most regards, the transactions are very similar. Both foreign and domestic acquirers used tender offers in more than 45 percent of all transactions. In the acquisitions sample, the total cost of domestic acquisitions was somewhat larger than that for foreign acquisitions, but the difference was not statistically significant, even after controlling for industry. Finally, for the 148 acquisitions where the information was known, foreign bidders were in possession of a greater percentage of shares at the time of bid placement than were the domestic firms. The 5 percent difference, however, is not significant.

Although foreign takeover efforts were similar in execution to domestic takeovers, panel B shows that the competitive environment in foreign acquisitions was different than the environment surrounding domestic acquisitions. To begin, successful foreign acquirers faced competing bids less often than domestic bidders. Domestic acquirers faced competitors in 27.4 percent of all transactions, compared with only 17.7 percent of all foreign acquisitions. Foreign acquirers were also less likely to be challenged by the Justice Department, Federal Trade Commission, Internal Revenue Service, or other government agency. The only similarity in competitive environment is in the frequency of hostile reaction by the target firms. Both foreign and domestic bidders faced hostile reactions in slightly more than 10 percent of their acquisitions.

5. Changes in the process of acquisitions caused the later years to be less well represented in the sample. Over time, an increasing number of transactions involved the purchase of divisions as opposed to entire firms, and an increased proportion of activity involved the purchase of corporate assets which were not traded on any of the stock exchanges.

Table 9.4 Comparison of Foreign and Domestic Transactions, 1974–1990

A. Transaction Characteristics

	Tender	% Stock Owned	Total Acquisition Cost ($ millions)
Domestic	46.5%	16.9%	$421.5
Foreign	50.0	21.0	349.7
t-stat	0.85	1.81	−0.76
Industry-Adj *t*-stat	0.81	1.08	−0.98

B. Competitive Environment

	Competitors	Hostile	Government Challenge
Domestic	27.4%	11.5%	14.0%
Foreign	17.7	10.1	9.3
t-stat	−2.83	−0.53	−1.78
Industry-Adj *t*-stat	−2.89	−0.54	−1.80

C. Target Firm Characteristics

	Sales*	Asset Size*	P/E Ratio	D/E Ratio	Int % Sales	4-Year Gr Rate
Domestic	$511.4	$388.7	10.94	1.13	1.82%	0.11
Foreign	431.2	509.9	13.05	1.19	1.72	0.17
t-stat	−0.61	0.89	2.25	0.92	−0.77	1.67
Industry-Adj *t*-stat	−0.66	0.88	2.01	1.29	−0.77	1.92

Notes: *t*-stat = *t*-statistic for the test that there is no difference in the foreign and domestic levels of the variable of interest. Indusry Adj *t*-stat = *t*-statistic for the tests for equality of domestic and foreign levels, controlling for industry.

Panel A: Tender = Percentage of transactions for which the bidder used a tender offer. % Stock Owned = Percentage of stock held by the bidder at the time of announcement; only known for 148 transactions. Total Acquisition Cost = Total payment by the bidder to effect the transaction.

Panel B: Competitors = Percentage of foreign and domestic transactions facing one or more competing bids. Hostile = Number of transactions opposed by the target. Government Challenge = Percentage of transactions opposed by the Internal Revenue Service, Justice Department, Federal Trade Commission, or any other government agency.

Panel C: All panel C variables generated by Compustat, based on the author's sample. P/E ratio = Price-earnings ratio. D/E Ratio = Debt-equity ratio. Int % Sales = Interest payments as a percentage of sales in the year prior to acquisition. 4-Yr Gr Rate = Growth of the respective targets in the 4 years preceding the takover.

*Millions of dollars.

Panel C compares target firm characteristics of foreign and domestic transactions. Despite firm-size similarities, there were differences in the financial composition and in levels of growth of foreign and domestic targets. The price-earnings ratio of foreign targets is found to be almost 19 percent higher than that for domestic targets. This would imply market expectation that foreign targets would generate greater earnings growth than would the targets of do-

mestic acquisition. In the sample, foreign targets are also characterized by a relatively high growth rate in the four years preceding the acquisition.

9.3 Premium Measurement and the Foreign Premium

In section 9.4, the value of changes in corporate ownership is approximated by target shareholder gains. This section discusses the measurement of target shareholder wealth gains and comments on the information they contain. When their firm is purchased by a foreign bidder, target shareholders realize an additional 9 percent gain relative to preacquisition share prices.

9.3.1 Measuring Target Shareholder Gains

Although we compare average abnormal returns on the event days surrounding the announcements of foreign and domestic takeovers, the analysis concentrates on cumulative abnormal returns. Constructing measures of average abnormal returns or cumulative abnormal returns begins with the standard market model. For each stock, the market model is estimated on returns data in the interval 250 to 21 trading days prior to the takeover announcement date, ($t = 0$). R_{it} represents the return to the individual stock i on trading day t, while R_{mt} represents returns to the market portfolio on trading day t.

$$R_{it} = \alpha + \beta_i R_{mt} + \varepsilon_{it}\ t = (-250, -21)$$

To compute shareholder gains associated with acquisition announcement, the estimates of each firm's α_i, and β_i are applied to the market model during the acquisition event window. Both average abnormal returns (AR) and cumulative abnormal returns (CAR) accent the change in the traded value of target shares caused by the announcement of takeover intentions. Average abnormal returns for the domestic and foreign portfolios for each date t relative to the *Wall Street Journal* announcement date are calculated as follows:

$$AR_t = \frac{1}{N}\sum_{i=1}^{N} (R_{it} - \alpha_i - \beta_i R_{mt})$$

where N equals the number of firms in each portfolio.

The average abnormal returns for the foreign and domestic portfolios are presented in table 9.5, panel A. On the day before and the takeover announcement date itself, the foreign portfolio generated returns 3.9 and 2.9 percent greater in absolute value than the domestic portfolio returns of 11.6 and 6.0 percent. In other words, the announcement of a foreign acquisition resulted in target shareholder gains almost 39 percent greater than those created by the announcement of a domestic acquisition.

We generated cumulative abnormal returns to expand the analysis over a longer event window. The cumulative abnormal returns measure target shareholder wealth gains as they accrued in the period beginning twenty days prior

Table 9.5 **Abnormal Returns around the Merger Announcement Date ($t = 0$), as Distinguished by Buyer Nationality, 1974–1990**

A. Daily Abnormal Returns

Event Day	N_{Dom}	AR_{Dom}	Z-stat	N_{For}	AR_{For}	Z-Stat
−20	477	0.001	1.219	226	0.005	3.813
−15	477	0.001	4.241	226	0.002	1.843
−10	477	0.003	4.196	226	0.007	5.758
−5	477	0.003	3.658	226	0.009	7.279
−4	477	0.011	11.031	226	0.011	8.031
−3	477	0.015	13.984	226	0.016	11.015
−2	477	0.015	16.806	226	0.026	16.028
−1	477	0.116	115.214	226	0.155	95.715
0	477	0.060	59.567	226	0.089	62.338
1	477	0.006	6.458	226	0.007	5.171
2	477	0.001	4.855	226	0.010	9.075
3	477	0.006	1.712	226	0.006	3.148
4	477	0.002	3.924	226	0.006	3.721
5	477	0.001	1.517	226	0.000	0.691
10	477	0.002	2.507	226	0.002	1.267

B. Cumulative Abnormal Returns

Event Day	N_{Dom}	CAR_{Dom}	Z-stat	N_{For}	CAR_{For}	Z-Stat
−20	477	0.001	1.156	226	0.005	3.040
−15	477	0.016	3.780	226	0.015	4.322
−10	477	0.027	4.076	226	0.041	7.155
−5	477	0.053	6.403	226	0.080	11.524
−4	477	0.064	7.778	226	0.091	12.605
−3	477	0.079	9.221	226	0.107	14.187
−2	477	0.095	11.019	226	0.133	16.677
−1	477	0.211	23.041	226	0.288	33.424
0	477	0.271	28.041	226	0.377	37.730
1	477	0.278	27.013	226	0.384	36.422
2	477	0.282	26.555	226	0.394	36.011
3	477	0.283	26.158	226	0.401	35.250
4	477	0.287	25.752	226	0.407	34.753
5	477	0.288	25.171	226	0.407	34.032
10	477	0.301	23.912	226	0.409	31.900

Note: AR is the abnormal returns, and CAR is the cumulative abnormal returns on the domestic ($_{Dom}$) and foreign ($_{For}$) portfolios.

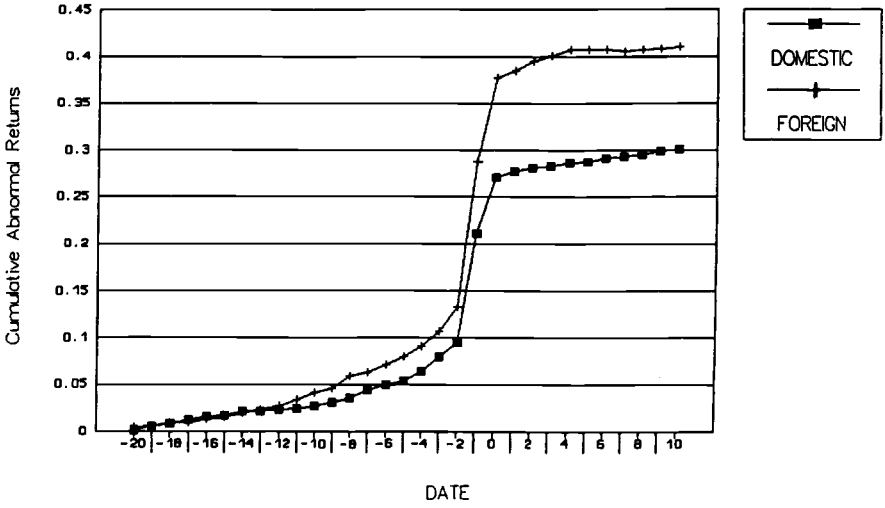

Fig. 9.1 Foreign and domestic cumulative abnormal returns

to the acquisition announcement and through the five trading days following the last announcement.

$$CAR = \sum_{t=annc-20}^{bid+5} [\frac{1}{N} \sum_{i=1}^{N} (R_{it} - \alpha_i - \beta_i R_{mt}]$$

The cumulative abnormal returns experienced in foreign and domestic acquisitions are shown in table 9.5, panel B. The evolution of cumulative abnormal returns is also displayed in figure 9.1. The gains on the foreign portfolio of targets are most pronounced on days -1 and 0, during which shareholders earned abnormal returns of 6.8 percent above those earned on the domestic portfolio. But the difference in total gains is noticeable across the entire event window.[6]

In aggregate, cumulative abnormal returns accruing to target shareholders indicate that target shareholders benefit more when their firm is subject to foreign takeover. We now compare the cumulative abnormal returns created by foreign and domestic transactions as we examine more disaggregated industry groupings. Table 9.6 displays foreign and domestic premiums disaggregated at the two-digit industry level for the manufacturing sector. Direct comparisons

6. The comparison and subsequent analysis is not sensitive to the length of the event window. We find that foreign transactions command higher shareholder wealth gains across all event windows.

are possible for sixteen of the manufacturing industries. While the cumulative abnormal returns in foreign acquisitions are higher in the average manufacturing transaction, they are not absolutely higher across all manufacturing industries. The foreign premium is higher than the domestic premium in eleven of the manufacturing sectors and lower in five. It is interesting to note that the industries experiencing high foreign acquisition activity were the same as those industries undergoing heavy domestic acquisition activity. The similarity of emphasis in foreign and domestic acquisitions seems to indicate that underlying industry factors may have precipitated consolidation in particular manufacturing sectors.

Initial information indicates that foreign acquisitions are associated with greater shareholder wealth gains than are domestic acquisitions of U.S. firms. However, the result may be due to differences in target industries, numbers of outside bidders, or other situational differences unrelated to buyer nationality. In the following sections, we control for circumstances associated with premium fluctuations to learn whether higher foreign payments arise from firm- or industry-level influences that are common determinants in all transactions or if the premiums are the outcome of unique factors facing foreign acquirers.

9.3.2 Evidence of A Foreign Premium

Before concluding that the premium measured in the foreign subsample is unique to foreign transactions, one must ascertain whether the high foreign premium represents foreign purchases of assets that would command higher payments regardless of buyer nationality. Although the bulk of wealth gains accruing to target shareholders have never been completely described, it is true that some industry and transaction characteristics are known to influence the level of the premium paid. To analyze the level of target shareholder wealth gains associated with the presence of foreign bidders, we use the following standard regression:

$$PREMIUM_i = \alpha + \beta_1 * FOREIGN + \beta_2 * COMPET + \beta_3 * MFG + \beta_4 * CASH + \beta_5 * \text{CHALL} + \varepsilon_i$$

In each regression, we describe target shareholder wealth gains as a function of bidder identity, transaction characteristics, and industry characteristics. The dependent variable *PREMIUM* is the cumulative abnormal returns accruing to target shareholders in each individual transaction. To determine the effect of foreign acquirers on shareholder gains, a dummy variable, *FOREIGN*, was created and set equal to one if the buyer was foreign and to zero if the buyer was a domestic firm. We expect the coefficient on foreign will be positive if foreign firms create additional synergy gains in their U.S. acquisitions or benefit from the arbitrage of cross-border asymmetries. Although it is difficult to provide

Table 9.6 **Cumulative Abnormal Returns: Manufacturing Industries as Distinguished by Buyer Nationality, 1974–1990**

	United States		Foreign	
	Premium	*N*	Premium	*N*
Food and kindred products	0.366	16	0.346	14
Tobacco products	—	0	0.595	1
Textile mill products	0.326	5	0.368	1
Apparel and other textile products	0.485	12	1.077	1
Lumber and wood products	0.374	5	—	0
Furniture and fixtures	0.348	7	—	0
Paper and allied products	0.372	14	0.385	4
Printing and publishing	0.431	11	0.619	8
Chemicals and allied products	0.392	25	0.419	21
Petroleum and coal products	0.476	2	0.179	2
Rubber and miscellaneous Plastic products	0.518	13	0.479	7
Leather and leather products	—	0	0.007	2
Stone, clay, and glass products	0.528	11	0.352	9
Primary metal industries	0.246	7	0.708	3
Fabricated metal products	0.397	25	0.469	3
Machinery, except electrical	0.449	47	0.621	35
Electric and electronic equipment	0.315	35	0.573	13
Transportation and equipment	0.358	15	0.423	3
Instruments and related products	0.359	28	0.352	14
Miscellaneous manufacturing industries	0.321	6	0.787	2
Total	0.386	284	0.486	143

economic arguments for irrationality, the coefficient on *FOREIGN* will also be positive if foreign firms were systematically overpaying.[7]

The variables *COMPET* and *CASH* are included because previous studies have shown them to be significant determinants of wealth effects. *COMPET* is a dummy variable set equal to one if there were other competing bidders who announced their intention to acquire the target. The coefficient on the competition dummy should be positive, since the presence of competing bids forces the winning bidder to meet the bid or lose the contest for control in most cases. Previous studies have also shown that transactions completed with cash command higher shareholder gains than those that do not. Consequently, all transactions that were completed entirely by cash payment are indicated by setting the dummy variable *CASH* equal to one. For all other transactions, the value of the *CASH* dummy is set to zero.

7. See Roll (1986) for an overpayment hypothesis. However, it would be hard to explain why manager nationality should influence this propensity.

Two other variables are used in the regressions describing target shareholder gains. First, there is a variable used to capture any differences in the bids made for manufacturing and for nonmanufacturing assets. Target firms were classified as manufacturing firms if the Standard Industrial Classification (SIC) code for their primary line of business was between 2000 and 3999. The dummy variable *MFG* was set equal to one for all targets that had SIC codes in this range. Second, we test for the influence of a government challenge on the wealth gains of target shareholders. The dummy *CHALL* was set equal to one if any government agency challenged the takeover transaction. The most common challenges were presented by the Federal Trade Commission, Justice Department, and Internal Revenue Service.

Table 9.7 displays the results of the benchmark regressions. As the first regression indicates, the premium paid in foreign transactions exceeded the premium paid by domestic purchasers by 10.9 percent. Relative to shareholder gains in domestic contests, the wealth gains associated with the presence of a foreign bidder are more than 40 percent larger than the gains in domestic contests. The presence of competing bidders augmented premium payments by 9.2 percent. Government challenge was also associated with an increase in the cumulative abnormal returns earned by target shareholders, although the coefficient is not statistically significant at conventional levels. In comparison, the returns to target shareholders of manufacturing assets commanded a significant premium 9 percent larger than the premium of nonmanufacturing assets.[8] The second regression augments the first by including a dummy variable representing takeovers effected by cash. When the *CASH* dummy is added, the estimated values of the other regressors are reduced. Nonetheless, the value of foreign bidders remains highly significant and is estimated to increase target shareholder gains by 9.3 percent.

The third regression of table 9.7 investigates the importance of time specification. Sixteen year dummies were included to capture the variations in shareholder cumulative abnormal returns that were the result of yearly changes in economic conditions or in the market for corporate control. The results show that the time dummies do reduce the value of the other regressors. However, the character and magnitude of the variables are not changed significantly. The data were also tested to see if time effects could be captured by a trend effect. However, the premiums received by target shareholders displayed no apparent trend between 1974 and 1990.

8. The premium on manufacturing assets could arise from one of many factors. Most likely, the difference represents the different elasticity of demand for shares in the manufacturing sector. As James and Weir (1987) show for the banking sector, the premium received by shareholders is positively related to the number of potential purchasers of the target. If there are more potential buyers of manufacturing assets, then competition for the assets may allocate more of the gains to target shareholders, leaving less of the surplus to the purchaser. The finding of a significantly higher premium could also be a proxy for other firm characteristics. However, inclusion of regressors such as research and development expenditures as a percentage of sales or other financial or operating statistics was unsuccessful in reducing the manufacturing dummy.

Table 9.7 **Regression of Shareholder Gains on Merger Characteristics, 1974–1990**

Dependent Variable	FOREIGN	COMPET	MFG	CHALL	CASH	YEAR	IND	CONSTANT	Obs	Adj. R^2
1. PREMIUM	0.1086[a]	0.0921[a]	0.0979[a]	0.0672				0.2521[a]	703	0.036
	(0.0329)	(0.0357)	(0.0312)	(0.0462)				(0.0281)		
2. PREMIUM	0.0930[a]	0.0686[c]	0.0760[b]	0.0349	0.1464[b]			0.1490[b]	645	0.035
	(0.0345)	(0.0375)	(0.0330)	(0.0494)	(0.0611)			(0.0582)		
3. PREMIUM	0.0765[b]	0.0550	0.0744[b]	0.0330	0.1463[b]	YES		0.4480[a]	645	0.060
	(0.0350)	(0.0375)	(0.0330)	(0.0495)	(0.0616)			(0.1062)		
4. PREMIUM	0.0936[a]	0.0662[c]		0.0429	0.1346[b]		YES	0.1398[b]	645	0.034
	(0.0347)	(0.0378)		(0.0496)	(0.0615)			(0.0786)		
5. PREMIUM	0.0759[b]	0.0515		0.0418	0.1369[b]	YES	YES	0.4342[a]	645	0.060
	(0.0352)	(0.0378)		(0.0497)	(0.0621)			(0.1177)		
6. PREMIUM	0.1545[a]	0.1412[b]	−0.0066	0.0797	0.1873			0.1260[a]	246	0.038
1974–81	(0.0521)	(0.0601)	(0.0530)	(0.0728)	(0.1993)			(0.1985)		
7. PREMIUM	−0.0389	0.0333	0.0953	0.0248	0.1997[b]			0.0812	219	0.035
1982–86	(0.0587)	(0.0566)	(0.0491)	(0.0787)	(0.0817)			(0.0764)		
8. PREMIUM	0.0903	0.0187	0.1467[b]	−0.0592	0.1050			0.2115[b]	180	0.025
1987–90	(0.0756)	(0.0808)	(0.0732)	(0.1125)	(0.1079)			(0.0998)		

Notes: PREMIUM is cumulative abnormal returns accruing to target shareholders. The *COMPET* dummy was set equal to one if one or more competitors declared their intention to acquire the target. *MFG* is a dummy varibale for manufacturing sector targets. The dummy *CHALL* was set equal to one for any transaction facing challenge by a government agency. The *CASH* dummy was set equal to one for all transactions done entirely by cash payment. *YEAR* is a set of year dummies. *IND* is a set of industry dummy variables. Standard errors are in parentheses.

[a]Significantly different from zero at the 99 percent level.

[b]Significantly different from zero at the 95 percent level.

[c]Significantly different from zero at the 90 percent level.

Table 9.7's fourth and fifth regressions consider the influence of more detailed industrial heterogeneity on shareholder wealth gains. In the benchmark regressions, we limit the distinction to manufacturing and nonmanufacturing targets. However, we may learn that foreign firms tended to purchase firms which were from higher-premium sectors. If this were the case, the coefficient on the foreign dummy would disappear when a more comprehensive set of industry dummies were included. This specification with industry dummies rather than a single manufacturing dummy variable adds no information on the wealth effects of takeovers. This is also confirmed by regression five, which includes a set of industry and time dummies. The effect of foreign bidders remains as large and significant as in previous regressions. The robustness of the foreign premium to the inclusion of industry dummies and proxies for the competitive environment show that the foreign premium is not the simple outcome of foreign purchases concentrated in high-premium industries.

The final three regressions in table 9.7 test the benchmark regression on subperiods of the 1974 to 1990 time span. When the time periods of 1974 to 1981, 1982 to 1986, and 1987 to 1990 are used, it becomes apparent that the coefficients of the benchmark regression change markedly across the different time periods. Most notable for the paper is the instability of the foreign coefficient. Even if the time periods are split differently, it is apparent that the foreign premium was highest in the 1970s, fell in the early 1980s, but increased again in the late 1980s. These results cast doubt on the overpayment hypothesis. If it were true that firms became more sophisticated in their abilities in the U.S. acquisition market, we would expect a declining foreign premium, as is seen by comparison of the first and second time periods. But the resumption of the influence of foreign bids in the late 1980s contradicts the notion of ongoing learning. However, these results do suggest that there are some very important time-varying effects that influence the gains of target shareholders. We will return to these explanations in the next section.

9.3.3 Measurement Issues and the Foreign Premium

To the extent that individual premiums reflect the value of transaction-specific opportunities, premium variations may be used to evaluate the sources of value in foreign and domestic transactions. Unfortunately, the premium payment will not be an exact measure of the transaction's value, due to measurement concerns which must be noted.

As recognized in Hall (1988) and Malatesta and Thompson (1985), a current stock price reflects the expected value of a firm's discounted current and future profits. This value incorporates expectations of the stock's value under current management, as well as the incipient value of the firm under new management, weighted by the expected probabilities of each outcome. Takeovers will not occur unless the bidders expect to produce gains which cannot be realized without a change in control. As long as investors believe that their firm could become a takeover target, a fraction of potential takeover gains will be capitalized in the current stock price.

$$P_{stock} = E(P_{stock}|\text{foreign takeover})*[\text{prob(foreign takeover)}] + E(P_{stock}|\text{domestic takeover})*[\text{prob(domestic takeover)}] + E(P_{stock}|\text{no takeover})*[\text{prob(no takeover)}]$$

If there is any anticipation that a firm may be acquired, the observed effect of the takeover announcement will be less than the economic value of the event itself.

A second issue that influences the observed payment is the division of the gains between target shareholders and the bidding firm.[9] Following Hall (1988), one assumes that stochastic changes in the world create changes which favor changes in corporate ownership. The assumption of stochastic changes is important. Otherwise, investors could predict each firm's time path of ownership and each firm's precise value. Takeovers would command no shareholder gains, because stock prices would already reflect the value of all future changes in control. Each firm x has a valuation, V_{yx}, for target y's assets. Of the potential acquirers, the bidder with the highest valuation for the target makes the purchase. In order to purchase the target, the winning firm x' has to pay at least as much as the firm with the second-highest valuation would be able to pay.

$$\text{Max}_{x \neq x'} V_{yx} \leq P_{paid} \leq V_{yx'}$$

It is assumed that the valuation of firm, V_{yx}, exceeds the current market value of the target firm.[10] Since the price paid lies between the valuations of the highest and the second-highest valuing firms, the closer the valuation of the second bidder to the first bidder, the higher the minimum price the first firm must pay in order to gain control. If the highest bidder is uncertain about other firms' valuations, he may offer a larger bid. If the firm knew all other firms' valuations with certainty, it would only offer marginally more than the target was worth to the next-highest bidder.

Since the division of gains is not likely to be divided between the bidder and target in a systematic fashion, target shareholder gains are an imperfect measure of total value created by the acquisition. The empirical evidence on this issue will be considered in the next section.

9.4 Evidence from Foreign Acquisitions in the United States

In this section we search for explanations of the foreign premium in U.S. acquisitions. We begin with tests for the influence of exchange rate fluctuations on foreign premium payments and later try to ascertain the importance of firm

9. The degree to which target shareholders capture merger gains is controversial. Grossman and Hart (1980) suggest complete capture. Subsequent research has shown that informational asymmetries and costs of information gathering and shareholder heterogeneity will result in incomplete capture by target shareholders.

10. No bid will be placed if the current market value of the target firm, V_y, exceeds the firm's value under the ownership of another firm x. This ignores the possibility that management, enhancing its own perquisites, may place bids which are harmful to shareholder interests. See Roll (1986); Morck, Shleifer, and Vishny (1990).

explanations of foreign investment by gauging whether shareholder gains are influenced by the aspects of the target firm sought by foreign purchasers, or by the foreign firms' approach to the bidding.

9.4.1 Exchange Rates and Shareholder Gains

There are many potential avenues by which the exchange rate may influence the level of foreign acquisitions in the United States and the payments accompanying the activity. A couple of the channels, including country-specific interest rates, provide no aggregate predictions because their impact is firm specific.[11]. Exchange rate effects transmitted by changes in supply and demand are also indeterminate because their effects depend on the method of competition in relevant output and factor markets.

Exchange rate effects driven by wealth effects or worries of protection have more-direct predictions regarding the feasibility of specific acquisitions.[12] Most easily predicted are wealth effects induced by exchange rate movements, as explained in Froot and Stein (1991). When foreign firms are constrained in credit markets, competition among foreign bidders for U.S. targets should cause the enhanced ability to pay dollars to be translated into higher premiums. If the foreign bidder did not increase its premium offer, another foreign bidder, who also benefited from exchange rate-induced wealth effects, would offer a slightly higher bid and acquire the assets. It is true that foreign firms' willingness to pay should never exceed the expected present discounted value profits. And, unless the profit stream is influenced by the level of the exchange rate, the foreign perception of the dollar value of the assets does not fluctuate. However, if imperfect lending markets create borrowing constraints which prevent firms from bidding as much as their willingness to pay, the foreign premium may increase to the degree to which exchange rate movements relax the bidding constraints faced by foreign firms.

Even though some argue that a weak dollar facilitates the foreign purchase of domestic assets at bargain prices, the strength of the dollar will only influence the amount paid by the foreign bidder when dollar fluctuations create differential wealth effects for foreign and domestic bidders. The strength of the dollar will not create bargains, because depreciation reduces the value of the expected foreign currency profit stream at the same time that the foreign currency price of the U.S. target falls.[13]

11. Cushman (1985) models the foreign direct investment decisions of risk-averse firms and their response to the level and variability of the exchange rate. Since the real interest rate facing each firm is determined by its location of sales, source of production inputs, and location of financing, firm reactions are uniquely determined by each firm's multinational structure.

12. We do not analyze the protection argument here. A firm with lucrative export sales to the United States might choose to acquire U.S. assets to transfer production to the United States if it feared that large U.S. current account deficits might spur protection against its exports. If a strong dollar aggravates the current account deficit, then a strong dollar could promote foreign acquisitions. However, how much time will elapse before the onset of protection or the firm decision to invest is unclear.

13. Klein and Rosengren (1991) find that exchange rate effects on FDI are caused by wealth effects rather than by exchange rate effects on relative wages.

Table 9.8 **The Effect of the Exchange Rate Level or Changes on the Foreign Premium, 1974–1990**

	(1)	(2)	(3)
Competitors	0.0676[b]	0.0612[c]	0.0661[b]
	(0.0373)	(0.0373)	(0.0375)
Challenge	0.0311	0.0399	0.0390
	(0.0492)	(0.0491)	(0.0494)
Manufacturing	0.0686[b]	0.0696[b]	0.0731[b]
	(0.0330)	(0.0329)	(0.0331)
Cash	0.1493[a]	0.1502[a]	0.1481[b]
	(0.0609)	(0.0607)	(0.0611)
Constant	0.1515[a]	0.1509[a]	0.1493[a]
	(0.0580)	(0.0579)	(0.0581)
Foreign Dummies			
Strong-$ year	0.0133		
	(0.0476)		
Weak-$ year	0.1474[a]		
	(0.0411)		
$ depreciation		0.1592[a]	
		(0.0411)	
$ appreciation		−0.0031	
		(0.0474)	
Future $ appreciation			0.0550
			(0.0449)
Future $ depreciation			0.1272[a]
			(0.0432)
Obs	645	645	645
Adj. R^2	0.042	0.047	0.036

Note: Standard errors in parentheses.

[a]Significantly different from zero at the 99 percent confidence level.

[b]Significantly different from zero at the 95 percent confidence level.

[c]Significantly different from zero at the 90 percent confidence level.

To test whether the movements or the value of the exchange rate influence target shareholder wealth gains, we try a number of specifications that incorporate either the level of the exchange rate or its changes. In each of these tests, the foreign dummy is split to reflect the value of the U.S. dollar when the bid was placed for the U.S. target. The results of these tests are displayed in table 9.8.

In the first column of table 9.8, we test whether the cumulative abnormal returns measured in foreign acquisitions vary with the strength of the U.S. dollar. The first column classifies foreign purchases as having occurred during strong- or weak-dollar years.[14] The results show that target shareholder wealth

14. Dollar classification is based on real effective exchange rates published in the *OECD Main Economic Indicators*. Each observation was dated according to the date of its acquisition announcement. We then compare the value of the dollar to its average over the 1974–90 time period. If the value exceeded the average, it was classified as being a strong-dollar period. Weak-dollar periods indicated that the value of the dollar was below the 1974–90 average.

gains in foreign acquisitions are much larger in weak-dollar years. In fact, there are no additional wealth gains for target shareholders in foreign acquisitions during strong-dollar years. In addition to the results reported in table 9.8, the effects of dollar strength were also tested by adding the real value of the dollar to the benchmark regression. The continuous variable confirms our previous findings that the value of the foreign premium increases when the dollar is weak.

While the classification of foreign bidders according to strong- or weak-dollar years indicates the importance of the current exchange rate, we also test for the influence of exchange rate changes on the foreign premium. In the second column of table 9.8, we categorize foreign firms on the basis of dollar changes in the period prior to the foreign acquisition. The variable "$ depreciation" is a dummy variable representing all foreign firm purchases that occurred in a year following dollar depreciation, while the "$ appreciation" variable represents all foreign acquisitions that occurred in years following dollar appreciation.[15] Similar to the results involving the level of the exchange rate, the wealth gains in foreign acquisitions are found to be higher in years following dollar depreciation. In contrast, the wealth gains in years following dollar appreciation are found to be nonexistent.

Further exchange rate tests were performed to learn whether the finding that dollar depreciation enhances foreign bids was unique to foreign mergers or whether the finding reflected underlying economic changes which influenced all mergers. Since the value of the dollar reflects expectations regarding the U.S. economy, one might be concerned that the exchange rate results actually measure merger response to macroeconomic trends in the United States. These could include interest rates, as determined by the levels of saving and investment demand, or the rate of growth in the U.S. economy. Accordingly, the test was repeated to include division of the domestic sample on the basis of dollar appreciation or depreciation as well. If the relevance of the exchange rate coefficient was based on economic factors of importance to all mergers, then one would expect that the domestic premiums would also be higher in periods of dollar depreciation. However, the division of U.S. transactions is not justified by the data. Exchange rate classification of the domestic dummy yielded a coefficient small in magnitude and indistinguishable from zero.

Although unlikely, a second alternative exchange rate timing argument would posit that mergers are timed to anticipate future exchange rate movements. If foreign firms could time their purchases perfectly, they would choose to crowd purchases into periods before dollar appreciation.[16] Despite the problems with the argument, we use the third column of table 9.8 to test whether

15. The classification of appreciation or depreciation was based on the movement of the dollar in the year before the announcement of the takeover.

16. There are many difficulties with the argument that foreign firms might time their purchases to beat dollar appreciation. First, there is no reason to believe that firms should have better estimates of future exchange rate changes, and to the extent that exchange rate movements present

there is any different in target wealth gains in periods before dollar changes. The foreign dummy is split into two dummies, one for foreign purchases before dollar appreciation and another for foreign purchases occurring before dollar depreciation. The values of the two foreign variables are not statistically different, though the estimated value of the foreign variable in periods preceding depreciation is slightly higher than the variable indicating foreign purchases in periods preceding appreciation. If there were any reason to believe that firms timed purchases to beat future exchange rate changes, we would have expected the values of the two foreign variables to be the reverse of their estimated values.

9.4.2 Strategic Bidding and the Division of Takeover Gains

As was demonstrated in section 9.3, the level of the takeover premium depends in part on the division of gains between the bidding firm and target shareholders. In addition to the strategies pursued by bidders, the division depends on information, relative learning costs, and the competitive environment for particular targets. In this section, we examine whether foreign and domestic acquirers appear to pursue similar bid strategies.

Fishman (1988, 1989) explains why firms may place high initial bids or offer cash as strategic devices to preempt the entry of other bidders. Learning about the merit of various targets is costly, and one way in which firms can learn is observing the placement of bids by other firms.[17] If the initial firm places a sufficiently high bid, other firms will be deterred from assessing the value of the particular target, because their expected gain is smaller than the learning costs they would incur in deciding whether to place a competing bid.

In order to test whether foreign firms are bidding in a manner consistent with preemptive bidding, we separate the effect of competitors in domestic and foreign acquisitions. The results are shown in table 9.9. The unconstrained estimate is superior and shows that, while the presence of competitors significantly augments shareholder gains in domestic contests, the presence of competitors has no measurable influence on the premiums paid by foreign acquirers.[18] This finding is consistent with the possibility that foreign firms practice preemptive bidding. If foreign bidders place preemptively high bids, the entry of other bidders should have less influence on target shareholder gains

business risks, we would expect these firms to use futures contracts to protect themselves. Additionally, if many foreign firms decide to buy in the current period to avoid price increases caused by future dollar appreciation, then asset demand should bid up current-period asset prices, eliminating the advantages of current-period purchases.

17. As long as there is positive correlation in firms' evaluation of potential targets, one firm's bid signals to other firms that the target could be valuable to them as well.

18. A variable was created representing the presence of foreign competition in the bidding process. Its value could not be distinguished from the dummy variable for domestic competitors. The failure was not unexpected, because only 2 percent of the acquisitions in the sample faced public competition from a foreign bidder.

Table 9.9 **Regression of Target Shareholder Gains on Acquisition Characteristics: 1974–1990**

	(1)	(2)	(3)
Foreign	0.1065[a]	0.0586	0.0612
	(0.0389)	(0.0668)	(0.0512)
Challenge	0.0333	0.0708	0.0456
	(0.0494)	(0.0993)	(0.0671)
Manufacturing	0.0784[b]	0.0122	0.0668
	(0.0331)	(0.0671)	(0.0468)
Cash	0.1427[b]	0.1298[b]	0.1248
	(0.0613)	(0.1039)	(0.0768)
Competitors		0.0322	0.0775
		(0.0635)	(0.0481)
Domestic * Competition	0.0863[b]		
	(0.0441)		
Foreign * Competition	0.0229		
	(0.0711)		
Relative intangibles		−0.0668[b]	
		(0.0044)	
Foreign * Relative intangibles		0.0121	
		(0.0092)	
Relative market			−0.0545
			(0.0656)
Foreign * Relative market			0.3799
			(0.2575)
Constant	0.1461[a]	0.2182[a]	0.1804[b]
	(0.0583)	(0.0980)	(0.0728)
Obs	645	167	383
Adj. R^2	0.034	0.015	0.028

Note: Standard errors in parentheses.

[a]Significantly different from zero at the 99 percent confidence level.

[b]Significantly different from zero at the 95 percent confidence level.

[c]Significantly different from zero at the 90 percent confidence level.

than would be the case for domestic bids which have not been set at a preemptive level. In the presence of a competing bidder, the first bidder may increase his initial bid or drop out of the contest.[19] If foreign firms attempt to set preemptive bids, their initial bids are set closer to their estimated value of the target firm. These firms have less ability to increase their payments when competitors enter, since payment increases are bounded above by the bidder's estimate of target value.

This evidence agrees with the summary statistics presented in table 9.2 which show that foreign takeover bids face competitors 35 percent less often than do domestic transactions. The differences in foreign and domestic merger processes could be linked to relatively high foreign bids, which deter potential competition.

19. Target management may recommend the acceptance of the lower bid.

Less clear is why foreign firms should place more-frequent preemptive bids. Preemptive bids may be placed by foreign firms in an effort to mitigate the adverse publicity associated with resistance to foreign ownership. If preemptive bids reduce competition and speed the acquisition process, then foreign firms may find the extra costs worth the gains of reduced public attention and hostility. Resistance to foreign ownership might also exist at the shareholder or worker level. The argument that shareholders cared would require that shareholders value not only the financial returns of the underlying stock but also the continuation of U.S. control. This condition, however, seems rather unlikely, especially in light of the empirical facts that foreign takeovers were not any more likely to face hostile opposition than domestic takeovers were and that foreign purchases were less frequently subject to governmental challenge. In order to test if foreign firms were concerned with resistance at the worker level, a variable to measure labor intensity was included in the standard regressions.[20] Employment intensity, however, had no relation to shareholder gains in foreign transaction.

Our evidence can not resolve the presence or absence of preemptive bidding on the part of foreign acquirers. Nonetheless, the evidence is intriguing and worth further inquiry.

9.4.3 Evidence from Target Firm Operational Data

There is some suggestion that foreign firms are pursuing particular types of firms in the United States.[21] If foreign and domestic acquirers target different firms, we would expect that the shareholder gains would reflect firm differences. In fact, the appearance of preemptive bidding could be created by the differences in the assets sought by domestic and foreign bidders. Nonetheless, it is difficult to ascertain whether foreign firms seek different assets. It is plausible that certain U.S. targets are particularly attractive to firms expanding their global operations. While we would expect these U.S. assets to be subject to foreign interest, they would most likely be of interest to domestic multinationals as well. In this vein, we test whether certain target characteristics explain the large shareholder gains in foreign acquisitions.

One variable that does produce interesting results is the effect of intangibles. A ratio variable, "relative intangibles," was created by dividing the target firm's intangibles by the average level of intangibles in its industry. A second variable was created by multiplying the first variable by the foreign dummy variable to learn if intangible assets played a symmetric role in foreign and domestic transactions. Column 2 of table 9.9 indicates the influence of including the two variables. The foreign dummy is reduced significantly. The results indicate that the presence of intangibles results in higher wealth gains in foreign trans-

20. Measures tried were employment/sales and employment/assets.

21. Harris and Ravenscraft (1991) claim that foreign firms make purchases in industries that are more research and development intensive.

actions than would be the case for the same level of intangibles in a domestic acquisition. In other words, part of the high premiums in foreign transactions appears to reflect foreign bidders' willingness to pay for intangible assets.

A second test of intangibles involves the influence of market share on the premiums paid by bidders. In table 9.9, the variable "relative market" measures sales by the target in its primary line of business relative to the industry as a whole. The second variable "foreign*relative market" multiplies the relative market by the foreign dummy. In the estimation presented in column (3) of table 9.9, the measure of market share is found to have no influence on merger premiums in general but to increase the premiums paid by foreign bidders. At the same time, the value of the foreign dummy is lower than it is in the benchmark regressions. Like the previous test of intangibles, the inclusion of market share variables suggests that higher foreign bids are caused in part by foreign firms' willingness to pay for market share. This finding is consistent with theories that foreign firms will pursue acquisitions when it is more costly for foreign firms to develop market share in the United States.[22]

9.4.4 Other Motivations for Foreign Investment

The primary advantage of multinationals over uninational firms is often claimed to lie in multinational firms' ability to surmount barriers to the minimum-cost international flow of goods and finances. The benefits of being multinational range from use of the form as an alternate to individual international portfolio diversification, to such firms' ability to exploit country financial differences.[23] The results here cannot be claimed to apply to all foreign investment, because the current study concerns only acquisition, and the applicable restrictions/barriers may be more frequently avoided by means of joint venture, purchase of only a division rather than whole firm, or the establishment of a new business in the United States.

At the individual level, either capital market segmentation or large transactions costs could inhibit international portfolio diversification (see Agmon and Lessard 1977; or Errunza and Senbet 1981). Two possible tests are suggested by the implication that multinationals may provide international diversification at lower cost than international diversification created by individual investors. Assuming that target shareholders capture a portion of bidder gains, the foreign premium should be higher when the foreign firm's acquisition significantly

22. In addition to the reported tests, we also tested the benchmark findings for their sensitivity to the inclusion of target firm financial variables or to the addition of relative performance variables. When added to the analysis, these do not contribute to our understanding of foreign premium payments.

23. Numerous other explanations are possible involving the arbitrage of trade, tax, or other barriers. However, without a measure that indicates which restrictions are actually binding, answers cannot be found. Analysis of these issues could be much better captured by comparisons of pre- and postacquisition performance of the acquiring firm in target markets.

increases the foreign exposure of the multinational.[24] To this end, regressions were performed to see if the foreign premium was any higher for foreign firms which had no previous real operations in the United States.[25] However, when foreign bidders were distinguished according to their presence in the U.S. market, no differences in target shareholder wealth gains were found. We next tested an alternative method of determining foreign firm involvement in the U.S. market. Rather than classifying involvement as the presence or absence of U.S. subsidiaries, we classified involvement in the U.S. market according to the financing of the foreign firm. We might expect that the foreign firm gains the most international diversification when it had not previous financing in the United States.[26] However, the prior financial status of foreign acquirers had no influence on the level of the foreign cumulative abnormal returns.

The results display no evidence confirming the value of multinationals as vehicles for diversification; neither do the results alone refute the existence of those gains. Even if diversification gains resulted, it is not clear that target shareholders could appropriate those gains.

A second possible barrier, which would incline foreign firms toward foreign investment, is the presence of trade barriers against sales of their products in the United States. Unless the foreign products have distinct advantages or characteristics relative to their domestic competitors, the trade barriers will be just as likely to encourage domestic as foreign investment. A clean test would relate target shareholder gains to the level of barriers levied against specific products. Unfortunately, due to the small number of transactions in each industry and to uncertainty as to the degree to which the various restrictions are actually binding, the current data is not suited to this inquiry. As a first pass, the manufacturing dummy was split into separate foreign and manufacturing dummies. Assuming that barriers would particularly inhibit the flow of finished goods, one might expect that foreign purchases of manufacturing firms might generate a higher premium than domestic purchases of manufacturing assets would. However, beyond the inclusion of the foreign dummy variable on all foreign transactions, distinction of the manufacturing dummy on the basis of nationality was not warranted by the data.

24. Doukas and Travlos (1988) studied U.S. firms making acquisitions abroad. They found that abnormal returns to the bidding firms are largest when the firm makes a new entry or undertakes new activities, especially when the country entered is more dissimilar to the United States. They stress corporate multinationalism, rather than portfolio diversification, as the source of additional shareholder gains.

25. Determination of previous real operations was based on information contained in *Moody's International.* A dummy variable was created to indicate presence of the foreign firm in the U.S. market, at the time that the bid was placed. If the firm had any U.S. operations or subsidiaries, the variable was set equal to one.

26. Of the foreign firms in the sample, 25 percent had dollar-denominated debt, while 30 percent of the foreign firms had stocks issued in the United States prior to their bids. Most of the foreign stock issues were American depository receipts sold through investment banks. Fourteen percent of the foreign firms had both financial instruments.

9.5 Conclusion

While domestic and foreign acquirers have both expanded their activity in the U.S. market in the 1980s, certain differences in the characteristics of their transactions distinguish their efforts. The most pronounced difference arises in the target shareholder wealth gains in domestic and foreign acquisitions. Foreign acquisitions generated target shareholder wealth gains almost 10 percent in excess of those in similar domestic acquisitions. The robustness of the finding to controls for the method of payment, the competitive environment, and the presence of government or target management resistance indicate that high returns in foreign transactions are not simply caused by the concentration of foreign purchases in high-return sectors.

Other differences between foreign and domestic acquisitions are worthy of mention. To begin, foreign firms have acquired targets which are more rapidly growing and which have significantly higher price-earnings ratios than do the targets of domestic acquirers. In their contests for control, foreign firms are less likely to encounter competition from other bidding firms or challenge from government agencies. Finally, foreign acquisitions are more sensitive to exchange rate movements in a manner consistent with imperfect capital market explanations of foreign direct investment.

The presence of higher payments in foreign acquisitions seems indicative of additional value creation opportunities based on operational, financial, and transactions-based opportunities unique to cross-border acquisition. We find that part of the higher foreign payments is explained by foreign firms' payments for intangible assets. The specific causes of these differences and the particular asset characteristics should be the subject of further study.

References

Agmon, T., and D. Lessard. 1977. Investor recognition of corporate international diversification. *Journal of Finance* 32 (September): 1049–55.

Baldwin, John R., and Richard E. Caves. 1991. Foreign multinational enterprises and merger activity in Canada. In *Corporate globalization through mergers and aquisitions,* ed. Leonard Waverman, 89–121. Calgary: University of Calgary Press.

Brown, S. J., and J. B. Warner. 1980. Measuring security price performance. *Journal of Financial Economics* 8:205–58.

———. 1983. Using daily stock returns: The case of event studies. *Journal of Financial Economics* 14:3–31.

Cushman, David O. 1985. Real exchange rate risk, expectations, and the level of direct investment. *Review of Economics and Statistics* 67, no. 2 (May): 297–308.

Dewenter, Kathryn L. 1992. Evidence for and against Froot and Stein's imperfect capital markets model of foreign direct investment. Working Paper. Chicago: University of Chicago.

Doukas, John, and Nickolos G. Travlos. 1988. The effect of corporate multinationalism

on shareholders' wealth: Evidence from international acquistions. *Journal of Finance* 43, no. 5 (December): 1161–75.

Dunning, John H. 1981. *International production and the multinational.* London: Allen and Unwin.

Errunza, Vihang R., and Lemma W. Senbet. 1981. The effects of international operations on the market value of the firm: Theory and evidence. *Journal of Finance* 35 (May): 401–17.

Fishman, Michael J. 1988. A theory of preemptive takeover bidding. *Rand Journal of Economics* 19:88–101.

———. 1989. Preemptive bidding and the role of the medium of exchange in acquistions. *Journal of Finance* 44 (March): 41–57.

Froot, Kenneth A., and Jeremy C. Stein. 1991. Exchange rates and foreign direct investment: An imperfect capital markets approach. *Quarterly Journal of Economics* 106 (November): 1191–217.

Grossman, S., and O. Hart. 1980. Takeover bids, the free rider problem, and the theory of the corporation. *Bell Journal of Economics* 11(1): 42–64.

Grossman, S. J., and J. E. Stiglitz. 1980. On the impossibility of informationally efficient markets. *American Economic Review* 70, no. 3 (June): 393–408.

Hall, Bronwyn H. 1988. The effect of takeover activity on corporate research and development. In *Corporate takeovers: Causes and consequences,* ed. Alan J. Auerbach. Chicago: University of Chicago Press.

Harris, Robert S., and David Ravenscraft. 1991. The role of acquisitions in foreign direct investment: Evidence from the U.S. stock market. *Journal of Finance* 46, no. 3 (July): 825–44.

Huang, Yen-Sheng, and Ralph Walkling. 1987. Target abnormal returns associated with acquisition announcements: Payment, acquisition form, and managerial resistance. *Journal of Financial Economics* 19, no. 2 (December): 329–49.

James, Christopher M., and Peggy Weir. 1987. Returns to acquirers and competition in the acquisition market: The case of banking. *Journal of Political Economy* 95, no. 2 (April): 355–70.

Jensen, M. C., and R. S. Ruback. 1983. The market for corporate control: The scientific evidence. *Journal of Financial Economics* 11, nos. 1–4: 5–50.

Klein, Michael W., and Eric Rosengren. 1992. The real exchange rate and foreign direct investment in the United States: Relative wealth versus relative wage effects. NBER Working Paper no. 4192. Cambridge, Mass.: National Bureau of Economic Research, October.

Kogut, Bruce, and Sea Jin Chang. 1991. Technological capabilities and Japanese foreign direct investment in the United States. *Review of Economics and Statistics* 73, no. 3 (August): 401–13.

Malatesta, Paul H., and Rex Thompson. 1985. Partially anticipated events: A model of stock price reactions with an application to corporate acquisitions. *Journal of Financial Economics* 14(2): 237–50.

Morck, Randall, Andrei Shleifer, and Robert W. Vishny. 1990. Do managerial objectives drive bad acquisitions? *Journal of Finance* 45, no. 1 (March): 31–48.

Roll, R. 1986. The hubris hypothesis of corporate takeovers. Part 1. *Journal of Business* 59, no. 2 (April): 197–216.

Vernon, Raymond. 1966. International investment and international trade in the product cycle. *Quarterly Journal of Economics* 83(1): 190–207.

Comment Donald Lessard

Deborah Swenson's paper raises a number of fascinating questions regarding the motivations for foreign direct investment and employs company-level transaction data that have the potential to answer many of these questions in ways that are not possible with aggregate data.

Swenson's main focus is on measuring and explaining foreign premiums, the difference in the premiums paid in acquisitions by foreign firms versus those paid by domestic firms. While the behavior of these premiums may be viewed by some as capital markets arcana, they involve central questions: Why are certain activities worth more to foreign firms than to domestic firms? How do these differences vary across industries, types of activities, time, financial systems, macroeconomic circumstances, and so on?

Although acquisition data are partial relative to the FDI aggregates usually employed, they have some clear advantages. Firm-level explanations emphasize economies of scale, scope, and learning and therefore depend on the nature of the assets acquired and the way in which they are integrated into the acquiring firms' networks. Industry-level arguments vary with industry structure (global, continental, national, as well as degree of rivalry, etc). Financial system arguments often turn on differences between "inside" versus "outside" capital and asymmetries in information or in access to markets for corporate control, all of which are likely to vary across firms as well as countries. Even macroeconomic motives are likely to apply differentially to firms in different industries.

Swenson's primary explanation of the existence of foreign premiums is that, due to informational differences, foreign firms are more likely than domestic firms to engage in preemptive bids and thus pay higher prices on average. The reasons provided for this behavior, however, are not very convincing. Further, even if different groups of firms are willing to pay different prices, some bidding/equilibrium structure must be assumed to result in their having to pay more!

An alternative explanation might be that domestic and foreign firms bid for different populations of target firms. Consider two types of acquisition targets: (1) mispriced and/or mismanaged companies that essentially can be valued on a stand-alone basis, and (2) companies in industries with substantial potential global scale/scope economies whose value depends on the characteristics of the global network of the acquiring firm. Domestic firms should dominate bidding for the former group, while firms that are culturally and geographically distant from the United States should in general only be interested in the latter group, since they typically will have higher costs of gaining information about the United States, and so on. Dick Caves's unpublished results, which he referred to in the discussion, suggest that the difference in premiums is in fact associated with differences in target rather than acquirer characteristics. Why

one group of targets should command greater premiums, however, still requires an explanation.

In order to answer a number of these questions more precisely, it is necessary to be more specific about the nature of the asset being acquired. Some direct foreign investments, whether by acquisitions or not, are essentially portfolio investments where the acquired asset is not integrated into the acquiring firm's network and its management and operations are not changed to reflect the skills, operating principles, and so on, of the acquiring firm. The acquisition of Rockefeller Center is an example. In those cases where the investment is incorporated into the acquiring firm's network, it is important to know whether this is largely a locally oriented investment (e.g., buying "downstream" activities in order to sell products in the United States that are designed and produced elsewhere) or whether it is an upstream investment that seeks to exploit U.S.-based activities for global purposes, such as the case of Genentech. Under these different situations, one might expect quite different value creation as well as value transfer. In addition, it would be helpful to know whether the target is stronger or weaker in R&D or advertising than the acquiring firm, based on ratios of R&D and advertising to sales, levels of patent activity, or nature of employees.

In all, this is a very interesting study at a level of analysis that has the potential to differentiate between competing hypotheses regarding FDI, and Swenson is to be commended for having opened up what I expect will become a major domain of FDI research.

Discussion Summary

The discussion opened with *Kenneth Froot*'s observation that this paper represents an important yet subtle change in the emphasis of FDI research, away from quantities and toward prices.

During the discussion, several comments were made on the specific results and arguments presented. Some people questioned the preemptive bidding hypothesis and why it should only (or, predominantly) hold for the foreign bidders. *Krishna Palepu* asked if the length of the abnormal return window affects the results, noting that preannouncement "leakage" may vary depending on the bidder. *Deborah Swenson* confirmed that she had tried several different specifications, but they did not alter the findings. *Palepu* also noted that the existence of foreign bidders in any given transaction would alter the distribution of expected bids, leading to higher expected shareholder wealth gains in transactions with foreign bidders, regardless of any other factors. (The higher number of potential competing bidders would increase the share of gains going to target shareholders.)

Several extensions to *Swenson's* work were suggested. *Robert Feenstra* observed there may be an option value to these investments for those foreign companies worried about potential trade restrictions (as in Bhagwati's quid pro quo investments). Since this fear only applies to a handful of industries, this hypothesis could be tested by comparing foreign takeover premiums across industries. The selection of appropriate industries could be based on trade protection filings with the FTC. *Froot* suggested trying to separate out the wealth effect from the exchange rate effect by looking at other shocks to corporate wealth, such as changes in stock prices.

Kathryn Dewenter mentioned three related results she has acquired in similar research: only shareholder wealth gains for the largest foreign acquisitions appear to have any exchange rate sensitivity; within the chemical and retail industries, shareholder wealth gains are not significantly higher for foreign buyers; and the pattern of foreign versus domestic wealth gains appears to depend on whether or not the target and buyer product lines are closely related. All of these findings suggest that moving toward more transaction detail, as recommended by *Donald Lessard,* is warranted and likely to provide richer insights.