

Returns to Acquirers of Listed and Unlisted Targets

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Abstract

We examine announcement period abnormal returns to acquirers of listed and unlisted targets in 17 Western European countries over the interval 1996–2001. Acquirers of listed targets earn an insignificant average abnormal return of -0.38% , while acquirers of unlisted targets earn a significant average abnormal return of 1.48% . This listing effect in acquirers' returns persists through time and across countries and remains after controlling for the method of payment for the target, the acquirer's size and Tobin's Q, pre-announcement leakage of information about the transaction, whether the acquisition created a blockholder in the acquirer's ownership structure, whether the acquisition was a cross-border deal, and other variables. The fundamental factors that give rise to this listing effect, which has also been documented in U.S. acquisitions, remain elusive.

I. Introduction

A phenomenon observed in studies of U.S. acquisitions is that acquirers achieve zero or negative average announcement period cumulative abnormal returns (CARs) when acquiring listed targets and positive average CARs when acquiring unlisted targets (Chang (1998), Fuller, Netter, and Stegemoller (2002) (FNS hereafter), Hansen and Lott (1996) (HL hereafter), and Moeller, Schlingemann, and Stulz (2004) (MSS hereafter)). Additionally, when unlisted targets are separately categorized as either stand-alone companies or subsidiaries of other firms, acquirers earn significant positive CARs when acquiring targets from either category (FNS and MSS). (Henceforth, we refer to this listing factor as the "listing effect" in acquirers' announcement period stock returns.)

Although various hypotheses have been proffered to explain this phenomenon, none have been fully successful (Chang (1998), FNS (2002), and HL (1996)). Our objective in this study is to re-examine the role of the listing status of the

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target in acquirers' CARs with a "holdout" sample of 4,429 acquisitions by Western European firms over the period 1996–2001. We find that the listing effect is widespread. Over the interval considered in our analysis, acquirers earn an insignificant average CAR of -0.38% around announcements of acquisitions of listed targets and a significant positive average CAR of 1.48% around announcements of acquisitions of unlisted targets. This listing effect is present in the full sample, in each year of the analysis, and for five of the six individual countries in which there are enough observations to conduct meaningful tests. Further, when the sample of unlisted targets is separated into unlisted stand-alone companies and unlisted subsidiaries, the average CAR for each set is significantly positive and significantly greater than the average CAR for acquirers of listed targets. Finally, the effect persists after controlling for the size of the bidder, whether a blockholder is created in the bidder, the method of payment for the target, the relative size of the target, pre-announcement leakage of information about the transaction, the bidder's Tobin's Q, the bidder's ownership structure, whether the acquisition is a cross-border deal, the target's attitude toward the acquirer (i.e., hostile or friendly), and whether the acquirer and target are from the same industry. Indeed, in cross-sectional regressions with the acquirer's CAR as the dependent variable, the only independent variables that are consistently significant are the acquirer's size (i.e., its equity market value) and whether the target is listed. These two factors, which have been shown to be significant in explaining CARs in acquisitions by U.S. firms, appear to be universal.

One implication of our results is that the listing effect in corporate acquisitions is not due to an institutional or regulatory feature that is unique to the U.S. Rather, the effect appears to be due to some factor that distinguishes acquisitions of listed targets from acquisitions of unlisted targets more generally. The implication is that shareholders of acquiring firms fare better when the firms they own are smaller and when the targets their firms acquire are not traded on an exchange.

The remainder of the paper is structured as follows. Section II describes our data. Section III considers whether the listing effect persists through time and across countries, while Sections IV and V present tests of various explanations of it. Section VI concludes.

II. Sample Selection, Data, and Methodology

A. Sample and Sources of Data

Our sample includes acquisitions over the period January 1, 1996–December 31, 2001 by companies incorporated in the 17 Western European countries listed in Table 1.¹ This sample is taken from the SDC PlatinumTM Worldwide Mergers and Acquisitions Database. We use 1996 as the starting point because SDC data on acquisitions outside the U.S. become more reliable as of that year. An initial set of 28,242 acquisitions was obtained from SDC along with the dollar amount paid for the target, the amount of any liabilities assumed or paid off by the acquirer, the

¹The initial sample included 18 countries, but Luxembourg dropped out when various screens were applied as discussed below.

acquirer's and the target's Standard Industrial Classification (SIC) code, the countries in which the acquirer and target were incorporated, the method of payment for the target, and whether the target's shares were listed on an exchange.

As do Chang (1998), FNS (2002), and others, for an acquisition to remain in the sample, we require that it be a "completed control acquisition." We define a completed control acquisition as one in which the acquirer owned less than 10% of the target's shares prior to the acquisition and the acquirer increased its ownership position to greater than 50%.² We also require that the amount paid for the target be at least \$5.0 million and that stock price data for the acquirer be available on Datastream around the announcement date of the transaction. Finally, we deleted transactions where the target's listing status was something other than public, private, or subsidiary.³ Application of these criteria yielded a sample of 4,429 acquisitions where 735 of the targets were listed on an exchange, 1,956 were unlisted stand-alone companies, and 1,738 were unlisted subsidiaries. The acquirer's pre-acquisition book value of debt and equity are taken from Worldscope.

We calculate a five-day announcement period CAR by subtracting the daily return of the Datastream stock market index of the acquirer's home country from the acquirer's daily stock return each day over the interval beginning two days prior to and ending two days after the announcement date of the acquisition, and summing these differences. We use the SDC announcement date as the announcement date for our study.

B. Characteristics of the Sample

Table 1 presents the number of acquisitions by year and by home country of the acquirer. There is some variation in the number of acquisitions across years. However, even in 1996, the year with the fewest acquisitions, the sample numbers 457 deals. Because the sample is dominated with acquisitions by U.K. firms, where appropriate we separately consider U.K. acquirers or include a dummy variable for the U.K. to control for the possibility that U.K. acquisitions could overwhelm the results from other countries. Table 1 also gives the frequency distribution of acquisitions by home country of the target.

Table 2 provides additional data describing the sample. The first two rows of Panel A classify the transactions according to method of payment for the target. Transactions are classified as "all-stock," "all-cash," or "mixed." As do FNS (2002) and Martin (1996), we define cash as the amount paid in cash and newly-issued notes and stock as the amount paid in the stock of the acquiring company. Overwhelmingly, the transactions are consummated with cash as 59% of listed target acquisitions and 78% of unlisted target acquisitions are all-cash deals. Contrarily, in only 26% of listed target acquisitions and in only 5% of unlisted target acquisitions is the method of payment all-stock.

The third row of Panel A in Table 2 shows that acquisitions of listed targets and acquisitions of unlisted targets are equally likely to involve international

²We excluded unsuccessful deals that were announced so as to have a sample comparable to other studies. Later we comment on the listing effect for non-completed but announced acquisitions.

³These include privatizations, joint ventures, and unidentified cases.

TABLE 1
Distribution of Acquisitions by Year and Home Country of the Acquirer and Target

<i>Panel A. Distribution by Year</i>							
	<u>1996</u>	<u>1997</u>	<u>1998</u>	<u>1999</u>	<u>2000</u>	<u>2001</u>	<u>Total</u>
All countries	457	631	823	904	1,011	603	4,429
<i>Panel B. Distribution by Country</i>							
Country	Bidder Country		Target Country				
	No. of Obs.	Percent	No. of Obs.	Percent			
Austria	18	0.41	11	0.25			
Belgium	70	1.58	52	1.17			
Denmark	64	1.45	59	1.33			
Finland	88	1.99	55	1.24			
France	287	6.48	251	5.67			
Germany	183	4.13	182	4.11			
Greece	21	0.47	12	0.27			
Ireland	123	2.78	57	1.29			
Italy	164	3.70	129	2.91			
Netherlands	178	4.02	165	3.73			
Norway	83	1.87	68	1.54			
Portugal	23	0.52	20	0.45			
Spain	119	2.69	126	2.84			
Sweden	185	4.18	138	3.12			
Switzerland	69	1.56	41	0.93			
Turkey	4	0.09	10	0.23			
United Kingdom	2,750	62.09	1,835	41.43			
Total Western Europe	4,429	100.00	3,211	72.50			
United States			823	18.58			
Canada			59	1.33			
Australia			58	1.31			
Brazil			30	0.68			
Poland			17	0.38			
South Korea			16	0.36			
Czech Republic; South Africa			14	0.32			
Argentina			13	0.29			
Hong Kong			12	0.27			
Chile; Japan; Romania			9	0.20			
Thailand			8	0.18			
Luxembourg; Mexico; Singapore; Taiwan			6	0.14			
Bermuda; Indonesia; New Zealand; Russian Fed.; Venezuela			5	0.11			
India; Lithuania			4	0.09			
Colombia; Croatia; Estonia; Israel; Morocco; Philippines; Slovak Rep; Unknown			3	0.07			
Bahamas; Bolivia; Bulgaria; Gibraltar; Guernsey; Hungary; Isle of Man; Laos;							
Monaco; Multi-National; Peru; Puerto Rico; Slovenia					2	0.05	
Cayman Islands; China; Dominican Rep; Ecuador; Egypt; Ghana; Honduras; Jersey;							
Jordan; Latvia; Liechtenstein; Malaysia; Moldova; Myanmar(Burma); Nicaragua;							
Nigeria; Saudi Arabia; Supranational; Tunisia; Vietnam					1	0.02	
Total Sample	4,429	100.00	4,429	100.00			

The sample consists of 4,429 acquisitions by acquirers from 17 European countries. Acquisitions are listed by year of announcement according to SDC Platinum™ Worldwide Mergers and Acquisitions Database. Only successful control acquisitions valued at U.S.\$5 million or more are included.

transactions as approximately 50% of each type of acquisition is a cross-border deal. Using three-digit SIC codes to classify industries, the final row of Panel A indicates that acquisitions involving listed targets are somewhat more likely to be “within-industry” transactions (41%) than are acquisitions involving unlisted targets (34%).

To consider an acquirer’s size, we convert the acquirer’s equity market value into year-end 2001 U.S.\$ by multiplying the acquirer’s U.S. dollar market value as of the date of the transaction by one plus the percentage change in the U.S. retail price index from the month of the acquisition announcement to the end of 2001. Panel B of Table 2 gives data on the acquirer’s size, relative size (i.e., purchase

TABLE 2
Descriptive Statistics for Deal, Acquirer, and Target Companies by Listing Status of Target

Panel A. Binary Variables

Variable	Listed Targets	All Unlisted Targets	Unlisted Stand-Alone Targets	Unlisted Subsidiary Targets
Fraction of all-stock acquisitions	0.257	0.054	0.071	0.036
Fraction of all-cash acquisitions	0.593	0.779	0.692	0.876
Fraction of cross-border acquisitions	0.498	0.500	0.492	0.509
Fraction of within-industry acquisitions	0.407	0.337	0.339	0.334

Panel B. Continuous Variables

	Mean	Median	Mean	Median	Mean	Median	Mean	Median
Acquirer's market capitalization (U.S.\$ mill.)	9,337	1,517	4,744	591	3,397	430	6,259	911
Acquirer's Tobin's Q ratio	2.40	1.46	2.63	1.66	3.11	1.87	2.08	1.44
Target/acquirer relative market value	0.552	0.214	0.367	0.056	0.414	0.053	0.314	0.059

An acquisition is all-stock if only stock is used as payment for the target. An acquisition is all-cash if only cash is used as payment for the target. An acquisition is classified as cross-border if the acquirer and the target are incorporated in different countries. An acquisition is classified as within-industry if the target has the same primary three-digit SIC code as the acquirer. The acquirer's market capitalization is the market value of acquirer's common stock as of five days prior to the acquisition announcement, expressed in year-end 2001 U.S.\$\$. Tobin's Q ratio is the market value of the acquirer's equity as of the calendar year-end prior to the announcement plus the book value of debt, and preferred stock from the most recent financial statement prior to the acquisition announcement divided by the sum of the book value of equity, debt, and preferred stock as of the same date. Target/acquirer relative market value is the total amount paid for the target less the amount of any liabilities assumed or paid by the acquirer divided by the market value of the acquirer as of the calendar year-end prior to the announcement.

price of the target's equity divided by the market value of the acquirer's equity), and Tobin's Q.⁴ As Panel B shows, acquirers of listed targets are almost twice as large as are acquirers of unlisted targets and acquirers of all types tend to be larger than their targets. Finally, acquirers of listed targets have slightly lower Qs than do acquirers of unlisted targets.

III. Does the Listing Effect Persist through Time and across Countries?

In this section, we consider univariate tests of CARs through time and across countries to determine the extent and persistence of any listing effect in acquirers' stock returns. In the tables, we report the mean and median CARs for acquirers of listed targets, for acquirers of all unlisted targets combined, and separately for acquirers of unlisted stand-alone companies and for acquirers of unlisted subsidiaries. We test to determine whether the mean and median CAR of each sample is significantly different from zero. We also test whether the mean and median CARs for acquirers of listed targets are significantly different from the mean and median CARs for acquirers of unlisted stand-alone targets and for acquirers of unlisted subsidiary targets.

There is also the question of whether the CARs for acquirers of unlisted stand-alone companies are significantly different from the CARs for acquirers of unlisted subsidiaries. As it turns out, in only one case are the mean or median CARs significantly different (at the 0.05 level) between acquirers of unlisted

⁴Q is measured as the market value of the acquirer's equity as of the calendar year-end prior to the acquisition announcement plus the book value of debt and preferred stock from the most recent financial statement prior to the announcement divided by the sum of the book value of equity, debt, and preferred stock as of the same date.

stand-alone companies and acquirers of unlisted subsidiaries. Thus, we do not present this statistic for any of the samples. One implication of this result is that whatever the factor is that explains the listing effect, it must be common to stand-alone and subsidiary targets. In our discussions of results, we focus on mean CARs because mean and median CARs tell the same story.

A. CARs by Year of Acquisition

Table 3 shows the mean CAR for acquirers of listed targets is negative (-0.38%) and not significantly different from zero; the mean CAR for acquirers of unlisted stand-alone targets is positive (1.51%) and highly significantly different from zero (p -value < 0.01); and the mean CAR for acquirers of unlisted subsidiaries is also positive (1.44%) and highly significantly different from zero (p -value < 0.01). Perhaps of greatest interest, the mean CAR for acquirers of unlisted stand-alone companies and the mean CAR for acquirers of unlisted subsidiaries are both significantly greater than the mean CAR for acquirers of listed targets (both p -values < 0.01).

Table 3 also shows the results are not due to a few isolated years. In no year is the mean CAR for acquirers of listed targets significantly different from zero at the 0.05 level; whereas in every year but one, the mean CAR for acquirers of unlisted stand-alone companies and for acquirers of unlisted subsidiaries is positive and significantly different from zero at the 0.01 level. In the other year, the mean CARs are positive and significant at the 0.05 level. Again, and most interestingly, in every year, the mean CAR for acquirers of unlisted targets is greater than the mean CAR for acquirers of listed targets and, in every year but one, the difference is significant at the 0.01 level or better.

B. CARs by Home Country of the Acquirer

To determine whether the listing effect is merely a U.K. effect, we separately calculate CARs for U.K. acquirers and for non-U.K. acquirers. As the top two rows of Panel A in Table 4 show, results for the two sets of acquirers are quite similar. The mean CAR for acquirers of unlisted targets, for both stand-alone companies and subsidiaries, is significantly greater than zero and significantly greater than the mean CAR for acquirers of listed targets for both U.K. and non-U.K. acquirers—the listing effect in Western European acquisitions is not just a U.K. effect.

To further explore the generality of the listing effect in Western European acquirers' returns, the remaining rows of Panel A give CARs by home country of the acquirer for countries in which acquirers made at least 30 acquisitions each of listed targets, unlisted stand-alone companies, and unlisted subsidiaries. These include France, Germany, Italy, the Netherlands, and Sweden. We group acquirers from other countries as a separate "all other" sample.

The results for the individual countries are consistent with the results for the full sample. For no country is the mean CAR for acquirers of listed targets significantly greater than zero at the 0.05 level. In contrast, the mean CAR for acquirers of unlisted targets is significantly positive at the 0.05 level or better in

TABLE 3
 Acquirers' Announcement Period Cumulative Abnormal Returns (CARs) in Percent by Year and Listing Status of Target

Year of Acquisition	Listed Targets (1)	All Unlisted Targets (2)	Difference col 2-col 1 (3)	Unlisted Stand-Alone Targets (4)	Difference col 4-col 1 (5)	Unlisted Subsidiary Targets (6)	Difference col 6-col 1 (7)
All years	-0.38 -0.39 735	1.48** 0.64** 3,694	1.86** 1.03**	1.51** 0.58** 1,956	1.90** 0.98**	1.44** 0.66** 1,738	1.82** 1.05**
1996	0.78 -0.14 71	1.32** 0.74** 386	0.54 0.88	1.22** 0.76** 200	0.45 0.90	1.42** 0.71** 186	0.64 0.85
1997	-0.37 -0.55 103	1.11** 0.33** 528	1.47** 0.89*	1.22** 0.45** 283	1.59** 1.00**	0.97** 0.05 245	1.34* 0.61
1998	-0.33 -0.45 122	1.40** 0.71** 701	1.73** 1.15**	1.03** 0.51** 370	1.35* 0.95*	1.82** 0.81** 331	2.15** 1.25**
1999	0.53 0.15 180	2.28** 1.17** 724	1.74** 1.01*	2.29** 0.93** 383	1.76** 0.77	2.26** 1.51** 341	1.72* 1.36**
2000	-1.36 -1.17* 175	1.21** 0.48** 836	2.57** 1.65**	1.53** 0.49** 454	2.89** 1.66**	0.82* 0.47* 382	2.19** 1.64**
2001	-1.40 -0.68 84	1.40** 0.56** 519	2.80** 1.25	1.55* 0.53* 266	2.95* 1.22	1.24** 0.61* 253	2.64* 1.29

Acquirers' five-day percentage CARs and associated statistics. The CAR for each acquisition is calculated by summing the difference between the acquirer's stock return and the return of the Datastream stock market index of the acquirer's home country over the interval beginning two days prior to the announcement of the acquisition and ending two days after the announcement. Columns 1 and 2 give data for acquisitions of listed and unlisted targets, respectively. Column 4 gives data for unlisted stand-alone targets and column 6 gives data for unlisted subsidiary targets. The top number for each group is the acquirer's mean percentage CAR, the second number is the acquirer's median percentage CAR, the third number is the number of observations. ** = significant at 0.01, * = significant at 0.05. Significance for means is based on the *t*-test. Significance for medians is based on the signed-ranks test. Columns 3, 5, and 7 show, respectively, differences between the means and medians for columns 2 and 1, 4 and 1, and 6 and 1. Significance for differences between means is based on the *t*-test. Significance for differences between medians is based on the Mann-Whitney test.

four of the five countries. The lone exception is France. In France, the mean CAR for acquirers of unlisted targets is positive, but not significantly greater than zero. However, there is still a listing effect in France in that, on average, French acquirers of unlisted targets earn significantly higher CARs than do French acquirers of listed targets.

The only wrinkle in the results from individual countries is for the all other set. For this sample, the mean CARs for acquirers of unlisted targets combined and separately for stand-alone companies and subsidiaries are all positive and significantly greater than zero, but so is the mean CAR for acquirers of listed targets. Additionally, although the mean CAR for acquirers of unlisted targets is greater than the mean CAR for acquirers of listed targets, the difference is not statistically significant. Thus, in all other countries, on average, there is still a listing effect in acquirers' stock returns, but it is modest and not statistically significant.

So, how does the listing effect for Western European acquirers compare with that for U.S. acquirers? As we noted above, for European acquirers of listed targets, the mean CAR is -0.38% and for European acquirers of unlisted targets it is 1.48%. When the unlisted set is split into stand-alone targets and subsidiaries, the mean CARs are 1.51% and 1.44%, respectively.

TABLE 4
 Acquirers' Announcement Period Cumulative Abnormal Returns (CARs) in Percent by
 Characteristics of Acquirer, Deal, Target, and Listing Status of Target

Sample	Listed Targets (1)	All Unlisted Targets (2)	Difference col 2- col 1 (3)	Unlisted Stand-Alone Targets (4)	Difference col 4- col 1 (5)	Unlisted Subsidiary Targets (6)	Difference col 6- col 1 (7)
<i>Panel A. By Home Country of Acquirer</i>							
All non-U.K.	0.28 0.02 385	1.75** 0.79** 1,294	1.47** 0.78**	1.80** 0.89** 562	1.52** 0.87**	1.71** 0.76** 732	1.42** 0.74**
U.K.	-1.12* -1.03* 350	1.33** 0.57** 2,400	2.45** 1.60**	1.39** 0.53** 1,394	2.51** 1.56**	1.25** 0.64** 1,006	2.37** 1.67**
France	-1.18 -1.59* 76	0.66 0.17 211	1.84* 1.76*	0.37 -0.16 80	1.55 1.44	0.84 0.39 131	2.02* 1.98*
Germany	-2.14 -0.55 39	1.41* 0.78* 144	3.55** 1.32**	1.61 0.59 48	3.75* 1.13*	1.32* 0.78 96	3.45* 1.32**
Italy	0.88 0.96 33	2.06** 0.90* 131	1.18 -0.06	3.70* 1.90* 60	2.82 0.94	0.68 0.53 71	-0.20 -0.43
Netherlands	-0.01 -0.49 58	2.59** 1.47** 120	2.59** 1.96*	1.84 1.28* 38	1.84 1.76	2.93** 1.96** 82	2.94** 2.45*
Sweden	1.33 0.97 43	2.56** 1.70** 142	1.23 0.73	3.62* 1.80** 64	2.29 0.83	1.69* 1.56* 78	0.36 0.59
All other	1.44* 0.72 136	1.78** 0.69** 546	0.35 -0.03	1.41** 0.50** 272	-0.03 -0.21	2.15** 0.84** 274	0.72 0.13
<i>Panel B. By Method of Payment</i>							
Cash	0.30 0.01 436	1.17** 0.53** 2,876	0.86** 0.52**	1.15** 0.39** 1,353	0.85* 0.38**	1.18** 0.62** 1,523	0.88** 0.62**
Stock	-1.81* -1.36** 189	3.90** 1.47** 201	5.72** 2.83**	4.07** 1.32** 138	5.88** 2.68**	3.55* 1.61* 63	5.36** 2.97**
Mixed	-0.66 -0.71 110	2.14** 1.12** 617	2.81** 1.83**	1.80** 1.04** 465	2.46* 1.75**	3.18** 1.79** 152	3.85** 2.50**
<i>Panel C. By Blockholder Creation</i>							
None at 5%	0.37 0.01 552	1.21** 0.56** 3,308	0.85** 0.55**	1.22** 0.48** 1,703	0.85** 0.47**	1.21** 0.64** 1,605	0.85** 0.63**
At 5%	-1.80 -1.85 78	3.73** 1.58** 386	5.52** 3.43**	3.49** 1.57** 253	5.29** 3.43**	4.17** 1.61** 133	5.97** 3.47**
At 10%	-1.62 -1.63 46	4.03** 1.59** 259	5.65** 3.22**	3.59** 1.58** 162	5.21** 3.21**	4.78** 1.68** 97	6.40** 3.32**
<i>Panel D. By Size of Acquirer (i.e., Market Value of Acquirer's Equity)</i>							
Small	-0.58 -0.24 283	1.95** 0.74** 1,929	2.52** 0.98**	1.98** 0.73** 1,167	2.55** 0.97**	1.90** 0.76** 762	2.48** 1.00**
Big	-0.26 -0.45 452	0.97** 0.50** 1,765	1.25** 0.97**	0.82** 0.35** 789	1.09** 0.80**	1.08** 0.57** 976	1.35** 1.01**

(continued on next page)

TABLE 4 (continued)
 Acquirers' Announcement Period Cumulative Abnormal Returns (CARs) in Percent by
 Characteristics of Acquirer, Deal, Target, and Listing Status of Target

Sample	Listed Targets (1)	All Unlisted Targets (2)	Difference col 2– col 1 (3)	Unlisted Stand-Alone Targets (4)	Difference col 4– col 1 (5)	Unlisted Subsidiary Targets (6)	Difference col 6– col 1 (7)
<i>Panel E. By Whether the Acquisition is Cross-Border</i>							
Domestic	-0.87 -0.34 369	1.62** 0.71** 1,846	2.49** 1.05**	2.01** 0.90** 993	2.88** 1.25**	1.17** 0.62** 853	2.04** 0.97**
Cross-Border	0.11 -0.46 366	1.33** 0.55** 1,848	1.23** 1.00**	1.00** 0.42** 963	0.89* 0.88**	1.70** 0.77** 885	1.59** 1.22**
<i>Panel F. By Ownership Structure of Acquirer</i>							
Dispersed	-0.85 -0.95* 231	1.14** 0.64** 1,144	1.99** 1.59**	1.03** 0.69** 592	1.88** 1.63**	1.26** 0.58** 552	2.11** 1.52**
Concentrated	-0.15 0.23 164	1.69** 0.61** 801	1.84** 0.38*	1.54** 0.35** 418	1.69* 0.12	1.86** 0.77** 383	2.01** 0.54*

Acquirers' five-day percentage CARs and associated statistics. The CAR for each acquisition is calculated by summing the difference between the acquirer's stock return and the return of the Datastream stock market index of the acquirer's home country over the interval beginning two days prior to the announcement of the acquisition and ending two days after the announcement. Columns 1 and 2 give data for acquisitions of listed and unlisted targets, respectively. Column 4 gives data for unlisted stand-alone targets and column 6 gives data for unlisted subsidiary targets. The top number for each group is the acquirer's mean percentage CAR, the second number is the acquirer's median percentage CAR, the third number is the number of observations. ** = significant at 0.01, * = significant at 0.05. Significance for means is based on the *t*-test. Significance for medians is based on the signed-ranks test. Columns 3, 5, and 7 show, respectively, differences between the means and medians for columns 2 and 1, 4 and 1, and 6 and 1. Significance for differences between means is based on the *t*-test. Significance for differences between medians is based on the Mann-Whitney test.

In comparison, for U.S. acquirers, HL (1996) report a mean abnormal return of -0.98% for acquirers of listed targets and a mean abnormal return of 1.15% for acquirers of unlisted targets. Chang's (1998) corresponding numbers are -1.49% and 1.45%. MSS (2004) and FNS (2002) separate their samples of targets into listed companies, unlisted stand-alone companies, and unlisted subsidiaries. The mean abnormal returns for the three groups from MSS are -1.02%, 1.50%, and 2.00%, respectively. For FNS, corresponding numbers are -1.00%, 2.08% and 2.75%. In all four studies, the mean differences between bidders' abnormal returns for acquisitions of listed and unlisted targets are significant at the 0.01 level.

Thus, in terms of their signs, magnitudes, and statistical significance, mean CARs for European acquirers line up closely with those from the U.S. The implication is that the listing effect that has been documented in U.S. acquisitions is not due to an institutional or regulatory peculiarity of U.S. markets. The effect persists through time and extends beyond U.S. borders.

IV. Explanations of the Listing Effect in Acquirers' Stock Returns: Univariate Tests

Having established that the listing effect is widespread and persistent, we now consider various explanations of it.

A. CARs by Method of Payment

For a sample of 255 acquisitions by U.S. acquirers of unlisted targets over the period 1981–1992, Chang (1998) reports a higher average CAR when payment for the target is in stock than when it is in cash. He proposes that the listing effect is actually a method of payment effect. For a sample of 167 acquisitions by U.S. acquirers of listed targets over the period 1972–1981, Travlos (1987) reports a higher average CAR when payment for the target is in cash than when it is in stock. With a sample of 456 listed targets and 2,679 unlisted targets by U.S. acquirers over the period 1990–2000, FNS confirm both findings. FNS, too, suggest that the listing effect may be a method of payment effect. However, these studies do not test to determine whether the method of payment effect subsumes the listing effect. Panel B of Table 4 gives evidence on whether the listing effect is actually a method of payment effect. On a univariate basis, the answer to that question is unambiguously no: as Panel B shows, regardless of payment method, mean CARs for acquirers of unlisted targets, both stand-alone companies and subsidiaries, are significantly greater than zero and significantly greater than the mean CARs of acquirers of listed targets. Hence, the listing effect in acquirers' CARs is not a method of payment effect. As an aside, however, it is interesting to note that, as with U.S. acquirers, for European acquirers, abnormal returns for listed targets are higher when they are acquired with cash, whereas abnormal returns for unlisted targets are higher when they are acquired with stock. Thus, to the extent that there is a method of payment effect in European acquisitions, it is reversed for listed and unlisted targets (as it is in the U.S.) and it is separate and distinct from the listing effect.

B. CARs by Whether a New Blockholder is Created

For U.S. acquirers, Chang (1998) also reports that the average CAR is significantly larger when the acquisition creates a blockholder in the acquiring company's ownership structure. This situation typically comes about because the bidder has paid for the target with stock. Thus, Chang attributes at least part of the method of payment effect to the creation of a blockholder in the acquirer's ownership structure. Chang conjectures that "... the creation of an outside blockholder results in an increase in firm value through more efficient monitoring" (p. 778). FNS echo that conjecture. Following this reasoning, if unlisted targets are more closely held than are listed targets and if most unlisted targets are acquired with stock, the fraction of unlisted acquisitions that give rise to a blockholder may greatly exceed the fraction of listed acquisitions that give rise to a blockholder. If so, and if Chang's conjecture is correct, the apparent listing effect may actually be a blockholder creation effect. However, neither Chang nor FNS test to determine whether the blockholder creation effect subsumes the listing effect. In particular, Chang estimates a regression in which the dependent variable is the acquirer's CAR and one of the independent variables is an indicator for whether an acquisition created a blockholder in the acquirer's ownership structure, but he does not include an indicator for whether the target was listed. Thus, although the coefficient of the blockholder indicator is positive and significant, it is not possi-

ble to determine whether the effect is due to the listing status of the target or to the creation of a blockholder.

To explore further the question of whether the listing effect is actually a blockholder creation/monitoring effect, we conduct several different analyses. To begin, as does Chang, we denote a blockholder as an investor who owns more than 5% of the acquirer's stock. Because our data sources do not indicate whether an acquisition created a blockholder, we calculate proxies. To do so, for unlisted targets, we divide the market value of stock paid for the target by the sum of the market value of the acquirer's stock five days prior to the announcement and the market value of any stock issued to buy the target. This ratio is our proxy for whether the sellers of the target created a blockholder in the acquirer. Implicit in this calculation is the assumption that all shares of unlisted targets are held by a single entity. For listed targets, we derive our proxy by multiplying this ratio by the percentage of shares of the target held by the target's largest shareholder.⁵ We classify acquirers as having a blockholder created by means of the acquisition if our proxy is 0.05 or greater. According to our proxies, a blockholder was created in 386 of the 3,308 acquirers of unlisted targets and in 78 of the 552 acquirers of listed targets. Thus, contrary to the idea that the listing effect is due to blockholder creation, acquirers of listed targets appear to structure the transaction in such a way as to create a blockholder in the acquirer more often than do acquirers of unlisted targets: 12.4% of the time our proxy indicates that a blockholder was created in the acquirer when the target was listed versus 10.4% of the time when the target was unlisted.⁶

CARs according to whether a blockholder was created in the acquirer are given in Panel C of Table 4. The results are easy to summarize: regardless of whether our proxy indicates that a blockholder is created, the mean CAR for acquirers of unlisted targets, both stand-alone companies and subsidiaries, is positive and significantly greater than zero. It is also significantly greater than the mean CAR for the acquirers of listed targets. Finally, regardless of whether our proxies indicate that the acquisition created a blockholder in the acquirer, the mean CAR for the acquirers of listed targets is not significantly different from zero. We then replicated this analysis defining a blockholder as occurring at the 0.10 level. These results, also given in Panel C, paint the same picture: average CARs for acquirers of unlisted targets are significantly positive and significantly greater than those for acquirers of listed targets when a 0.10 blockholder is created. These results indicate that the listing effect is not a blockholder creation effect. As with the method of payment variable, however, the blockholder creation/monitoring variable does have a differential effect for acquirers of listed and unlisted targets. For listed targets, CARs are lower when the acquisitions create blockholders in the acquirers, whereas, for unlisted targets, CARs are higher when blockholders are created. These data indicate that whatever blockholder creation effect occurs, like the method of payment effect, it is distinct from the listing effect.

⁵Sources for the ownership data are listed in the Appendix.

⁶Our proxy probably overstates the number of blockholders created in the acquirers of unlisted targets because we assume that all shares are held by a single entity.

To explore the question a bit further, we conduct several additional analyses. Because different types of blockholders may have different capacities and different incentives to monitor, we consider blockholders by type. In particular, it might be argued that individuals or controlling families have different incentives and/or different capacities for monitoring than do institutional investors. For unlisted stand-alone targets (as opposed to subsidiaries), it can be argued that the blockholders that are created in the acquirer are more likely to be individuals or families than are the blockholders that are created when a listed target is acquired. If so, and if individuals and families are more effective monitors than are institutions, blockholders created in an acquirer when listed targets are acquired may (on average) be less effective than blockholders created when unlisted targets are acquired. Following this line of argument, even though blockholders are less frequently created when unlisted targets are acquired, the listing effect in abnormal returns could still be a blockholder creation/monitoring effect if families/individuals are more effective monitors.

To consider this possibility, for the 78 listed targets for which our proxy variable indicates that a blockholder was created in the acquirer, using Worldscope, the data sources listed in the Appendix, and companies' annual reports, we classify each target's largest shareholder prior to the acquisition as an individual/family (48 deals), an institutional investor (25), or other (5)⁷ and calculate CARs for each set. When the new blockholder is an individual/family, the mean CAR is -2.25% ; when the new blockholder is an institutional investor, it is -1.83% . Thus, if anything, announcement period CARs are lower (albeit the difference is not statistically significant at the 0.05 level) when the blockholder is an individual/family than when it is an institution. These data also do not support the blockholder creation/monitoring hypothesis of the listing effect.

A further possibility is that the blockholders that are created when a listed target is acquired are less likely to retain their shares than are the blockholders that are created when an unlisted target is acquired. If so, the listing effect could still be a blockholder creation/monitoring effect because blockholders created in acquisitions of listed targets are expected to sell their shares shortly thereafter. To consider this possibility, albeit somewhat obliquely, we examined the post-acquisition ownership structure of the 78 acquirers of listed targets one year after the acquisition. We are able to find such information for 66 of the 78 acquirers. In 20 of these 66 acquisitions, a newly created blockholder was present in the acquirer's ownership structure one year later. The mean announcement period CAR for these acquirers was -2.87% . For the remaining 46 acquisitions, the mean CAR was -0.30% . Thus, the CAR was lower in acquisitions wherein the blockholder remained in the acquirer's ownership structure. Again, this result does not support the blockholder creation/monitoring explanation of the listing effect. In sum, regardless of the way in which we classify the deals, the stock price changes associated with acquisitions of listed targets do not support a conjecture that the listing effect is due to the creation of a blockholder in the acquirer's ownership structure.

⁷Others includes charities and governments.

C. CARs by Size of the Bidder

Evidence of a size effect in acquirers' stock returns in which bigger bidders have lower CARs has appeared in Loderer and Martin (1990) and Schwert (2000). MSS (2004) examine the issue exhaustively. They document significantly higher CARs for smaller acquiring firms regardless of the type of target. They also report, but do not discuss, that buyers of unlisted targets, regardless of whether the targets are stand-alone companies or subsidiaries, have significantly higher CARs than do buyers of listed targets. Further, they find that when acquirers' CARs are regressed against a slew of independent variables, both the market value of the bidder's equity and the listing status of the target continue to be significant.

It is possible that our results are really a size of acquirer effect in which bigger bidders tend to buy listed targets (and have negative CARs), while smaller bidders tend to buy unlisted stand-alone targets and subsidiaries (and have positive CARs). To address that possibility, we classify acquirers according to the market value of their common stock as of five days prior to the acquisition announcement, where the market value of common stock is calculated as number of shares outstanding times market price per share converted to 2001 U.S.\$\$. We then classify an acquirer as big if its market value is greater than the median market value of all acquirers in our sample for the calendar year in which the acquisition was announced. All others are small.

CARs for small and big acquirers are given in Panel D of Table 4. On average, both sets of acquirers earn significant positive CARs when buying either type of unlisted target and negative CARs when buying listed targets. Further, both small and big acquirers of unlisted targets earn CARs that are significantly higher than those for small and big acquirers of listed targets. Thus, the listing effect in acquirers' stock returns is not a size of buyer effect in disguise.

D. Shareholder Overlap and Cross-Border Transactions

HL (1996) analyze 252 acquisitions by U.S. acquirers over the period 1985–1990. They propose that the listing effect comes about because diversified shareholders of acquirers do not care whether managers overpay for shares of listed targets. They do not care because the shares of those targets are part of shareholders' diversified portfolios. Any loss generated because the acquirer paid too high a price for the target is recaptured through ownership of the target's shares. The same shareholders will, however, demand that managers not overpay for unlisted targets because shares of such targets cannot be part of their diversified portfolios by virtue of the fact that these companies are not publicly traded.

A necessary condition for the HL argument to explain the listing effect is that shareholders of the acquirer and target be one and the same or, at a minimum, that they substantially overlap. Such overlap in ownership might occur in the U.S. for acquirers that buy publicly traded U.S. targets. However, given the amply documented home bias in investors' portfolios, it is highly unlikely that shareholders of acquirers and targets from different countries significantly overlap.⁸ If they do not, CARs for cross-border acquisitions of listed targets should be much like those

⁸For example, see French and Poterba (1991) and Lewis (1999).

for unlisted targets. As we described in Section II, approximately 50% of acquisitions of both listed and unlisted acquisitions are cross-border transactions. These data indicate that the HL (1996) conjecture is an unlikely candidate to explain the listing effect. Nevertheless, we calculate CARs for cross-border acquisitions and for domestic acquisitions by acquirers of listed and unlisted targets. The results are given in Panel E of Table 4. The mean CARs for acquirers of unlisted targets, both those that acquire within-country and those that acquire cross-border, are significantly greater than zero and significantly greater than the corresponding mean CARs for acquirers of listed targets. These results do not support the HL hypothesis.

E. Predictability of Acquisitions

Another possible explanation has to do with the likelihood of an acquisition occurring. Suppose that all acquisitions are positive NPV undertakings for the acquirer. Further, suppose that acquisitions of listed targets are more predictable than are acquisitions of unlisted targets. If so, the average CAR for acquirers of listed targets will be lower than the average CAR for acquirers of unlisted targets, but the difference in CARs will not be due to a difference in wealth creation. Rather, the CARs will only appear to result in greater wealth creation for acquirers of unlisted targets because the gains in value for acquirers of listed targets have already been anticipated and impounded into stock price.

To address the question of predictability, we rely on Faccio and Masulis (2005) who develop a model for predicting acquisitions by Western European companies. Their model estimates a probit regression of the likelihood that listed firms in 13 Western European countries will make takeover bids. Their predictor variables are publicly available accounting, financial, and ownership data. We do not describe their model in detail here, but refer the reader to their original paper. Suffice it to say that their model exhibits reasonable explanatory power with R^2 s of 20% to 25% depending upon the specific application.

We use the variables identified by Faccio and Masulis (2005) to predict acquirers of listed targets, unlisted stand-alone targets, and unlisted subsidiaries. We estimate three regressions with our sample of acquisitions. In the first, the dependent variable is set to 1 if a firm announces a bid for a listed target, and set to 0 otherwise (either it does not announce any acquisitions or acquires only unlisted targets). In the second regression, the dependent variable is set to 1 if a firm announces a bid for a stand-alone unlisted target, and set to 0 otherwise. In the third regression, the dependent variable is set to 1 if a firm announces a bid for a subsidiary, and 0 otherwise.

We do not report the results of the regressions here except to note that the R^2 s of the three models are nearly identical at 21.8%, 23.4%, and 22.9%, respectively.⁹ Thus, as best we can determine, based on observable data, acquisitions by acquirers of listed targets are no more predictable than are acquisitions by acquirers of unlisted targets.

A related question is whether the results are affected by the probability of success of an announced but not completed transaction. Suppose that the true an-

⁹The results are available from the authors.

nouncement effect of all types of acquisitions is positive. Further, suppose that the likelihood that an announced acquisition of an unlisted target will be successfully completed is higher than the corresponding likelihood for an announced acquisition of a listed target. If so, the estimated CARs associated with acquisitions of listed targets will be downward biased relative to those associated with acquisitions of unlisted targets. The result would be that the apparent listing effect could be attributable to our having conditioned our tests on eventual completion of the transaction.

To explore this question, we identified all acquisitions that were announced as completed as of the initial announcement date. For these acquisitions, there is no uncertainty that the deal will be completed. There were 41 such acquisitions involving listed targets and 2,009 such acquisitions involving unlisted targets. Thus, there were 694 acquisitions involving listed targets and 1,685 acquisitions involving unlisted targets in which there was uncertainty about the success of the acquisition as of the initial announcement date. We also identified 143 announced but not completed deals involving listed targets and 459 announced but not completed deals involving unlisted targets. Using these data, the probability that an announcement of a listed target will eventually lead to a completed acquisition is $(694/(694+143)) = 83\%$ and the probability that an announcement of an unlisted target will eventually lead to a completed acquisition is $(1,685/(1,685+459)) = 79\%$. Thus, although the difference is small, the probability that the announcement of an acquisition of a listed target will lead to a completed transaction is actually higher than that of an unlisted acquisition (given that the deal was not already completed as of the initial announcement date). Thus, if there is any bias in CARs due to the differential likelihood of success for listed and unlisted acquisitions, it is that the announcement period CAR is downward biased for acquirers of unlisted targets.

To pursue this theme a bit further, we calculated the announcement period CARs around announcements of the actual completion of transactions that were not initially announced as completed acquisitions. For acquirers of listed targets, the CAR was -0.04% . For acquirers of unlisted targets, the CAR was 0.21% . Rather than overturn the initial announcement effect, these CARs reinforce the differential between acquirers of listed and unlisted targets. In particular, the CAR at completion is negative for acquirers of listed targets and it is positive for acquirers of unlisted targets. Thus, the differential in the likelihood of success does not appear to explain the listing effect in acquirers' stock returns.

Finally, we also calculated the initial announcement period CARs for acquisitions that were announced, but never completed. If there is a differential in the predictability of listed and unlisted target acquisitions, the effect should be minimal in non-completed deals. For these cases, the acquirer's average CAR is -1.50% (p -value = 0.01) for deals involving listed targets and 1.70% (p -value < 0.01) for deals involving unlisted targets (p -value for the difference < 0.01). Thus, the listing effect is also present in non-completed transactions and, thus, apparently is not due to a differential in the predictability of successfully completed transactions.

F. Leakage of Information

A slight variation on the anticipation effect could be that leakage of information about acquisitions is more likely for deals involving two listed companies than for deals in which only the acquirer is listed. Again, suppose that acquisitions on average have positive NPVs. And suppose that there is more leakage of information about acquisitions of listed targets than about acquisitions of unlisted targets. If so, such leakage would show up in the pre-announcement returns of acquirers. To consider that possibility, we calculate the pre-announcement abnormal returns for acquirers of listed and unlisted targets as the sum of the daily abnormal returns over the period beginning 15 trading days prior to the announcement and ending three days prior to the announcement. The average CAR over this interval for acquirers of listed targets is 0.69% (p -value = 0.08); for acquirers of unlisted stand-alone targets, it is 0.82% (p -value < 0.01); and for acquirers of unlisted subsidiary targets, it is 0.64% (p -value < 0.01). If there is leakage, it is no greater for acquirers of listed targets than for acquirers of unlisted targets. Thus, these results are not consistent with differential anticipation of the announcements explaining the listing effect.

Another way to consider whether leakage can explain the listing effect is by use of rumors of acquisitions. We have 237 cases involving acquisitions of listed targets and 204 cases involving acquisitions of unlisted targets where SDC identified a rumor of a possible acquisition that preceded the announcement. For the first sample, the mean five-day CAR around the announcement date is -1.50% (p -value < 0.01), for the second it is 0.67% (p -value = 0.12), and the difference between the two is highly significant (p -value < 0.01). Thus, differential leakage of information and/or rumors of acquisitions do not explain the listing effect in corporate takeovers.

G. Acquirers' Ownership Structure

Another possible explanation of the listing effect rests in traditional agency theory used to explain negative abnormal returns associated with acquisition announcements. The agency explanation posits that when firms have dispersed ownership, managers undertake acquisitions that enhance their empires even when doing so reduces shareholder wealth (Lewellen, Loderer, and Rosenfeld (1985)). If acquirers of listed targets tend to have dispersed ownership, whereas acquirers of unlisted targets tend to have concentrated ownership, the agency explanation might account for the listing effect. To consider this possibility, we use the ultimate percentage cash flow held by the acquirer's largest shareholder as calculated by Faccio and Lang (2002). This variable is available for acquirers in 13 of the 17 countries in our sample.

With these ownership data, we classify an acquirer as having dispersed ownership if the acquirer's largest shareholder owns less than 10% of the outstanding voting rights. We classify an acquirer as having concentrated ownership if the largest shareholder owns 20% or more of the voting rights. We calculate CARs according to ownership structure of the acquirer. As Panel F of Table 4 shows, regardless of whether they have dispersed or concentrated ownership, the mean

CAR for acquirers of listed targets is negative and not significantly different from zero; whereas for acquirers of unlisted targets, the mean CAR is positive and significantly greater than zero. Additionally, regardless of ownership structure, the mean CARs for acquirers of unlisted targets are significantly greater than the mean CARs for acquirers of listed targets. The data do not support the traditional agency theory as the explanation of the listing effect in acquirers' CARs.

Another simple way to check the agency explanation is to examine CARs of acquirers that buy both listed and unlisted targets. Such acquirers have the same ownership structure regardless of the target's listing status. For such acquirers, the mean CAR around announcements of their listed target acquisitions (-0.53%) is not significantly different from zero while the mean CAR around announcements of their unlisted target acquisitions (1.32%) is significantly positive. Additionally, the mean CAR when these buyers acquired unlisted targets is significantly greater than the mean CAR when they acquired listed targets. These results also indicate that the listing effect is independent of the ownership structure of the acquirer and, thus, is not consistent with this version of an agency explanation. These results further indicate that the difference in CARs for acquirers of listed and unlisted targets is unlikely to be due to any acquirer-specific characteristics given that the acquirers are the same in the two samples.

H. Cross-Sectional Dependence

Our sample involves 4,429 events occurring over a six-year period for an average of 2.8 announcements per trading day. This raises the possibility that CARs may not be cross-sectionally independent. We use Mandelker's (1974) calendar-time portfolio approach to control for this possibility. Because we are interested in testing whether the mean CAR for acquirers of unlisted targets is significantly greater than the mean CAR for acquirers of listed targets, the calendar-time portfolio methodology requires that an announcement period for an acquisition of an unlisted target overlap with the announcement period of a listed target acquisition in order for either announcement to enter the sample. For our full sample tests, this requirement is readily met for a large set of acquisitions. For certain of our subsample tests, however, the number of events that can enter the sample is quite small. Of course, for these smaller samples, because there is less overlap in announcement periods, the concern about cross-sectional dependence is lessened.

To implement the test, on each trading day, we form a portfolio consisting of a long position in an equally weighted portfolio of those acquirers of unlisted targets whose five-day announcement period includes that trading day and an offsetting short position in an equally weighted portfolio of those acquirers of listed targets whose announcement period also includes that trading day. For both acquirers, an offsetting position in the stock market index of the acquirer's home country is also included. Statistical significance is determined with a *t*-test using the standard deviation of the time series of the portfolio's daily returns.

Table 5 reports the daily average portfolio returns over the five-day period beginning two days prior to an ending two days after the initial acquisition announcement. The table also gives a five-day portfolio return, which is simply

five times the daily average return. We present this statistic for comparison with five-day CARs in previous sections.

As the top row of Table 5 shows, with this procedure, for our full set of acquirers of listed and unlisted targets, the mean five-day portfolio return is 1.83%, which is very close to the difference of 1.86% in mean five-day CARs for the two samples as given in Table 3. Further, the p -value for difference from zero is less than 0.01. In the remaining rows of Table 5, we give the mean portfolio returns for our larger subsamples, i.e., those for which concern about cross-sectional dependence is greatest. In each case, the mean five-day portfolio return is significant at the 0.05 level or better. In sum, the listing effect is not due to cross-sectional dependence in abnormal returns.

TABLE 5
Results Based on Calendar-Time Portfolios

Sample	Portfolio Days (1)	Daily Return (2)	Five-Day Return (3)
<i>Panel A. By Home Country of Acquirer</i>			
All countries	1,326	0.37**	1.83**
U.K.	971	0.50**	2.51**
Non-U.K.	1,027	0.25*	1.23*
<i>Panel B. By Method of Payment</i>			
Cash	1,097	0.17*	0.83*
Stock	652	1.26**	6.30**
Mixed	444	0.59**	2.97**
<i>Panel C. By Blockholder Creation</i>			
None at 5%	1,188	0.20**	1.00**
At 5%	324	0.93**	4.66**
At 10%	213	1.01**	5.04**
<i>Panel D. By Size of Acquirer (i.e., Market Value of Acquirer's Equity)</i>			
Small	890	0.47**	2.37**
Big	1,109	0.27**	1.37**
<i>Panel E. By Whether the Acquisition is Cross-Border</i>			
Domestic	1,035	0.50**	2.50**
Cross-Border	1,004	0.22*	1.10*

Table 5 reports the listing effect computed using Mandelker's (1974) portfolio procedure. To implement this method, on each eligible day, we form a portfolio consisting of a long position in an equally weighted portfolio of those acquirers of unlisted targets whose announcement period includes that day and an offsetting short position in an equally weighted portfolio of those acquirers of listed targets whose announcement period also includes that day. For both acquirers, an offsetting position in the stock market index of the acquirer's home country is also included. Thus, the returns reported in this table are a measure of the difference between announcement period abnormal returns for acquirers of unlisted and listed targets. Statistical significance is determined with a t -test using the standard deviation of the time series of the portfolio's daily returns. The five-day return is simply five times the daily portfolio return. ** = significant at 0.01, * = significant at 0.05.

V. Multivariate Tests

Our univariate tests appear to demonstrate that the listing effect in acquirers' CARs—an effect that has also been documented in U.S. acquisitions—is widespread and persistent through time. We now turn to multivariate tests to determine whether the listing effect survives when we put it to the stiffer challenge of standing up to a panel of independent variables.

A. Setup

The dependent variable in our regressions is the five-day CAR. As independent variables, we include an indicator for whether the acquirer was domiciled in the U.K. (1) or not (0), the log of the market value of the bidder's common stock five days prior to the announcement (in 2001 U.S.\$), an indicator for whether payment was made in stock (1) or not (0), an indicator for whether payment was a combination of stock and cash (i.e., mixed) (1) or not (0), an indicator for whether the acquisition was a cross-border deal (1) or not (0), and the CAR of the bidder over the interval beginning 15 days prior to and ending three days prior to the announcement. (Initially we do not include a variable indicating whether a blockholder was created in the acquirer's ownership structure because this variable is highly correlated with method of payment.) These are the variables considered in our univariate tests.

As control variables, we also include factors found to be correlated with acquirers' announcement period returns in other studies. For U.S. acquirers, Lang, Stulz, and Walkling (1989), (1991) and Servaes (1991) report that acquirers' CARs are higher when the acquirer's Tobin's Q is higher. We use the acquirers' Q as described in Section II.

Maquieira, Megginson, and Nail (1998) report that acquirers' abnormal returns are higher in within-industry (i.e., non-diversifying) acquisitions than in diversifying acquisitions. To control for whether the acquisition is within the same industry, we include an indicator variable to identify whether the target and the bidder have the same three-digit SIC code (1) or not (0).

For U.S. acquirers, Asquith, Bruner, and Mullins (1983), Jarrell and Poulsen (1989), and Servaes (1991) report that the size of the target relative to the size of the acquirer is positively correlated with the acquirer's CAR. Eckbo and Thorburn (2000) and Bae, Kang, and Kim (2002) report similar results for Canada and Korea, respectively. To control for this factor, we use relative size as described in Section II.

Servaes (1991) reports that hostile bids result in particularly low returns to acquirers, while Schwert (2000) reports no impact of hostility on bidders' returns. Using SDC data and keyword searches on Lexis-Nexis for acquisitions that involve the words: hostile, unfriendly, unsolicited, or white knight, we identify 40 transactions that can be classified as hostile. We include an indicator to identify whether the acquisition was hostile (1) or not (0).

Finally, because more than one announcement occurred on many days, we insert indicator variables for each announcement day (i.e., we use announcement day fixed effects).

B. Regression Results

Our first regression includes an indicator variable for whether the target was a stand-alone company (1) or not (0) and an indicator for whether the target was a subsidiary (1) or not (0). The regression also includes each of the independent variables described above. The results of this regression are given in column 1 of Table 6.

The coefficient of the market value of the equity (i.e., size) of the acquirer is negative and significant. Consistent with results from MSS, bigger buyers appear to be worse buyers in Western Europe as well as in the U.S. Further, the coefficient of the U.K. indicator variable is negative and significant: U.K. acquirers' achieve lower announcement period CARs than do acquirers from other Western European countries. None of the other independent variables (holding aside the listing effect indicators) is significant at the 0.05 level.

More consequentially, for the purposes of this investigation, the listing effect is robust to the inclusion of a host of independent variables in a multivariate analysis. The coefficients of both the unlisted stand-alone company indicator variable and the unlisted subsidiary indicator variable are positive and highly statistically significant (p -values < 0.01). Further, their magnitudes are such that they imply that the acquisition of an unlisted entity adds roughly 2.0% to the total market value of the acquiring company after taking into account variables that have been shown to be significant in explaining CARs to acquirers in other contexts.

TABLE 6
Cross-Sectional Regression of Acquirers' CARs with Announcement-Day Fixed Effects

Independent Variable	All Targets (1)	All Targets (2)	Cash Only (3)	Stock Only (4)	Unlisted Only (5)	All Targets (6)
Unlisted stand-alone target	2.14** (0.41)	1.60** (0.41)	0.99* (0.41)	8.71** (2.86)		1.17* (0.48)
Unlisted subsidiary target	2.09** (0.38)	1.50** (0.38)	1.08** (0.39)	7.96** (2.82)		1.17** (0.44)
All-stock	0.60 (0.65)				2.44* (1.05)	-1.73 (0.92)
Mixed	0.51 (0.44)				0.83 (0.49)	-0.01 (0.50)
Blockholder created		1.15 (0.63)		1.18 (2.16)	0.47 (0.83)	1.39 (0.89)
Acquirer size	-0.30** (0.09)	-0.31** (0.08)	-0.38** (0.07)	-1.26* (0.54)	-0.35** (0.09)	-0.39** (0.10)
Cross-border acquisition	0.42 (0.28)	0.44 (0.27)	0.55* (0.25)	2.22 (1.58)	0.32 (0.30)	0.87** (0.32)
Target attitude	-0.73 (0.98)	-0.83 (1.01)	-0.62 (0.99)	-4.46 (2.43)	1.51 (1.89)	-1.76 (1.30)
Acquirer Tobin's Q	0.00 (0.07)	0.03 (0.07)	0.14* (0.07)	-0.22 (0.18)	-0.01 (0.07)	0.20* (0.09)
Within-industry	-0.23 (0.29)	-0.17 (0.29)	0.14 (0.27)	-3.38 (2.23)	-0.19 (0.32)	-0.01 (0.32)
Relative market value	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.04** (0.01)	0.00** (0.00)	0.00 (0.00)
U.K. acquirer	-0.95** (0.29)	-0.80** (0.29)	-0.58* (0.26)	-5.52** (1.99)	-0.78** (0.30)	-0.23 (0.36)
Acquirer ownership						0.01 (0.01)
Pre-announcement returns	0.01 (0.02)	0.01 (0.02)	-0.01 (0.02)	-0.08 (0.09)	0.01 (0.02)	0.03 (0.02)
No. of observations	4,396	4,294	3,296	315	3,668	3,174
Adj. R^2	0.037	0.039	0.080	0.665	0.036	0.063
p -value of F -test	0.008	0.006	0.000	0.000	0.027	0.002

Dependent variable is the acquirer's five-day percentage CAR. "Unlisted stand-alone target" and "Unlisted subsidiary target" are indicators for acquisitions of unlisted stand-alone companies and unlisted subsidiaries, respectively. "All-stock" is an indicator equal to 1 if only stock is used as payment. "Mixed" is an indicator equal to 1 if both cash and stock are used as payment. "Blockholder created" is an indicator equal to 1 if the value of stock payment to a target's largest shareholder exceeds 5% of the bidder's market value. "Acquirer size" is the logarithm of the market value of acquirer's common stock (expressed in year-end 2001 U.S.\$) as of five days prior to the acquisition announcement. "Cross-border acquisition" is an indicator equal to 1 if the bidder and the target are incorporated in different countries. "Target attitude" is an indicator equal to 1 if the acquisition is hostile or unsolicited. "Acquirer Tobin's Q" is the market value of the acquirer's equity as of the calendar year-end prior to the announcement plus the book value of debt and preferred stock from the most recent financial statement prior to the acquisition announcement divided by the sum of the book value of equity, debt, and preferred stock as of the same date. "Within-industry" is an indicator equal to 1 if the target has the same primary three-digit SIC code as the acquirer. "Relative market value" is the amount paid for the target less the amount of any liabilities assumed or paid by the acquirer divided by the market value of the acquirer as of the calendar year-end prior to the announcement. "U.K. acquirer" is an indicator equal to 1 if the bidder is incorporated in the U.K. "Acquirer ownership" is the ultimate percentage cash flow stake held by the acquirer's largest shareholder. "Pre-announcement return" is the sum of acquirer's abnormal returns over the period beginning 15 trading days prior to the announcement and ending three days prior to the announcement. All regressions include dummy variables for the announcement date. ** = significant at 0.01, * = significant at 0.05. Significance is based on White (1980) heteroskedasticity-adjusted standard errors. Standard errors are in parentheses.

The second regression in Table 6 is the same as the first except that we exclude the method of payment variables and insert a blockholder creation variable where a blockholder is designated as an ownership position of 5% or more of the

acquirer's shares. As column 2 shows, the market value of the acquirer and the U.K. indicator variable are still significant. Of most importance for this study, the indicator variables for unlisted stand-alone targets and subsidiary targets continue to be significant at the 0.01 level: acquisitions of unlisted targets create greater value for shareholders of acquiring companies than do acquisitions of listed targets. We should note, however, that the point estimate of the impact declines to 1.60% indicating that, even though its coefficient is not statistically significant, the blockholder creation/monitoring variable reduces the level of the listing effect. Still, the listing effect continues to be very much in line with the effect documented in U.S. acquisitions—after controlling for other factors, acquirers of unlisted targets, both stand-alone companies and subsidiaries, generate a greater wealth increase for shareholders than do acquirers of listed companies.

The third regression in Table 6 is a different way of considering whether the listing effect is actually a blockholder creation effect. This regression involves only transactions in which the method of payment was cash. By definition, these acquisitions would not have created a blockholder in the acquiring company. We include all of the other variables as in regressions 1 and 2, but we exclude the method of payment and the blockholder creation variables. Both the stand-alone and the subsidiary indicator variables are statistically significant (both p -values < 0.02) although their coefficients are further reduced to about 1.00%. Thus, the listing effect is not a blockholder creation effect. As a complement to regression 3, the fourth regression includes only acquisitions in which the method of payment was stock. Regression 4 includes the same variables as regression 3 along with the blockholder creation indicator. In this regression, the coefficients of the stand-alone and subsidiary target indicators are both statistically significant (p -values < 0.01) and the point estimates of the coefficients are quite large at approximately 8.0%. However, the standard errors are also quite large. Even in this regression, however, the blockholder creation variable is not statistically significant.

As one final consideration of the blockholder creation effect, and keeping in mind that Chang (1998) only considered unlisted acquisitions in his analysis, we also estimated a regression including only unlisted targets. This is the fifth regression in Table 6. Even in this regression, the coefficient of the blockholder creation indicator is small and not statistically significant. This result indicates that even when we consider only unlisted acquisitions, blockholder creation is not associated with higher value creation for acquirers' shareholders.

Recall that we have data on the ownership structure of acquirers for 13 countries. To test the agency explanation of the listing effect, the final regression in Table 6 includes all of the independent variables from regressions 1 and 2 along with the fraction of the acquirer's shares held by the largest shareholder for acquirers in the 13 countries for which we have such data. According to the agency argument, the coefficient of this variable is predicted to be positive. As column 8 shows, the coefficient of this variable is positive, but not significant, and the size of the acquirer and the listing status of the target continue to be significant at the 0.01 level or better. These results do not support an agency explanation in acquirers as the cause of the listing effect.

VI. Conclusion

This study investigates the wealth created for shareholders around announcements of acquisitions by acquirers of listed and unlisted targets in 17 Western European countries over the period 1996–2001. As in the U.S., acquirers of listed companies earn zero or slightly negative average announcement period abnormal returns, whereas acquirers of unlisted targets earn positive and significant average announcement period abnormal returns. Furthermore, the wealth increase associated with acquisitions of unlisted targets is significantly greater than the wealth increase associated with acquisitions of listed targets and this differential is pervasive. It persists through time and across countries. In cross-sectional regressions in which announcement period abnormal returns are the dependent variable, the listing effect is robust to inclusion of a variety of variables including size of the acquirer, the method of payment for the target (cash, stock, or a combination), whether the acquisition created a blockholder in the acquiring company, the acquirer's Tobin's Q, whether the acquirer's shares are closely held, whether there is pre-announcement leakage of information about the acquisition, the ownership structure of the acquirer, the relative market values of the target and bidder firms, whether the acquisition was a cross-border transaction, whether the bidder and the target were in the same industry, and whether the acquisition was hostile.

Presumably the listing effect in acquirers' stock returns is a manifestation of some economic phenomenon that our various proxy variables have failed to capture. Further investigation will be required to identify what that fundamental factor is or those fundamental factors are. In the meantime, managers who are evaluating alternative acquisitions may wish to take into account the listing status of target companies.

APPENDIX
Data Sources for Target Ownership Structures

Country:	Data Sources:
Argentina	Worldscope
Australia	Australian Stock Exchange, ASX All Ordinary Index. Company Handbook, Sydney, N.S.W. and http://www.companies.govt.nz/search/cad/dbssiten.main
Austria	Wiener Börse, Yearbook, Österreichische Vereinigung für Finanzanalyse, Wien
Belgium	Banque Bruxelles Lambert, Actionariat des Sociétés Belges cotées à Bruxelles, Département Etudes et Stratégie
Bermuda	Worldscope
Brazil	São Paulo Stock Exchange, Brazil Company Handbook
Canada	The Financial Post, Survey of Industrials, company Web sites from http://www.tse.com/ and Worldscope
Chile	Worldscope
Colombia	Worldscope
Czech Republic	File purchased from the Securities Center of the Czech Republic
Denmark	Worldscope
Egypt	Worldscope
Estonia	http://www.tse.ee/english/
Finland	http://www.huginonline.com/ ; company Web sites from http://www.hex.fi
France	The Herald Tribune, French Company Handbook, SBF-Paris Bourse; http://www.bourse-de-paris.fr/fr/index.js.htm?nc=2&ni=6&nom=marche ; company Web sites from http://www.euronext.com/fr/
Germany	Commerzbank, Wer gehört zu Wem; Bundesaufsichtsamt für den Wertpapierhandel
Greece	Worldscope
Hungary	Worldscope
Indonesia	Asian Company Handbook
Ireland-Rep	London Stock Exchange, The London Stock Exchange Yearbook; http://www.hemscott.co.uk/equities/
Italy	http://www.consob.it/
Japan	Toyo Keizai Shanposha, Japan Company Handbook, Tokyo, Japan
Lithuania	Worldscope
Luxembourg	Worldscope
Malaysia	Asian Company Handbook
Mexico	Worldscope
Monaco	Worldscope
Morocco	Worldscope
New Zealand	Datex, New Zealand Directory of Shareholders (http://www.datex.co.nz/)
Norway	http://www.huginonline.com/ ; company Web sites from http://www.ose.no/english/
Philippines	Asian Company Handbook; Philippine Stock Exchange
Poland	Komisja Papierów Wartościowych i Gield, Ownership of Polish listed firms
Portugal	Bolsa de Valores de Lisboa e Porto, Sociedades Cotadas, CD-ROM
Romania	http://www.bvb.ro/ ; Worldscope
Russian Fed	Worldscope
Singapore	Asian Company Handbook
Slovak Repub.	Worldscope
Slovenia	http://www.ljse.si/ ; Worldscope
South Africa	Worldscope
South Korea	Asian Company Handbook
Spain	http://www.cnmv.es/english/cnmve.htm
Sweden	http://www.huginonline.com/
Switzerland	Union Bank of Switzerland, Swiss Stock Guide, Zurich
Thailand	Asian Company Handbook
United Kingdom	London Stock Exchange, The London Stock Exchange Yearbook; http://www.hemscott.co.uk/equities/
United States	http://www.sec.gov/cgi-bin/srch-edgar/

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