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SURVEYS, TECHNOLOGY AND CROSSOVERS

This section provides surveys of the literature in investment management or short papers exemplifying advances in finance that arise from the confluence with other fields. This section acknowledges current trends in technology, and the cross-disciplinary nature of the investment management business, while directing the reader to interesting and important recent work.

VALUE OF CORPORATE CONTROL: SOME INTERNATIONAL EVIDENCE

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Existing literature shows that the market values control because controlling shareholder can generate private benefits and improve the efficiency of the corporation. In this study, we provide a measure of the value of control for a set of domestic and foreign transactions. Our measure of the value of control is the difference between the offer premium for minority and comparable majority transactions. We find that the median control premiums in the United States are around 30%. The control premium in "market-oriented" countries is higher than that for the "bank-oriented" countries. Also, we find that the premiums are lower in "cross-border" transactions relative to "domestic transactions."

1 Introduction

The premise underlying much of modern finance is that most public corporations have diffused ownership in which the shareholders receive benefits in proportion to their fractional ownership and corporate decisions are made by professional managers with incentive compatible contracts. This premise is reflected in a wide range of analyses. For example, modern financial theory analyzes decisions, such as capital structure, dividend policy, investment and production decisions, and the allocation of rights among different claimholders, under the assumption of a proportional division of benefits to diffuse shareholders.

Recent empirical evidence shows that certain investors may exercise control over important corporate decisions that are disproportionate to their shareholdings, however. For example, Denis *et al.* (1997a) show that outside blockholders may influence managers to avoid adopting value reducing diversification strategies. Similarly, Denis

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et al. (1997b) show that a change in the top manager is significantly more likely in a poorly performing firm in which there is an outside shareholder who has a significant stake. In addition to value-enhancing activities, the controlling shareholders may be able to generate private benefits at the expense of the minority shareholders.[1] For example, Easterbrook (1984) and Jensen (1986) suggest that a substantial opportunity to generate private benefits may exist by controlling a firm's capital structure and dividend policy, especially for very profitable firms with limited investment opportunities. Morck *et al.* (1988) and McConnell and Servaes (1990) further argue that the ability to obtain private benefits depends on the ownership and governance structure of the firm.

There is also a great deal of evidence showing that control is valued, which could not be the case if controlling managers (or shareholders) received the same benefit as other investors.

For instance, Barclay and Holderness (1989, 1992) find that in the United States, large blocks of equity trade at an average premium of 20% relative to the post-announcement exchange price, indicating that the buyers of blocks that may have a controlling influence receive special benefits.

Moreover, several studies compare the prices of shares with identical dividend rights, but differential voting rights. Lease *et al.* (1983, 1984), DeAngelo and DeAngelo (1985), and Zingales (1995) all show that, in the United States, shares with superior voting characteristics trade at a premium. Even though this premium is very small on average, Zingales (1995) shows that it rises sharply where control is contested, indicating again that controlling rights earn benefits that are not available to minority shareholders.

Additional evidence comes from other countries. Levy (1983), Rydqvist (1996), Horner (1988), and Zingales (1994) report finding substantial premiums paid for voting control in Israel, Sweden, Switzerland, and Italy, respectively. Furthermore, in an international comparison, Dyck and Zingales (2004) and Nenova (2003) find that the cross-sectional variation in their respective measure of the control premium is correlated with legal and extra-legal mechanisms that act to protect minority shareholders.

However, the extant literature, though extensive, does not answer the question, "What is the value of control?" Studies on voting rights establish that control is valuable. The research on block trades by Barclay and Holderness (1989) provides an estimate of the value of partial control. There are other studies on premiums paid in takeover transactions in which control is acquired that provide an upper bound on the value of control, because the takeover premium compensates the target for factors other than control.[2]

In this article we estimate the *value of control* for a set of domestic and foreign transactions.[3] Our approach is straightforward. We identify a set of 29,391 acquisitions of public companies between 1986 and 2011 in the Group of 7 (G7) nations. The G7 nations are the United States, Japan, Germany, United Kingdom, France, Italy, and Canada. We next categorize each of these transactions as minority or majority transactions based on the fraction of shares acquired and held after the acquisition. Minority transactions are defined as those in which the acquirer had less than 30% ownership both before and after completion of the deal. Majority transactions are defined as those in which the acquirer had less than 30% ownership before the deal and at least 50% after completion of the deal. Next, we match the minority and majority transactions based on the industry, year of the deal, attitude of the deal (hostile or not), and the country of the target. Then we compare the premiums paid for acquiring the minority and majority positions; the difference between the two is our measure of the control premium.

Our research has produced the following principal findings:

— A majority position in a company based in the United States is acquired at a median premium that is 20–30 percentage points higher than the premium paid for a minority position. A similar 20–30% control premium is paid in other "market-oriented" countries, namely the United Kingdom and Canada. The control premiums paid in "bank-oriented" countries, namely Japan, France, Italy, and Germany, are appreciably lower.
— A higher offer premium is paid for majority transactions in which the acquirer and the target are from different nations. This differential between domestic and cross-border transactions is even higher for minority transactions. Therefore, the control premium paid for domestic transactions is higher than that for cross-border transactions.

The remainder of this paper is organized as follows. Section 2 discusses the value of control and the extant empirical literature. Section 3 discusses our data sources and reports descriptive statistics for the sample transactions. We also discuss the methodology we employed to measure the control premium. Section 4 reports evidence on the control premium categorized by year, industry, attitude, and size of the target. Section 5 provides results on the control premium for the G7 nations. Section 6 concludes.

2 Corporate control

2.1 A definition of control

Typically, control of a corporation can be defined as the direct power to cause more than 50% of the existing shareholder votes to be cast in the same manner. In certain situations it is clear that a party has "direct power to cause" more than 50% of the votes to be cast in a certain way; examples include an individual owning more than 50% of the outstanding shares of voting stock, a person holding irrevocable proxies representing more than 50% of the outstanding shares of voting stock, and the trustee of a voting trust into which has been deposited more than 50% of the outstanding shares of voting stock.

In other circumstances it is not as obvious whether "direct power to cause" exists. For example, a certain individual or group could have effective control at a level of ownership lower than 50%. Weston (1979) shows that no firm in which the managers have 30% ownership has ever been acquired without the cooperation of the managers. At the same time, 50% voting power is not necessarily a theoretically perfect measure of control. For example, 50% of share voting power would not be sufficient to win outright any shareholder elections in corporations whose corporate charters require a super-majority (say, 66 2/3%) for every vote and where cumulative voting does not exist.

On the other hand, in firms with a relatively small number of shareholders, the interests of minority shareholders are sometimes protected by requiring unanimous consent on important decisions. When corporate decisions require the unanimous consent of all shareholders, the allocation of shares no longer reflects the relative voting power of different shareholders. Specifically, each shareholder effectively enjoys the same voting power as all others. This has two implications for the allocation of control benefits within the firm: (a) in areas explicitly covered by the veto, all shareholders will capture an equal share of the private control benefits emanating from the decisions taken by the firm; and (2) even in areas that are unprotected by the veto, small shareholders may be able to exercise a disproportionate influence on decisions because of the veto power they enjoy in protected areas. In the latter case, the phenomenon of "logrolling would allow minority shareholders to trade off votes in protected areas for favorable decisions in unprotected areas.

2.2 *Economic rationales for a control premium*

Ownership of shares in a corporation may conveniently be analyzed as composed of two elements of value: the right to a proportionate share of the corporation's distributions, or cash-flow rights; and the proportionate participation in management of the enterprise, or control value. The dissection of share value into these components suggests that participation in management has some inherent value that is independent of the income and asset values of the corporation. The usual explanation of the control premium is that the power to elect and remove directors, appoint and remove officers, fix salaries, assure oneself a job at a reasonable salary, declare dividends, and dissolve or merge the corporation is valuable. The shortcoming of this approach as a justification for control premiums is that it fails to explain why participation in management is valuable apart from the fact that it enables one to affect corporate income and asset values. Any other inherent value of management powers is not obvious. One school of thought is that the value of control is due to an egocentric drive to run an ever-larger enterprise.

A second rationale for control premiums focuses upon the relationship between control and corporate performance. An acquirer might pay a premium for controlling shares because an investment in controlling shares is a more promising, or at least a safer, investment than one in noncontrolling shares for the simple reason that it will enable the investor to implement what he believes to be the best policies in the management of his investment (or at least void any actions that would be detrimental to shareholder value).

A third type of rationale for control premiums is that control carries with it the ability to engage in self-dealing. Self-dealing occurs when a controlling shareholder uses his power over corporate management in ways that benefit herself at the expense of minority shareholders. In closely held corporations, perhaps the most common variety of self-dealing occurs when the controlling shareholder causes the corporation to employ him at a salary in excess of his productive contribution to the company. His excessive salary reduces corporate earnings, to which minority shareholders have pro-rata claims, but at no loss to the control shareholder. Another form of self-dealing involves "looting" activities whereby controlling shareholders withdraw assets from the corporation, either without paying anything for them or by paying less than fair market value. Self-dealing also encompasses "freeze-out" and "squeeze-out" activities, whereby the controlling shareholders use fundamental corporate changes such as recapitalizations and mergers to actually increase their pro-rata claims to income and assets and reduce the pro-rata claims of minority shareholders.

2.3 *Empirical evidence on the control premium*

There are three areas of research that have contributed to the empirical estimate of the control premium. The line of research that has been examined most extensively is the premium paid for acquiring controlling interests in firms. As Jensen and Ruback (1983) wrote: "It is clear that much is known about the market. Indeed, it is unlikely that any set of transactions has been studied in such detail." However, the premium paid in a takeover attempt could be compensation for a variety of factors, including control. For example, an acquirer may identify an undervalued target and may be willing to pay a premium to acquire a majority stake in the company. Therefore, at best the premiums paid in takeover transactions serve as the upper bound on the value of control.

The second line of research involves the study of dual-class shares. Lease *et al.* (1983, 1984) show that the distribution of payoffs provided by a common stock depends upon whether the ownership of the stock also conveys control over the firm's activities. Specifically, they studied the share prices of 30 companies that had two classes of publicly traded common stock outstanding during the period 1940–1978 that were differentiated only by their voting rights. Month-end trade prices for the two shares classes from the same day of trading were used to infer the value of differential voting rights, or rights to control the firm's activities. For 26 of the 30 firms, the observed month-end pairs of trade prices were consistent with a positive price premium being placed on the class of shares with superior voting rights. Specially, on average the class of shares with superior voting rights had a 5.4% price premium relative to the class with the inferior voting rights. Thus, in 26 of 30 cases the relative pricing was consistent with the positive value of control. DeAngelo and DeAngelo (1985) and Zingales (1995) also show that, in the United States, shares with superior voting characteristics trade at a premium. Even though this premium is very small on average, Zingales (1995) shows that it rises sharply where control is contested, indicating again that controlling rights earns benefits that are not available to minority shareholders. Even more extreme evidence comes from other countries. Levy (1983) finds an average voting premium of 45.4% in Israel, Rydqvist (1996) finds a 6.5% voting control premium in Sweden, Horner (1988) finds a 20% premium for Switzerland, and Zingales (1994) reports an 82% voting premium on the Milan Stock Exchange. Furthermore, Zingales (1994) and Barca (1995) suggest that the high premium in Italy is a consequence of the ability of managers to divert profits to themselves rather than sharing them with the nonvoting shareholders. Nenova (2003) examines the premium in dual-class shares in 18 countries in 1997 and finds that the price premium varies across countries and ranges from 60% in South Korea to almost 0% in Canada and Scandinavian countries. She finds that the legal environment, law enforcement, investor protection, takeover regulations, and power-concentrating corporate charter provisions can explain 68% of the cross-sectional variation in the price premium.

The limitation of these studies is that even though they establish that there is a positive value of voting rights, they do not provide any estimates about the value of control. This is because these studies examine minority positions with voting rights relative to minority positions without voting rights.

A third body of literature relies on the examination of the pricing of block trades. Barclay and Holderness (1989) analyzed the pricing of 63 block trades between 1978 and 1982 involving at least 5% of the common stock of NYSE or AMEX Corporation. They found that these blocks were typically priced at an average of 20% premium relative to the post-announcement exchange price. They argue that these premiums reflect private benefits that accrue exclusively to the blockholder because of their voting power. They further show that the premiums paid by both individual and corporate block purchasers increase with firm size, fractional ownership, and firm performance. Individuals pay larger premiums for firms with greater leverage, lower stock-return variances, and larger cash holdings. In an international comparison of 39 countries Dyck and Zingales (2004) use the Barclay and Holderness (1989) methodology to estimate the control premium and find that both legal and extra-legal mechanisms are important in curbing the private benefits of control. Specifically, they find that accounting standards, tax compliance, legal protection of minority shareholders, law enforcement, the intensity of product market competition, and the level of diffusion of the press are all important determinants of the control premium.

3 Sample description and methodology

3.1 Sample description

Our sample consists of acquisitions of public companies from Securities Data Corporation (SDC) between January 1986 and December 2011 for which stock price data was available four weeks prior to the announcement of the transaction.[4] This study is only interested in mergers and acquisitions that actually occurred. Consequently, we limited our sample to include only the transactions that were in the form of a merger or an acquisition and that were deemed completed. Additionally, each transaction was required to have data available on the percentage of shares outstanding acquired in the deal. Finally, following the methodology used in studies that examine toehold investments, we excluded all transactions where the percent of shares acquired was less than 5% (see for example, Choi, 1991). The reason for a 5% cutoff is that owners with investments of at least 5% are considered to be beneficiary owners and are required to file a statement with the Securities and Exchange Commission (SEC). Our selection criteria resulted in a final sample of 11,376 transactions in the United States and 18,015 foreign transactions.

Table 1 illustrates the number of transactions classified by the acquirer's percent of ownership in the target prior to the deal and the percent ownership resulting from the completion of the deal. Panel A of Table 1 shows that for the United States in 10,411 transactions out of a total of 11,376 the acquirer owned less than 10% of the target prior to the deal and in 7,117 transactions the deal resulted in the acquirer owning more than 90% of the target. Similarly, Panel B of Table 1 shows that for foreign targets in 13,182 transactions out of a total of 18,015 the acquirer owned less than 10% of the target prior to the deal and in 6,539 transactions the deal resulted in the acquirer owning more than 90% of the target.

We grouped our sample into two different categories of acquisitions: minority and majority transactions. Minority transactions are defined as those in which the acquirer had less than 30% ownership both before and after completion of the deal. In essence, our definition of minority transactions parallels that of toehold investments. Majority transactions are defined as those in which the acquirer had less than 30% ownership before the deal and at least 50% after completion of the deal. The basic difference between the two categories is that in a majority transaction the acquirer gains control of the target through the completion of the deal, whereas in a minority transaction completion of the deal does not result in control of the target. Our definition of minority and majority transactions implicitly uses the notion that those shareholders with less than 30% do not have control of the firm. This is justified by the results presented in Weston (1979) which show that there are no cases in which firms were acquired in a hostile takeover when insiders owned more than 30%. This suggests that an insider with more than 30% ownership has effective control of the firm. In a later part of our analysis we relax this definition by using an alternate measure of control.

Panel A of Table 1 shows that for targets based in the United States, our final sample is comprised of 3,540 minority transactions and 6,879 majority transactions. Panel B of Table 1 shows that for

Table 1 Frequency of acquisitions categorized by ownership before and after the transaction.

	% Owned after										
	<10%	10–19.9%	20–29.9%	30–39.9%	40–49.9%	50–59.9%	60–69.9%	70–79.9%	80–89.9%	90% and above	Grand total
Panel A: U.S. targets											
% Owned before											
<10%	2,083	1,038	316	160	97	95	49	36	86	6,451	10,411
10–19.9%		28	64	21	12	5	1		3	76	210
20–29.9%			8	26	11	5	2	2	2	58	114
30–39.9%				3	16	9	4	2	2	64	100
40–49.9%					02	18	11	1	1	79	112
50–59.9%						5	5	4	3	94	111
60–69.9%								9	5	91	105
70–79.9%								1	5	69	75
80–89.9%									3	114	117
90% and above										21	21
Grand total	2,083	1,066	388	210	138	137	72	55	110	7,117	11,376
Panel B: International targets											
% Owned before											
<10%	2,512	2,852	1,282	654	427	567	314	282	209	4,083	13,182
10–19.9%		63	258	111	55	46	29	30	16	204	812
20–29.9%			42	166	119	103	53	29	40	218	770
30–39.9%				23	126	141	57	35	38	201	621
40–49.9%					22	130	72	45	39	246	554
50–59.9%						28	103	112	62	495	800
60–69.9%							14	67	53	354	488
70–79.9%								4	39	330	373
80–89.9%									7	265	272
90% and above										143	143
Grand total	2,512	2,915	1,582	954	749	1,015	642	604	503	6,539	18,015

Our sample consists of acquisitions of stakes of 5% or greater of public companies between January 1986 and December 2011 with stock premium data available from Securities Data Corporation.

Table 2 Descriptive statistics.

	Majority transactions	Minority transactions
Panel A: US targets		
Average enterprise value ($ millions)	2,072.02	2,193.94
Fraction of hostile transactions	1.69%	0.14%
Fraction in related industry	57.86%	53.36%
Average percent owned prior to transaction	0.52	0.77
Average percent acquired in transaction	98.09	10.13
Fraction of cross-border transaction	11.79%	9.32%
Number of observations	6,879	3,540
Panel B: International targets		
Average enterprise value ($ millions)	3,207.61	3,653.67
Fraction of hostile transactions	3.05%	0.20%
Fraction in related industry	45.45%	33.45%
Average percent owned prior to transaction	2.88	1.30
Average percent acquired in transaction	87.04	12.71
Fraction of cross-border transaction	26.12%	23.88%
Number of observations	6,330	7,139

Our sample consists of acquisitions of stakes of 5% or greater of public companies between January 1986 and December 2011 with stock premium data available from Securities Data Corporation. Minority transactions are defined as those in which the acquirer had less than 30% ownership both before and after completion of the deal. Majority transactions are defined as those in which the acquirer had less than 30% ownership before the deal and at least 50% after completion of the deal. Control premium is the difference between the premium for a minority transaction and the median premium paid for all majority transactions that took place in the same country, during the same year, in the same industry, and with the same attitude. Enterprise value is calculated by multiplying the number of actual shares outstanding of the target by the offering price and then adding the book value of short-term debt, straight debt, convertible debt, and preferred stock less marketable securities. The latter values are based on the most recent financial information prior to the announcement of the transaction. Related industry transactions are those that occur when acquirers and targets are in the same two-digit SIC code. Cross-border transactions are those in which the acquirer is based in a different country from the target. Domestic transactions are those in which the acquirer is based in the same country as the target.

foreign targets our final sample is comprised of 7,139 minority transactions and 6,330 majority transactions.

Table 2 presents the sample characteristics of minority and majority transactions. As we can see, the average enterprise value for U.S. majority transactions is $2.072 billion, which is roughly comparable to the enterprise value of minority transactions of $2.194 million.[5]

Foreign transactions have considerably higher average enterprise values with $3.208 billion and $3.654 billion in the case of control and minority transactions, respectively.

Table 2 shows that another common element shared by the United States and other countries is that control transactions are more likely to be between acquirers and targets with the same two-digit SIC code. In the United States, almost 60% of control transactions are in related industries. Minority transactions are more diversifying in nature: 53% of minority U.S. transactions and 33% of minority foreign transactions are in related industries.

In addition, in both majority and minority transactions, on average, the acquirer starts with an insignificant stake in the target. For U.S. control transactions, the acquirers purchase an average stake of over 98.1% in their targets. Analogously, for U.S. minority transactions acquirers purchase an average stake of 10.12% in their targets. Corresponding numbers for our foreign sample are 87% for majority transactions and 12.7% for minority transactions.

One striking difference between the U.S. transactions and foreign transactions is the fraction of cross-border transactions involved. In the United States, 11.8% of acquired companies are purchased by a non-domestic corporation whereas outside the United States 26.2% of acquired companies are purchased by a non-domestic firm.

3.2 *Estimation of the control premium*

Our analysis starts by estimating the control premium for our majority transactions. In the discussion that follows we use the premium of the offer price relative to the target's trading price four weeks prior to the announcement date.

A vast body of literature indicates that the acquisition premium is either information driven or control driven. In a financial transaction, the acquirer may pay a premium because it has information that the target is undervalued. Alternatively, the bidding firm expects to exploit some specialized resources by getting control of the target and implementing a higher valued operating strategy. The revised operating strategy may involve more efficient management, economies of scale, improved production techniques, the combinations of complementary resources, increased market power, re-deployment of assets to more profitable uses, or any other value-creating mechanism that is within the realm of corporate synergy. Therefore, the premium paid in majority transactions might overstate the true value of control since this premium might contain informational value. In an ideal experiment, we would like to compare two transactions in which the only difference is that in one transaction the acquirer is able to gain control and in the other it does not. The closest we can get to implementing this experiment empirically is to compare the premium paid for a majority transaction with that of a minority transaction. The argument is that some of the non-control rationales for the acquisition premium are reflected in the premiums paid for minority transactions. Therefore, our measure of the control premium is the difference between a minority transaction and a matched majority transaction. Specifically, we estimate the control premium as the difference between the premium for a minority transaction and the median premium paid for all majority transactions that took place in the same country; during the same year; in the same industry; and with the same attitude. As discussed previously, we use the two-digit SIC code as a proxy for whether the acquirer and the target are in related industries. For the purpose of matching minority and majority transactions we divided the SDC "attitude" variable into two categories: hostile or not hostile. We match each minority transactions with all the comparable majority transactions and not the other way around because our sample has many more majority transactions than minority transactions.

4 Empirical evidence on the control premium

4.1 *Control premium categorized by year of acquisition*

Table 3 reports the median premium paid by the acquirer for majority and minority transactions. As we can see in Panel A, the premium for our sample of U.S. majority transactions varies across time from a low of 25.7% in 2004 to a high of 54.2% in 1988. Similarly, the median premium varies between −2.2% in 2011 and 12.60% in 1986 for the U.S. minority transactions. The control premium varies between a low of 18.22% in 1986 to a high of 42.93% in 1991. Panel B shows that the premiums paid for foreign targets are somewhat smaller in magnitude. For majority transactions they vary between 16.27% in 2004 and 45.92% in 1987, whereas minority transactions vary between −6.03% in 2004 and 16.42% in 1998.[6] The control premiums are also smaller for foreign targets: in the 26 years available to compare, the control premium was higher for foreign targets than it was for U.S. targets only once in 1992 (36.7% vs. 34.81%).

Table 3 Control premium by year.

	Premium of offer price relative to the trading price four weeks prior to the announcement date					
	Majority transactions		Minority transactions		Control premium	
Year	Observations	Median	Observations	Median	Observations	Median
Panel A: U.S. targets						
1986	202	37.50	121	12.60	176	18.22
1987	228	36.61	194	6.99	197	27.19
1988	283	54.22	222	11.07	249	34.07
1989	215	47.69	284	8.39	201	37.36
1990	120	44.41	230	2.20	104	41.78
1991	112	53.08	143	9.33	98	42.94
1992	117	44.48	153	5.98	109	34.82
1993	160	37.55	206	1.95	152	33.74
1994	171	33.16	278	1.59	159	27.41
1995	305	36.00	340	4.83	292	28.98
1996	329	32.18	344	4.15	311	24.69
1997	405	31.65	185	4.96	374	24.12
1998	412	34.44	108	−2.03	337	27.64
1999	560	42.86	60	7.82	441	29.78
2000	492	45.18	65	11.79	367	26.05
2001	352	42.75	47	1.61	245	39.29
2002	203	37.36	47	5.71	149	30.12
2003	248	31.26	35	7.78	175	23.45
2004	206	25.68	28	1.29	145	24.72
2005	290	27.97	49	6.25	240	21.01
2006	333	27.80	41	7.80	238	21.07
2007	345	27.57	69	−0.48	258	24.61
2008	208	34.96	123	2.91	166	28.05
2009	152	40.75	99	6.72	112	30.92
2010	241	40.32	32	0.27	176	35.93
2011	171	38.04	34	−2.20	124	36.03

Table 3 (*Continued*)

	Premium of offer price relative to the trading price four weeks prior to the announcement date					
	Majority transactions		Minority transactions		Control premium	
Year	Observations	Median	Observations	Median	Observations	Median
Panel B: International targets						
1986	8	36.01	—	—	—	—
1987	42	45.92	—	—	—	—
1988	48	32.43	—	—	—	—
1989	61	35.63	2	115.68	—	—
1990	69	42.35	99	7.72	33	26.09
1991	67	22.55	111	11.63	29	8.07
1992	54	28.60	84	5.95	22	36.69
1993	61	17.70	116	10.69	18	−1.87
1994	75	23.44	89	8.18	19	12.25
1995	159	31.48	138	13.89	59	17.90
1996	159	28.95	173	11.44	73	15.62
1997	196	29.89	109	7.44	71	7.15
1998	275	28.70	68	16.42	40	−2.47
1999	456	35.04	132	2.36	117	20.85
2000	395	29.09	204	5.23	110	5.14
2001	300	21.87	204	4.24	95	5.11
2002	190	19.83	215	1.28	66	0
2003	233	19.14	308	−1.21	102	5.80
2004	192	16.27	351	−6.03	95	5.89
2005	449	19.22	400	−4.13	210	13.61
2006	495	22.62	491	1.02	265	14.97
2007	579	25.06	656	1.45	345	13.19
2008	448	27.63	775	−0.37	293	17.65
2009	434	31.65	832	1.67	303	30.09
2010	388	27.67	802	1.91	230	19.76
2011	360	30.05	650	0.00	220	21.41

Our sample consists of acquisitions of stakes of 5% or greater of public companies between January 1986 and December 2011 with stock premium data available from Securities Data Corporation.

Minority transactions are defined as those in which the acquirer had less than 30% ownership both before and after completion of the deal. Majority transactions are defined as those in which the acquirer had less than 30% ownership before the deal and at least 50% after completion of the deal. Control premium is the difference between the premium for a minority transaction and the median premium paid for all majority transactions that took place in the same country, during the same year, in the same industry, and with the same attitude. Enterprise value is calculated by multiplying the number of actual shares outstanding of the target by the offering price and then adding the book value of short-term debt, straight debt, convertible debt, and preferred stock less marketable securities. The latter values are based on the most recent financial information prior to the announcement of the transaction. Related industry transactions are those that occur when acquirers and targets are in the same two-digit SIC code.

4.2 Control premium categorized by industry

The value of control can differ across industry. Table 4 presents the premiums for selected two-digit SIC codes in our sample. As in Table 3, we can observe that in no industry categories is the premium paid for U.S. majority transactions lower than that paid for foreign targets.

The premium for U.S. majority transactions ranges between a low of 18.702% for "holding and other investment" (two-digit SIC code 67) to a high of 36.2% for "chemicals and allied products" (two-digit SIC code 28). For majority transactions involving foreign targets, the premium ranges between 14.63% and 31.64%.

The control premiums are lowest in the "holding and other investment offices" (two-digit SIC code 67) in the U.S. and in "electronic and other electrical equipment and components, except computer equipment" for international targets. The highest control premiums are in the "measuring, analyzing, and controlling instruments; photographic, medical and optical goods; watches and clocks" (two-digit SIC code 38) in both the United States and internationally, with a median of 33.54% and 25.59%, respectively.

4.3 Control premium categorized by the attitude of the transaction

Table 5 illustrates the control premium categorized by the attitude of the transaction. We would expect *ceteris paribus* that a hostile or unsolicited bid on a target would command higher premiums than would a friendly or neutral bid. This is the case even in minority transactions. Again in all four different categories of attitude of the transaction the U.S. targets command higher control premiums than their foreign counterparts except for neutral transactions (4.19% vs. 10.01%).

4.4 Control premium categorized by enterprise value of the target

One can argue that the size of the target could influence the premium paid by the acquirer. In light of this argument, Table 6 reports the premiums categorized by deciles of the target's enterprise value. Enterprise value is calculated by multiplying the number of the target's actual shares outstanding by the offering price and then adding the book value of short-term debt, straight debt, convertible debt, and preferred stock less marketable securities. The latter values are based on the most recent financial information prior to the announcement of the transaction. As we can see, there are no clear trends in the magnitude of premiums across minority and majority transactions, or in our estimate of the control premium. The general observation of a higher premium paid for U.S. target is also reflected in this table.

5 International evidence of a control premium

5.1 Analysis of G7 countries

We analyzed the control premium separately for each member of the group of the seven most industrialized nations, also known as the G7. The G7 countries consist of the United States, Japan, Germany, the United Kingdom, France, Italy, and Canada. Even though the G7 meetings have been superseded by the G8 and G20 meetings, we focus on the former grouping of countries because of their economic size and overall high level of economic development throughout the sample period. Although the G7 countries are fairly similar in their level of economic development, their market for corporate control and the corporate governance role played by banks and securities markets are fairly different. In prior studies countries have been classified by the size and power of their banking sector or on by

Table 4 Control premium by industry.

Industry name	SIC code	Premium of offer price relative to the trading price four weeks prior to the announcement date: Majority transactions — Observations	Majority transactions — Median	Minority transactions — Observations	Minority transactions — Median	Control premium — Observations	Control premium — Median
Panel A: U.S. targets							
Oil and gas extraction	13	185	23.61	76	7.69	114	16.90
Food and kindred products	20	88	42.00	75	8.63	64	25.80
Chemicals and allied products	28	362	45.53	240	6.31	355	33.47
Industrial and commercial machinery and computer equipment	35	325	43.16	163	6.85	219	31.46
Electronic and other electrical equipment and components, except computer equipment	36	411	39.39	191	6.62	379	30.97
Measuring, analyzing, and controlling instruments; photographic, medical and optical goods; watches and clocks	38	380	40.30	153	5.71	348	33.54
Communications	48	200	30.34	119	6.44	178	16.55
Depository institutions	60	1,258	34.03	673	2.38	1,254	30.80
Holding and other investment offices	67	281	18.70	212	2.93	275	11.36
Business services	73	941	40.91	246	7.58	935	30.38
Panel B: International targets							
Oil and gas extraction	13	409	24.57	176	5.33	299	15.64
Food and kindred products	20	229	31.64	243	4.17	90	11.05
Chemicals and allied products	28	267	31.11	355	−0.55	123	21.86
Industrial and commercial machinery and computer equipment	35	190	30.88	233	1.30	78	20.35
Electronic and other electrical equipment and components, except computer equipment	36	246	26.26	430	−1.04	121	1.80
Measuring, analyzing, and controlling instruments; photographic, medical and optical goods; watches and clocks	38	114	28.69	136	1.62	38	25.59
Communications	48	159	23.54	194	5.77	55	13.21
Depository institutions	60	198	18.49	162	3.90	51	8.89
Holding and other investment offices	67	372	14.64	426	2.10	251	3.39
Business services	73	670	29.86	643	0.21	406	18.42

Our sample consists of acquisitions of stakes of 5% or greater of public companies between January 1986 and December 2011 with stock premium data available from Securities Data Corporation.

Minority transactions are defined as those in which the acquirer had less than 30% ownership both before and after completion of the deal. Majority transactions are defined as those in which the acquirer had less than 30% ownership before the deal and at least 50% after completion of the deal. Control premium is the difference between the premium for a minority transaction and the median premium paid for all majority transactions that took place in the same country, during the same year, in the same industry, and with the same attitude.

Table 5 Control premium by the attitude of the transaction.

	Premium of offer price relative to the trading price four weeks prior to the announcement date					
	Majority transactions		Minority transactions		Control premium	
Attitude of transaction	Observations	Median	Observations	Median	Observations	Median
Panel A: U.S. targets						
Hostile	116	61.73	5	30.40	2	11.68
Unsolicited	26	41.30	1	55.72	19	40.50
Neutral	11	16.67	1,204	8.25	9	4.19
Friendly	6,580	36.07	753	7.52	5,468	28.12
Not applicable	127	17.45	1,574	2.41	97	8.37
Panel B: International targets						
Hostile	192	37.24	14	40.42	3	−5.82
Unsolicited	70	34.48	12	24.60	40	29.37
Neutral	269	19.11	2,038	3.94	138	10.05
Friendly	5,581	26.24	3,915	1.11	2,596	14.38
Not applicable	81	9.18	1,030	−0.23	38	−2.75

Our sample consists of acquisitions of stakes of 5% or greater of public companies between January 1986 and December 2011 with stock premium data available from Securities Data Corporation.

Minority transactions are defined as those in which the acquirer had less than 30% ownership both before and after completion of the deal. Majority transactions are defined as those in which the acquirer had less than 30% ownership before the deal and at least 50% after completion of the deal. Control premium is the difference between the premium for a minority transaction and the median premium paid for all majority transactions that took place in the same country, during the same year, in the same industry, and with the same attitude.

their legal tradition. Specifically, following Rajan and Zingales (1995) there are "bank-oriented" (Japan, Germany, France, Italy) and "market-oriented" countries (United States, United Kingdom, Canada) and following La Porta *et al.* (1997) there are "common law" countries (United States, United Kingdom, Canada) and "civil law" countries (Japan, Germany, France, Italy). Both classifications yield the same results and indeed as La Porta *et al.* (1997) discuss that these differing legal regimes are at the root of whether a country is "market-oriented" or "bank-oriented." In Table 7, we present the premium separately for each of the G7 nations. Table 7 clearly shows that most acquisition transactions occur in market-oriented countries. This result may reflect the fact that the number of listed securities is much higher and the market for corporate control is more active in market-oriented countries. We find that the premiums paid in market-oriented countries are considerably higher than in bank-oriented countries. Furthermore, in the United States the median premium for majority transactions is 36.17%, for minority transactions it is 5.07%, and the control premium is 27.93%. In the United Kingdom, the median premium for majority transactions is 35.44%, for minority transactions it is 7.57%, and the control premium is 20.85%. These results are in sharp contrast to Japan, for example, where the median premium for majority transactions is

Table 6 Control premium by enterprise value.

	Premium of offer price relative to the trading price four weeks prior to the announcement date					
	Majority transactions		Minority transactions		Control premium	
Deciles of enterprise value	Observations	Median	Observations	Median	Observations	Median
Panel A: U.S. targets						
Lowest	374	32.9457	584	6.67	327	19.12
2	650	39.13	327	4.21	547	30.97
3	677	39.16	314	7.31	565	30.86
4	684	38.94	315	5.26	558	29.97
5	704	39.54	311	6.80	577	31.01
6	707	38.83	326	5.01	584	31.52
7	740	38.21	287	4.63	594	30.35
8	719	33.00	298	4.26	577	25.58
9	733	33.40	294	4.60	575	26.81
Highest	712	30.49	329	3.76	540	21.86
Panel B: International targets						
Lowest	571	15.51	714	0.82	252	0.78
2	558	22.78	760	−1.19	298	13.47
3	555	27.91	727	1.81	295	16.29
4	595	29.13	708	1.28	280	15.32
5	584	30.63	683	0.94	289	15.95
6	610	31.44	620	1.46	273	20.52
7	596	28.15	621	1.52	272	14.33
8	670	27.81	550	3.96	279	17.77
9	625	25.17	537	4.64	238	10.50
Highest	584	25.57	647	3.92	197	13.41

Our sample consists of acquisitions of stakes of 5% or greater of public companies between January 1986 and December 2011 with stock premium data available from Securities Data Corporation. Minority transactions are defined as those in which the acquirer had less than 30% ownership both before and after completion of the deal. Majority transactions are defined as those in which the acquirer had less than 30% ownership before the deal and at least 50% after completion of the deal. Control premium is the difference between the premium for a minority transaction and the median premium paid for all majority transactions that took place in the same country, during the same year, in the same industry, and with the same attitude. Enterprise value is calculated by multiplying the number of actual shares outstanding of the target by the offering price and then adding the book value of short-term debt, straight debt, convertible debt, and preferred stock less marketable securities. The latter values are based on the most recent financial information prior to the announcement of the transaction.

10.35% and for minority transactions it is *negative* 2.57%. In France, another bank-oriented country, the median premium for majority transactions is 22.02%, for minority transaction it is 7.29%, and the control premium is 4.73%. We further categorized the transactions in each of the G7 countries by the nationalities of the acquirer and the target. We refer to the cases in which both the

Table 7 Control premium for G7 countries.

	Premium of offer price relative to the trading price four weeks prior to the announcement date					
	Majority transactions		Minority transactions		Control premium	
	Observations	Median	Observations	Median	Observations	Median
Panel A: United States						
Domestic transactions	6,055	35.45	3,209	4.85	4,980	27.5421
Cross-border transactions	805	41.17	328	9.43	615	32.70
All transactions	6,860	36.18	3,537	5.07	5,595	27.93
Panel B: Japan						
Domestic transactions	664	10.90	1,552	−2.51	533	9.48
Cross-border transactions	29	−11.20	180	−4.22	23	−5.39
All transactions	693	10.35	1,732	−2.57	556	9.19
Panel C: Germany						
Domestic transactions	70	21.62	39	5.84	18	7.99
Cross-border transactions	36	23.35	28	10.64	12	5.15
All transactions	106	21.62	67	7.45	30	6.07
Panel D: France						
Domestic transactions	213	22.02	101	7.48	35	3.73
Cross-border transactions	91	22.02	30	2.28	16	6.57
All transactions	304	22.02	131	7.29	51	4.727
Panel E: United Kingdom						
Domestic transactions	1,208	34.15	310	6.69	387	19.45
Cross-border transactions	385	40.59	143	12.03	121	24.84
All transactions	1,593	35.44	453	7.57	508	20.85
Panel F: Italy						
Domestic transactions	61	14.91	45	6.64	15	3.01
Cross-border transactions	17	16.96	19	8.34	4	−4.40
All transactions	78	15.04	64	7.12	19	−1.02
Panel G: Canada						
Domestic transactions	684	26.10	365	3.68	510	17.91
Cross-border transactions	277	40.03	172	0.95	162	35.78
All transactions	961	30.81	537	2.60	672	23.84

Our sample consists of acquisitions of stakes of 5% or greater of public companies between January 1986 and December 2011 with stock premium data available from Securities Data Corporation.

Minority transactions are defined as those in which the acquirer had less than 30% ownership both before and after completion of the deal. Majority transactions are defined as those in which the acquirer had less than 30% ownership before the deal and at least 50% after completion of the deal. Control premium is the difference between the premium for a minority transaction and the median premium paid for all majority transactions that took place in the same country, during the same year, in the same industry, and with the same attitude. Cross-border transactions are those in which the acquirer is based in a different country from the target. Domestic transactions are those in which the acquirer is based in the same country as the target.

acquirer and the target are from the same country as domestic transactions. In the cases where they are not from the same country, we refer to them as cross-border transactions. It is worthy of notice that both majority and minority cross-border transactions command higher premiums in market-oriented countries. For example, in the United States the domestic majority transactions command a premium of 35.45%, whereas the cross-border majority transactions command a premium of 41.17%. The domestic minority transactions have a corresponding premium of 4.85% while the cross-border minority transactions have a corresponding premium of 9.43%. The control premium for domestic transactions is 27.54% compared to 32.70% for cross-border transactions.

5.2 *On the robustness of our findings*

Our findings to this point are largely consistent with the hypothesis that control premiums are higher in market-oriented countries. Furthermore, the premiums paid are also higher for cross-border transactions than for domestic transactions. In Tables 8–10, we report the results of several robustness checks in which we alter the methodology used to calculate majority, minority, and control premiums.

At this point in our analysis, we have used a stringent definition of a minority transaction. Specifically, only those transactions in which the acquirer acquired less than 30% of the shares outstanding were classified as minority transactions. This creates at least one potential problem: The average size of the minority transactions is by construction smaller than that of a majority transaction. Therefore, what we refer to as the control premium could be a reflection of the size differences between the stakes acquired in these two types of transactions.

We address this issue in Table 8, where we repeat our previous analysis using an alternative definition of minority and majority transactions. In this analysis, we define a minority transaction as one in which the acquirer owned less than 50% of the firm both before and after the deal. A majority transaction is one in which the acquirer owned less than 50% before the deal and at least 50% after the deal. The results of this analysis, reported in Table 8, are remarkably similar to the results under our original definition of control. For example, in the United Kingdom our original assessment showed that domestic minority transactions had a premium of 6.69% and cross-border majority transactions had a premium of 12.03%. Using our alternative definition of minority transactions for the United Kingdom, we find that the premiums are barely changed at 6.89% for domestic transactions and 11.27% for cross-border transactions.

In Tables 9 and 10, we use alternate time periods over which we calculate the premium. Specifically, in Table 9 we use the premium of the offer price relative to the trading price of the target one week prior to the announcement date. In Table 10, we use the premium of the offer price relative to the trading price of the target one day prior to the announcement date. These alternate results yield systematically lower premiums: The control premiums generated using the four-week period were the highest, the ones generated by using the one-week period were the second highest, and the lowest were the ones generated by using a one-day period. This result suggests that there is some degree of information leakage prior to the transaction. There appears to be no systematic trend in the amount of information leakage prior to the transaction across countries. On the whole, our results remain similar to the previous ones. Market-oriented countries still command higher premiums and these premiums are higher for cross-border transactions.

Table 8 Control premium for G7 countries.

	Premium of offer price relative to the trading price four weeks prior to the announcement date					
	Majority transactions		Minority transactions		Control premium	
	Observations	Median	Observations	Median	Observations	Median
Panel A: United States						
Domestic transactions	6,212	35.29	3,513	5.05	5,253	27.0576
Cross-border transactions	839	41.04	372	9.98	662	32.40
All transactions	7,051	36.07	3,885	5.29	5,915	27.66
Panel B: Japan						
Domestic transactions	906	11.20	1,953	−2.39	776	9.75
Cross-border transactions	36	−5.27	218	−4.90	33	−5.39
All transactions	942	10.82	2,171	−2.53	809	8.39
Panel C: Germany						
Domestic transactions	82	21.62	65	13.01	27	15.98
Cross-border transactions	41	22.59	34	10.64	14	8.21
All transactions	123	21.74	99	10.84	41	14.28
Panel D: France						
Domestic transactions	257	20.67	147	7.29	67	1.90
Cross-border transactions	100	21.44	46	3.36	28	3.21
All transactions	357	20.81	193	6.82	95	2.43
Panel E: United Kingdom						
Domestic transactions	1,264	33.40	353	6.90	470	18.36
Cross-border transactions	411	39.43	163	11.28	153	24.84
All transactions	1,675	34.76	516	7.64	623	19.59
Panel F: Italy						
Domestic transactions	75	14.91	59	5.80	25	−0.28
Cross-border transactions	20	15.96	21	8.34	7	−3.60
All transactions	95	14.97	80	6.22	32	−0.65
Panel G: Canada						
Domestic transactions	710	26.10	434	3.10	544	18.35
Cross-border transactions	285	38.85	209	1.03	175	35.19
All transactions	995	30.43	643	2.49	719	24.11

Our sample consists of acquisitions of stakes of 5% or greater of public companies between January 1986 and December 2011 with stock premium data available from Securities Data Corporation.

Minority transactions are defined as those in which the acquirer had less than 50% ownership both before and after completion of the deal. Majority transactions are defined as those in which the acquirer had less than 50% ownership before the deal and at least 50% after completion of the deal. Control premium is the difference between the premium for a minority transaction and the median premium paid for all majority transactions that took place in the same country, during the same year, in the same industry, and with the same attitude. Cross-border transactions are those in which the acquirer is based in a different country from the target. Domestic transactions are those in which the acquirer is based in the same country as the target.

Table 9 Control premium for G7 countries.

	Premium of offer price relative to the trading price one week prior to the announcement date					
	Majority transactions		Minority transactions		Control premium	
	Observations	Median	Observations	Median	Observations	Median
Panel A: United States						
Domestic transactions	6,051	31.15	3,212	2.65	4,979	25
Cross-border Transactions	805	35.53	329	5.77	615	27.27
All transactions	6,856	31.66	3,541	2.91	5,594	25.29
Panel B: Japan						
Domestic transactions	663	11.38	1,550	−1.80	532	9.11
Cross-border transactions	29	−6.74	180	−2.77	23	−2.32
All transactions	692	10.66	1,730	−1.89	555	8.48
Panel C: Germany						
Domestic transactions	68	21.35	38	3.20	17	−2.95
Cross-border transactions	36	18.96	28	11.21	12	5.79
All transactions	104	21.20	66	4.78	29	−0.05
Panel D: France						
Domestic transactions	207	17.79	101	3.60	31	2.73
Cross-border Transactions	90	19.63	28	6.52	16	10.69
All transactions	297	18.12	129	3.93	47	8.49
Panel E: United Kingdom						
Domestic transactions	1,168	31.95	310	4.37	374	18.39
Cross-border transactions	379	37.21	141	6.18	118	28.13
All transactions	1,547	33.50	451	4.89	492	20.10
Panel F: Italy						
Domestic transactions	61	9.43	46	2.45	15	−1.70
Cross-border transactions	17	15.77	19	7.19	4	−4.74
All transactions	78	11.77	65	3.708	19	−2.30
Panel G: Canada						
Domestic transactions	674	25.28	356	2.10	502	19.76
Cross-border transactions	277	34.44	167	1.18	165	34.82
All transactions	951	27.11	523	1.51	667	23.12

Our sample consists of acquisitions of stakes of 5% or greater of public companies between January 1986 and December 2011 with stock premium data available from Securities Data Corporation.

Minority transactions are defined as those in which the acquirer had less than 30% ownership both before and after completion of the deal. Majority transactions are defined as those in which the acquirer had less than 30% ownership before the deal and at least 50% after completion of the deal. Control premium is the difference between the premium for a minority transaction and the median premium paid for all majority transactions that took place in the same country, during the same year, in the same industry, and with the same attitude. Cross-border transactions are those in which the acquirer is based in a different country from the target. Domestic transactions are those in which the acquirer is based in the same country as the target.

Table 10 Control premium for G7 countries.

	Premium of offer price relative to the trading price one day prior to the announcement date					
	Majority transactions		Minority transactions		Control premium	
	Observations	Median	Observations	Median	Observations	Median
Panel A: United States						
Domestic transactions	6,050	27.27	3,211	0.11	4,978	22.98
Cross-border transactions	805	30.39	329	2.90	615	25.46
All transactions	6,855	27.59	3,540	0.25	5,593	23.27
Panel B: Japan						
Domestic transactions	659	8.28	1,547	−0.80	530	7.42
Cross-border transactions	29	−8.16	180	−0.88	23	−0.41
All transactions	688	7.83	1,727	−0.80	553	6.80
Panel C: Germany						
Domestic transactions	68	15.18	38	0.25	17	−7.39
Cross-border transactions	36	14.08	28	6.80	12	8.38
All Transactions	104	14.91	66	2.15	29	−0.05
Panel D: France						
Domestic transactions	207	16.43	101	1.82	31	3.32
Cross-border transactions	90	18.15	28	3.61	16	12.43
All transactions	297	16.74	129	2.03	47	5.83
Panel E: United Kingdom						
Domestic transactions	1,168	26.85	310	2.48	374	17.65
Cross-border transactions	379	33.25	140	4.21	118	26.59
All transactions	1,547	28.26	450	2.78	492	20.25
Panel F: Italy						
Domestic transactions	61	4.64	46	1.73	15	−0.68
Cross-border transactions	17	11.91	19	6.77	4	−6.12
All transactions	78	5.69	65	1.74	19	−1.62
Panel G: Canada						
Domestic transactions	670	19.99	354	0.09	499	15.96
Cross-border transactions	273	28.67	167	−0.03	162	29.52
All transactions	943	21.91	521	0.00	661	19.95

Our sample consists of acquisitions of stakes of 5% or greater of public companies between January 1986 and December 2011 with stock premium data available from Securities Data Corporation.

Minority transactions are defined as those in which the acquirer had less than 30% ownership both before and after completion of the deal. Majority transactions are defined as those in which the acquirer had less than 30% ownership before the deal and at least 50% after completion of the deal. Control premium is the difference between the premium for a minority transaction and the median premium paid for all majority transactions that took place in the same country, during the same year, in the same industry, and with the same attitude. Cross-border transactions are those in which the acquirer is based in a different country from the target. Domestic transactions are those in which the acquirer is based in the same country as the target.

6 Conclusions

Ownership of shares in a corporation can be viewed as having two distinct components, the proportionate right to cash flows and the proportionate participation in the management of the enterprise, or control value. The value of control is derived in at least two ways. First, control can generate shared benefits for all shareholders by improving the economic performance of the firm. Second, a controlling shareholder can generate private benefits that accrue to itself, possibly even to the detriment of other shareholders. In this paper, we provide a measure of the value of control. We first identify a set of 29,391 acquisitions of U.S. and non-U.S. public companies between 1986 and 2011. We next categorize each of these transactions as minority or majority transactions based on the fraction of shares acquired and held after the acquisition. Minority transactions are defined as those in which the acquirer had less than 30% ownership both before and after completion of the deal. Majority transactions are defined as those in which the acquirer had less than 30% ownership before the deal and at least 50% after completion of the deal. Next, we match the minority and majority transactions based on the industry, year of the deal, attitude of the deal (hostile or not hostile), and the country of the target. Then we compare the premiums paid for acquiring the minority and majority positions; the difference between the two is our measure of the control premium.

We find that there exists a premium of around 20–30% for control. This premium has been fairly consistent across time and for different sizes of the target corporations. However, the premium does vary by industry. Also, we find that control is more valuable in "market-oriented" countries than in "bank-oriented" countries. Furthermore, in "market oriented" countries, the control premium paid is higher for cross-border (acquirer and the target are from different nations) transactions. These results are robust to different specifications of the control premium.

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Notes

1 The ability to generate private benefits may be quite modest when provisions in the corporate charter specifically allow protections for non-controlling shareholders.

2 See for example, Jensen and Ruback (1983).

3 This is of interest to the Tax Court, which has grappled extensively with the value of control because both the estate and gift tax regulations and Revenue Ruling 59–60 provide authority to use control as a factor when determining fair market value.

4 Specifically, we excluded all transaction for which the SDC variable "Premium 4 Week Prior to Announcement Date," defined as the premium of offer price to target trading price one day prior to the announcement date, was not available.

5 The enterprise value is calculated by multiplying the number of actual target company shares outstanding by the offering price and then adding the book value of short-term debt, straight debt, convertible debt, and preferred stock less marketable securities. The latter values are based on the most recent financial information prior to the announcement of the transaction.

6 In 1989, the premium for minority transactions was 115.7% with only two observations.

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