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Who Gains from Buying Bad Bidders?

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Abstract

We study the value gains from takeovers of firms with poor acquisition histories. We document that the premium received by target shareholders is higher when the value loss from the targets' prior acquisitions is larger. However, the gains to target shareholders seem to be offset by losses to acquiring shareholders. The average announcement return to acquiring shareholders is negative and decreasing in the value loss from the targets' prior acquisitions. Additionally, the combined acquirer-target value created in these takeovers is insignificant. These results suggest that the value lost from targets' prior acquisitions is not recovered through changes in corporate control.

I. Introduction

The disciplinary hypothesis for corporate takeovers holds that corporate takeovers occur to correct the nonvalue-maximizing behavior of target firm managers. The classic market for corporate control arguments posited in Marris (1963) and Manne (1965), and later extended by Jensen (1986), suggest that these corporate takeovers should be value creating to the extent that acquiring firms can more efficiently manage target firm assets or reverse poor prior investment decisions made by the target firm management. Empirical tests of the disciplinary hypothesis largely examine whether poorly performing firms are more likely to be the target of a takeover, whether there is a change in target firm management following the change in corporate control, or whether the acquiring firm divests target assets subsequent to the takeover.[1] The question left relatively unexplored

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[1] Agrawal and Jaffe (2003) provide a detailed literature review of the disciplinary hypothesis for takeovers in an Internet Appendix (available at www.jfqa.org).

in the studies of this topic is whether the economic value lost from poor target firm performance is recovered as a result of a disciplinary takeover.

In this study, we examine the gains from takeovers of companies whose managers previously engaged in value-reducing acquisition programs. We focus on this class of firms because acquisitions represent significant investments under the control of a firm's top managers. Consequently, if the market for corporate control operates as theorized, then firms that have engaged in value-reducing acquisitions should be likely targets of disciplinary takeovers since they represent large profit opportunities for acquiring firms. These profit opportunities can be realized by replacing the managers that made those poor prior acquisitions so that those assets can be more efficiently utilized by the acquiring firm, or by selling off those prior acquisitions to buyers that can put them to better use.

Our analysis addresses the following questions: Do shareholders of target firms that previously made value-decreasing acquisitions get to recover the value lost from past acquisitions via the takeover premium when their firms are taken over? Or, is it the acquiring shareholders that benefit from acquiring a bargain because so much of the target value has been lost and the acquiring firms will be able to recover that value? Finally, do the takeovers of firms that previously made value-decreasing acquisitions lead to combined acquirer-target value creation? We expect that if value is created from the takeovers of firms with poor acquisition histories, the value created should manifest in higher combined acquirer and target value after the takeover. Additionally, if the source of the value is the reversal or better management of poor prior acquisitions, then the combined acquirer and target value increase should positively correlate with the value lost from past acquisitions. Finally, if target and acquiring shareholders share the value gains from these takeovers, the gains realized by each firm should also positively correlate with the value lost from the target's past acquisitions.

The empirical studies that use prior acquisition history as a measure of managerial performance suggest that takeovers of firms with poor acquisition programs can create value, but they do not provide evidence that they indeed do so. Mitchell and Lehn (1990) and Offenberg (2009) document that firms making value-reducing acquisitions are subsequently more likely to become takeover targets themselves. Mitchell and Lehn additionally show that the worst acquisitions made by targets are those that are later divested.[2] More recently, Lehn and Zhao (2006) show that chief executive officers (CEOs) who make value-reducing acquisitions are more likely to be replaced through internal or external control mechanisms, including takeovers. While these studies suggest that value destruction through poor prior acquisitions can lead to a disciplinary takeover, they do not examine the relation between the value destroyed from the target firms' prior acquisitions and the value created at the announcement that the firms will be taken over.

Other studies suggest that acquisition announcement returns are a reasonable measure of the quality of an acquisition and that the value lost from poor prior

[2]In a related study, Berger and Ofek (1996) document that firms with greater value losses from diversification face a higher probability of a bust-up takeover.

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acquisitions can be, at least partially, recovered. Kaplan and Weisbach (1992) find that the average acquirer and combined acquirer and target returns at the announcement of the acquisition are significantly lower for those acquisitions later classified as unsuccessful than they are for those classified as successful. Allen, Lummer, McConnell, and Reed (1995) document that the value lost from poor acquisitions explains at least part of the gains realized when those acquisitions are later spun off. They note that one potential source of gains in bust-up takeovers is the recapturing of value lost from the target firm's poor prior acquisitions. Neither study, however, tests whether value is created as a result of disciplinary takeovers but focuses instead on acquisitions and subsequent divestitures by the same firm.

A related body of research offers mixed evidence on whether synergy values (i.e., value-weighted acquirer and target announcement returns) are realized when relatively well-managed firms acquire relatively poorly managed firms. Lang, Stulz, and Walkling (1989) and Servaes (1991) document that synergy gains increase in the acquiring firm's Tobin's Q and decrease in the target's Tobin's Q, and Wang and Xie (2009) find that synergy gains increase in the wedge between acquiring firm and target firm shareholder rights. Conversely, Bhagat, Dong, Hirshleifer, and Noah (2005) find that synergy gains decrease in the acquiring firm's Q and that the target firm's Q is unrelated to synergy gains. While the studies of Lang et al. (1989), Servaes (1991), and Wang and Xie (2009) can be interpreted as consistent with the notion that disciplinary takeovers create value, they do not examine whether the value realized at the takeover is related to the value destroyed by the target firm prior to the takeover.

We conduct our analysis on a sample of 1,595 takeovers that occurred between 1986 and 2007. In 789 of the 1,595 events, the target firms made at least one acquisition in the 6 years before they were taken over. We call these targets "bidders." We calculate a measure of the quality of the past acquisitions made by the bidders as the sum of the cumulative abnormal returns (SCAR) realized around the announcements of those past acquisitions. For 387 bidders, roughly one-half, the SCARs are negative. Borrowing terminology from Mitchell and Lehn (1990), we call the target firms with SCARs in the highest tercile of the sample "good bidders." Similarly, we call the target firms with SCARs in the bottom tercile of the sample "bad bidders."

Our results can be summarized as follows: Shareholders of bad bidders receive significantly higher takeover premiums than do the shareholders of good bidders. The relation between the takeover premium and the SCAR is negative and significant in the full sample and in the subsample of takeovers in which targets have negative SCARs. Thus, it appears that the more the prior acquisitions by the target firms are value decreasing, the higher the premium shareholders receive when their firms are taken over. However, such a relation does not hold for acquiring firm shareholders. Acquirers of past bidders realize negative announcement returns, on average. This announcement return for the acquirer is similar regardless of whether the target was a good bidder or a bad bidder. There is no statistically significant relation between the acquirer announcement returns and target SCARs in the full sample. However, in the subsample of takeovers in which targets have negative SCARs, the relation between the acquirer announcement

returns and target SCARs is positive. This indicates that the shareholders of firms that acquire bad bidders lose more from the deal when those bidders made worse prior acquisitions.

The results from examining the overall gains from the takeovers indicate that the takeovers of bad bidders do not create significant synergy values (as measured by the combined acquirer and target announcement returns), on average. Additionally, we find no significant relationship between the synergy value and the quality of the target's prior acquisitions in the full sample. In the subsample of takeovers of targets with negative SCARs, the synergy value positively correlates with the target SCAR. These findings suggest that in the majority of the takeovers of bad bidders in our sample, the value that is lost due to the target firm's past bad acquisitions is not recovered. Rather, these transactions result in a wealth transfer from acquiring shareholders to target shareholders. While target shareholders realize greater takeover premiums, acquiring shareholders realize greater losses when the losses due to the past acquisitions of the target firms are higher.

Our results of no average synergy gains from takeovers do not apply to the entire sample of takeovers, however. While we observe that the takeovers of either good or bad bidders, that is, takeovers of firms with SCARs in the top and bottom tercile, create no synergy gains, the takeovers of firms that made no acquisitions in the past or the takeovers of firms with SCARs in the middle tercile create significantly positive synergy values. We propose two (nonmutually exclusive) explanations for this result. First, target firms identified as either bad or good bidders might be more complex firms that are more difficult to value than other firms. If acquiring managers suffer from managerial hubris (Roll (1986)) and if their likelihood of making a negative valuation error increases with target firm complexity, then the acquirers of more complex targets are more likely to overestimate the value gains from these takeovers. Second, acquirers of either good or bad bidders might be more overconfident than other acquirers and therefore more likely to overestimate their ability to generate returns.

We report some evidence consistent with both explanations. Using the number of prior acquisitions as a proxy for target firm complexity, we find that both good and bad bidders (i.e., those with SCARs in the top and bottom terciles) made more acquisitions than other bidders prior to being taken over. Additionally, we document a significant negative relation between the number of prior acquisitions made by the target firm and both synergy value and acquirer announcement returns. Consistent with the first explanation, these results suggest that either bad or good bidders are complex target firms, and their acquirers overestimate the value that can be created from these takeovers. Consistent with the second explanation, we find that the acquirers of either good or bad bidders are more frequent acquirers and that they experience better operating performance than the acquirers of other firms, indicating that the acquirers of either good or bad bidders are potentially more overconfident (Malmendier and Tate (2008), Billett and Qian (2008), and Baker, Dutta, Saadi, and Zhu (2010)).

Overall, the results of this study suggest that the degree to which lost value from poor prior acquisitions is recovered through the market for corporate control is questionable. While prior studies document that firms making poor acquisitions

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face a higher probability of takeover, our results indicate that no net economic value is created when these firms are taken over. Our results do suggest that target firm shareholders recover some of the value lost from their firms' poor prior acquisitions in the form of higher takeover premiums. However, the gains to target shareholders seem to be offset by losses to acquiring shareholders. The evidence suggests that managers of acquiring firms overestimate their ability to create value from taking over firms with poor acquisition histories and overpay for acquiring these firms.

The remainder of this paper is organized as follows: Section II describes the sample. Section III presents the empirical results. Section IV concludes.

II. Sample Description

We obtain our initial sample of corporate control transactions from the Securities Data Corporation (SDC) U.S. Mergers and Acquisitions database. We select domestic mergers and acquisitions (M&As) with an announcement date between Jan. 1, 1986, and Dec. 31, 2007. We consider only acquisitions that are successful and result in completed transactions. We require that the acquirer controls less than 50% of the target prior to the announcement and owns more than 50% after the completion of the transaction. We further require that the deal value disclosed in SDC be at least 5% of the acquirer's market capitalization measured on the 28th day before the announcement date. Last, we require that both the acquirer and the target are public companies that have annual financial statement information available from Compustat and daily stock return data from the Center for Research in Security Prices (CRSP). We exclude from the sample transactions where either the acquirer or the target is a financial firm, and transactions where the market capitalization of the target firm is less than $25 million (after adjusting for inflation, with 2000 set as the base year). These criteria yield a sample of 1,595 successful corporate control transactions. In describing our sample construction, we refer to this sample of 1,595 transactions as the "main" sample.

To calculate the measure of the quality of the target firms' past acquisition programs, we identify the acquisitions made by the target firms in the main sample over the period ranging from 6 years to 60 days before the announcement date of their ultimate takeover. We do this by creating another sample of acquisitions, which we refer to as the "prior acquisition" sample. The data for the prior acquisition sample again comes from SDC. We select domestic and international M&As with announcement dates between Jan. 1, 1980, and Dec. 31, 2007. We consider only acquisitions that are successful and result in completed transactions. We also require that the deal value disclosed in SDC be at least 1% of the acquirer's market capitalization measured on the 28th day before the announcement date.[3] Last, we require that the acquiring firms in the prior acquisition sample have daily stock return data available in the CRSP database.

[3]The results reported throughout are essentially the same if we also require the deal value to be greater than $1 million, as in Moeller, Schlingemann, and Stulz (2004), Masulis, Wang, and Xie (2007), or Wang and Xie (2009).

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We then match the acquiring firms in the prior acquisition sample to the target firms in the main sample to determine the past acquisition history of the target firms in our main sample. The matching procedure yields a total of 1,835 past acquisitions made by 789 main sample target firms. Eight hundred and six (806) target firms from our main sample made no acquisitions that would meet our criteria.

For clarity, we define the terms used throughout this study as follows: We examine 1,595 takeover transactions, the parties to which we call "acquirers" and "targets." The 789 targets that made at least one acquisition within the 6 years preceding the announcement of their ultimate takeover we call "bidders," and the 806 targets that made no acquisitions in the same time frame we call "nonbidders." Bidders with abnormal returns from past acquisitions (as defined below) in the top tercile of the sample we call "good bidders," and those with abnormal returns in the bottom tercile we call "bad bidders."

In Table 1, we present the distribution of the takeovers of bidders and nonbidders by announcement year. Starting in 1986, the number of takeovers first decreases until the early 1990s, then increases steadily until it peaks in 1998–1999 and then again decreases until it stabilizes at about one-third of the 1998 level in the 2000s. This trend is similar to the trend documented in Moeller et al. (2004), whose less restrictive sample ends in 2001.

TABLE 1

Sample Distribution by Announcement Year

The main sample consists of 1,595 completed U.S. corporate takeovers listed on SDC between 1986 and 2007 with a deal value at least 5% of the market capitalization of the acquirer and the market capitalization of the target at least $25 million (in year 2000 dollars). The Takeovers of Bidders subsample contains takeovers of target firms that made at least one acquisition with a value greater than 1% of their market capitalization in the period from 6 years to 60 days prior to being taken over. The Takeovers of Nonbidders subsample contains takeovers of firms that did not make any such acquisitions prior to their takeover. SCARs are the sums of 11-day cumulative abnormal returns realized by target firms around the announcements of their past acquisitions.

	Sample			
			Takeovers of Bidders	
Year	Takeovers of Nonbidders	Takeovers of Bidders	SCARs > 0	SCARs < 0
1986	36	25	15	10
1987	37	15	9	6
1988	32	15	6	9
1989	24	13	4	9
1990	19	7	3	4
1991	13	14	7	7
1992	18	11	9	2
1993	19	16	9	7
1994	32	32	17	15
1995	58	43	22	21
1996	65	50	24	26
1997	70	77	39	38
1998	71	95	45	50
1999	71	77	47	30
2000	60	61	30	31
2001	32	49	21	28
2002	18	22	11	11
2003	27	30	15	15
2004	27	34	15	19
2005	25	38	26	12
2006	25	31	13	18
2007	27	34	15	19
Total	806	789	402	387

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III. Empirical Results

A. Measuring Target Bidding Quality

The measure of target bidding quality that we propose is based on the market reaction to the announcements of those targets' past acquisitions. We measure the market reaction to each past acquisition as the cumulative abnormal return (CAR) calculated using standard event study methodology. We estimate the CAR over an 11-day event window (−5, +5) using the market model.[4] The parameters of the market model are estimated with the CRSP value-weighted return as the market return over a 208-trading-day estimation period ending 45 trading days before the acquisition announcement date. The minimum estimation period we require is 100 trading days.

Similar to Offenberg (2009), we measure target bidding quality by cumulating the CARs from the acquisitions initiated by each bidder in the period from 6 years before to 60 days before the announcement date of the bidder's takeover.[5,6] We call this variable sum of cumulative abnormal returns, or SCAR. When cumulating the CARs, we make sure that we do not double count the CARs of prior acquisition announcements that happen too close to each other in time. Should the event windows used to calculate the CARs for a single bidder overlap, we include only the CARs realized around the acquisition with the higher deal value.[7]

Our primary measure of target bidding quality is the SCAR. The lower the SCAR, the worse the prior acquisitions made by a bidder. In Table 1, we report separately the distribution by announcement year of bidders with negative SCARs and bidders with positive SCARs. Three hundred and eighty-seven (387) bidders, roughly half of the sample of all 789 bidders, have negative SCARs. This roughly even split between bidders with positive and negative SCARs also obtains in individual sample years.

In some of our empirical tests, we use a binary version of SCAR as a measure of target bidding quality, which we call "Bad Bidder Dummy." Bad Bidder Dummy takes the value of 1 when the SCAR for that bidder is in the bottom tercile of the sample and takes the value of 0 when the SCAR for that bidder is in the top tercile of the sample. When we measure bidding quality by this dummy variable, we discard the takeovers of bidders with SCARs in the middle tercile to avoid misclassifying some bidders due to inaccuracies inherent in the calculation

[4]Later in the study, we also use a (−5, +5) window to estimate acquirer CAR and combined acquirer and target CAR. Using a shorter event window of (−2, +2) throughout does not substantively change the main results.

[5]We choose 6 years prior to the takeover to remain consistent with past studies. In comparison, Offenberg (2009) compounds acquisition announcement CARs for a bidder in a 2-year window and observes the bidders for 4 years afterward to determine whether the compound CARs relate to the likelihood that a bidder is taken over. Lehn and Zhao (2006) observe CEOs for 5 years after they make acquisition bids to determine whether the likelihood of CEO turnover depends on the market reaction to those bids.

[6]The results reported throughout remain substantively unchanged if we sum CARs over 5, 4, or 3 years instead of 6 years.

[7]This happens rarely in our sample. From the total of 789 bidders, 365 make only one acquisition that meets our criteria, 192 make two acquisitions, 224 make three to nine acquisitions, and only 8 make more than nine acquisitions.

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of abnormal returns. With Bad Bidder Dummy created this way, the highest SCAR for a bidder with the Bad Bidder Dummy of 1 is −5.0%, and the lowest SCAR for a bidder with the Bad Bidder Dummy of 0 is +5.7%. In the text, we refer to the bidders with Bad Bidder Dummy equal to 1 as bad bidders and the bidders with Bad Bidder Dummy equal to 0 as good bidders.

SCAR and the Characteristics of Bidders' Prior Acquisitions

One potential criticism of our measure of prior acquisition quality, SCAR, is that it contains information about the bidder that is unrelated to the quality of the acquisition. For example, some research argues that acquisitions paid for by stock generally result in negative abnormal returns for the acquirer not because the acquisition destroys value, but because the acquirer paid with overvalued stock, and the market is correcting this mispricing (Travlos (1987), Shleifer and Vishny (2003)). So, if our bad bidders predominantly made stock acquisitions that resulted in negative abnormal returns, they could be labeled "bad" erroneously.

To address this issue, we compare prior acquisition characteristics to see whether bad bidders made acquisitions that differ from those made by good bidders.[8] We find that the acquisitions differ significantly in two characteristics: i) Bad bidders made acquisitions that have smaller relative size (median of 0.07 vs. 0.09), and ii) bad bidders were more likely to acquire a public target (17.2% vs. 12.4%).

The literature proposes several explanations for why the acquirer abnormal returns increase in the relative size of the acquisition. Roll (1986) suggests that acquirers may value target firms more accurately when the target firm is larger because stakes are higher. He also suggests that because larger firms are less closely held, acquirers can offer a lower premium and still convince target shareholders to deliver their shares. Additionally, it is likely that there is less competition for the control of larger firms, enabling acquirers to pay a lower premium. Chang (1998) and Fuller, Netter, and Stegemoller (2002) suggest that when stock is used as the method of payment in the acquisition of private targets, the likelihood of blockholder formation increases as the relative size of the private target to the bidder increases. This creation of a large blockholder then allows for greater monitoring of the bidder's management, thereby increasing bidder value. All these explanations suggest that higher abnormal returns due to higher relative size of the acquisition reflect acquisition quality or value added by the acquisition and do not reflect information unrelated to the value of the acquisition, such as the acquirer's equity undervaluation.

With respect to the smaller abnormal returns associated with the acquisitions of public targets versus private targets, Fuller et al. (2002) theorize that "private firms and subsidiaries cannot be bought and sold as easily as publicly traded

[8]Specifically, we compare deal value; relative deal size; M&A activity in the target firm industry; the rates at which the acquisitions were hostile, tender offers, competed, diversifying, all-cash financed, and all-stock financed; and whether they had private, public, subsidiary, or international targets. Untabulated summary statistics are available from the authors.

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firms. This lack of liquidity makes these investments less attractive and thus less valuable than similar, more liquid investments. The acquirer captures this discount in purchasing the privately held firm or the subsidiary." This again seems to suggest that the public status of the target impacts the value added by the acquisition and reflects acquisition quality (i.e., the acquirer's ability to capture the liquidity discount) rather than some unrelated information.

In summary, we do not believe that the lower abnormal returns around the acquisitions of public targets or relatively smaller targets reflect information unrelated to the quality of those acquisitions. Thus, since bad and good bidders make otherwise comparable acquisitions, we contend that the SCAR is a reasonable measure of the quality of past acquisitions.

B. Takeover Premium and Target Bidding Quality

In this section, we examine how takeover premiums for target firm shareholders relate to target bidding quality, as measured by SCAR. We measure the takeover premium two ways. First, we calculate the premium as the offer price per share paid by the acquirer (from SDC) scaled by the target's stock price 28 days prior to the announcement of the takeover, minus 1. We call this the Raw Premium. Second, we follow the approach suggested in Schwert (1996) and calculate the premium as the sum of the pre-announcement run-up and the post-announcement increase in the target's stock price. We estimate this premium as the CAR realized by the target firm from 42 trading days before the announcement date to the date of deal completion or to 126 trading days after the announcement, whichever comes first. We call this the CAR Premium.

In Table 2, we summarize average and median takeover premiums for various subsamples of target firms. We report that shareholders of target firms that were past bidders realize similar Raw Premiums and CAR Premiums compared to shareholders of target firms that did not make acquisitions in the past. The average (median) Raw Premium is 39.5% (34.3%) and the average (median) CAR Premium is 28.7% (27.4%) for past bidders. These premiums are similar to those reported in Officer (2003) and Schwert (1996). However, there seems to be a difference between the premiums realized by shareholders of target firms that made value-increasing acquisitions in the past and those that made value-decreasing acquisitions in the past. In the subsample of bad bidders, the mean (median) Raw Premium is 43.3% (36.1%). In comparison, the mean (median) Raw Premium in the subsample of good bidders is 35.4% (30.3%). The difference in means is statistically significant at the 5% level, and the difference in medians is statistically significant at the 10% level. Comparing CAR rather than Raw Premium also suggests a statistically significant difference between premiums received by good and bad bidders.[9]

These univariate results suggest that the premium realized by the shareholders of target firms that made acquisitions in the past depends on the quality of

[9] As a robustness check, we define good and bad bidders as firms with SCARs in the top and bottom quartiles rather than terciles and repeat the analysis in Table 2. The results that we obtain are similar to those reported.

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TABLE 2

Takeover Premiums: Summary Statistics

The main sample consists of 1,595 completed U.S. corporate takeovers listed on SDC between 1986 and 2007 with a deal value at least 5% of the market capitalization of the acquirer and the market capitalization of the target at least $25 million (in year 2000 dollars). Raw Premium is the offer price divided by the target's stock price 28 days before the takeover announcement date minus 1. CAR premium is the cumulative abnormal return realized by the target firm in the period from −42 trading days to the close of the takeover transaction or +126 trading days after the announcement of the takeover, whichever comes first. Panel A reports statistics for the full sample of takeovers, split into the Takeovers of Bidders subsample and the Takeovers of Nonbidders subsample. Bidders are target firms that made at least one acquisition with a value greater than 1% of their market capitalization in the period from 6 years to 60 days prior to being targeted for corporate takeover. Nonbidders are target firms that did not make any such acquisitions. Panel B reports statistics for the Takeovers of Bidders subsample, split based on Bad Bidder Dummy that takes the value of 1 if the SCAR for the target firm is in the bottom tercile (bad bidder) and takes the value of 0 if the SCAR is in the top tercile (good bidder). SCARs are the sums of 11-day cumulative abnormal returns realized by target firms around the announcements of their past acquisitions. In the table, ** and * indicate the difference is statistically significant at the 5% and 10% levels, respectively.

Panel A. Target Premiums Sorted by Target Acquisition History

	Raw Premium			CAR Premium		
	Takeovers of Nonbidders	Takeovers of Bidders	Difference	Takeovers of Nonbidders	Takeovers of Bidders	Difference
	(1)	(2)	(2) − (1)	(3)	(4)	(4) − (3)
Mean	39.7%	39.5%	−0.2%	29.2%	28.7%	−0.5%
Median	34.2%	34.3%	0.1%	27.1%	27.4%	0.3%
N	787	773		795	789	

Panel B. Takeover Premiums to Bidders Sorted by Target Bidding Quality

	Raw Premium			CAR Premium		
	Bad Bidder Dummy = 0	Bad Bidder Dummy = 1	Difference	Bad Bidder Dummy = 0	Bad Bidder Dummy = 1	Difference
	(1)	(2)	(2) − (1)	(3)	(4)	(4) − (3)
Mean	35.4%	43.3%	7.8%**	22.4%	31.8%	9.4%**
Median	30.3%	36.1%	5.8%*	17.3%	31.8%	14.5%**
N	257	258		263	263	

those acquisitions. In particular, it seems that the larger the value lost from the target's past acquisitions, the higher the takeover premium. In the following analysis, we examine whether these results also obtain after controlling for other possible determinants of the takeover premium.

In Panel A of Table 3, we compare various fundamental and other characteristics of target firms classified as bad bidders with those of good bidders. Some of these characteristics serve as control variables in the multivariate analysis of the determinants of the target premium and in the multivariate analysis of acquirer abnormal returns or synergy gains presented later in the study. In selecting the controls, we were guided by the recent studies of Moeller et al. (2004), Masulis et al. (2007), and Wang and Xie (2009). All accounting data are from Compustat and are taken from the fiscal year end prior to the announcement of the takeover.

By construction, bad bidders have significantly lower SCARs than good bidders. The average (median) SCAR is 20.1% (14.5%) for good bidders and −17.2% (−11.6%) for bad bidders. Bad bidders seem to be larger than good bidders in terms of total assets and market capitalization, but the only difference that is statistically significant is in the median value of assets. There is no statistically significant difference between bad bidders and good bidders in free cash flow scaled by assets or market leverage. However, there seems to be a difference in the valuation of these firms. The median Tobin's Q of bad bidders is

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TABLE 3

Target and Deal Characteristics Sorted by Target Bidding Quality

The sample contains 789 completed U.S. corporate takeovers of target firms that made at least one acquisition with a value greater than 1% of their market capitalization in the period from 6 years to 60 days prior to being taken over (Takeovers of Bidders). We include corporate takeovers listed on SDC between 1986 and 2007 with a deal value at least 5% of the market capitalization of the acquirer and the market capitalization of the target at least $25 million (in year 2000 dollars). SCARs are the sums of 11-day cumulative abnormal returns realized by target firms around the announcements of their past acquisitions. The target firms are classified into subsamples based on Bad Bidder Dummy that takes the value of 1 if the SCAR is in the bottom tercile (bad bidders) ($N = 263$) and takes the value of 0 if the SCAR is in the top tercile (good bidders) ($N = 263$). Panels A and B report target characteristics, and Panel C reports deal characteristics. Market Capitalization is from CRSP measured 28 days prior to the takeover announcement date. Accounting variables are from Compustat measured at the fiscal year end prior to the takeover announcement date. Assets are total assets. Free Cash Flow is the income before depreciation, interest, and taxes minus interest, taxes, and capital expenditures. Tobin's Q is the market value of assets divided by the book assets, where the market value of assets is book assets plus market capitalization minus book equity (all from Compustat). Market Leverage is total debt divided by the market value of assets. Number of Prior Acquisitions is the number of acquisitions completed in the period from 6 years to 60 days prior to the takeover. Days from Last Acquisition is the number of days between the target's last acquisition and the announcement of the target's ultimate takeover. Number of operating segments is the count of operating segments reported in the Compustat Segment database. Prior CEO turnover takes the value of 1 if there was a CEO turnover in the period from the target's first prior acquisition to the target's ultimate takeover, and 0 otherwise. Prior Divestiture takes the value of 1 if the target firm completed a divestiture with a value greater than 1% of the market capitalization in the period from the target's first acquisition to 60 days prior to the target's ultimate takeover, and 0 otherwise. Industry-adjusted values are calculated as firm values minus industry median values in that year. Industry medians are calculated using all Compustat firms classified into Fama and French (1997) 49 industries based on the firms' primary SIC codes. Deal Value is from SDC. Relative size is the Deal Value divided by the acquirer's market capitalization 28 days before the announcement date. Hostile Deal, Tender Offer, Competing Bid, All Cash, All Stock, Diversifying (Fama-French 49), and Diversifying (3-digit SIC) take the value of 1 if the deal is classified as hostile or unsolicited, if the deal is a tender offer, if there was more than one bidder for the target, if the takeover is financed 100% by cash, 100% by stock, if the target and the acquirer operate in different Fama-French industries, and if the target and the acquirer have segments that do not share a 3-digit SIC code, respectively, and 0 otherwise. Industry M&A is calculated as the value of all corporate control transactions reported by SDC for each year and Fama-French industry divided by the total book assets of all Compustat firms in the same Fama-French industry and year. The dollar values are adjusted for inflation and reported in year 2000 dollars. In the table, *, **, and *** indicate the difference between subsamples significant at the 10%, 5%, and 1% levels, respectively; [a], [b], and [c] indicate industry-adjusted values statistically different than 0 at the 1%, 5%, and 10% levels, respectively.

	Sample					
	Bad Bidder Dummy = 0		Bad Bidder Dummy = 1		Difference	
Variable	Mean (1)	Median (2)	Mean (3)	Median (4)	Mean (3) − (1)	Median (4) − (2)
Panel A. Target Characteristics						
SCAR	0.201	0.145	−0.172	−0.116	−0.373***	−0.261***
Assets ($mil)	1,190	301	1,695	383	505	81*
Market capitalization ($mil)	1,394	348	1,938	409	544	62
Free cash flow/Assets	0.002	0.035	−0.002	0.028	−0.004	−0.007
Tobin's Q	2.19	1.67	2.15	1.51	−0.05	−0.16**
Market leverage	0.172	0.158	0.166	0.122	−0.007	−0.035
Number of prior acquisitions	2.63	2	2.52	2	−0.11	0
Days from last acquisition	637	517	688	494	51	−23
Number of operating segments	1.62	1	1.80	1	0.18	0
Prior CEO turnover	0.266	0	0.289	0	0.023	
Prior divestiture	0.224	0	0.236	0	0.011	
Panel B. Industry-Adjusted Target Characteristics (based on Fama-French 49 industries)						
Free cash flow/Assets	0.015	0.028[a]	0.021[b]	0.029[a]	0.006	0.001
Tobin's Q	0.42[a]	0.03	0.36[a]	−0.11[b]	−0.06	−0.14**
Market leverage	0.054[a]	0.013[a]	0.052[a]	0.006	−0.002	−0.008
Panel C. Deal Characteristics						
Deal value ($mil)	2,147	594	3,145	798	998	203*
Relative size	0.59	0.35	0.62	0.36	0.03	0.01
Hostile deal	0.015	0	0.046	0	0.030**	
Tender offer	0.156	0	0.221	0	0.065*	
Competing bid	0.030	0	0.065	0	0.034*	
All cash	0.160	0	0.183	0	0.023	
All stock	0.411	0	0.369	0	−0.042	
Diversifying (Fama-French 49)	0.323	0	0.323	0	0.000	
Diversifying (3-digit SIC)	0.323	0	0.285	0	−0.037	
Industry M&A	0.099	0.062	0.088	0.058	−0.011	−0.004

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lower than the median Q of good bidders, with the difference being statistically significant at the 5% level. The lower Q for bad bidders can be the manifestation of the value reduction due to past acquisitions. Alternatively, the lower Q may indicate that these firms have lower growth opportunities or that these firms are undervalued.

With regard to other characteristics, we document the following: Bad and good bidders made similar numbers of acquisitions in the past (2.52 and 2.63 on average, respectively). On average (median), the past bidders receive their takeover offers within 1.7–1.9 years (1.4 years) after they make their last acquisition. Bad bidders have 1.8 operating segments on average, while good bidders have 1.62 segments on average, with the difference being insignificant.

The last set of characteristics we compare between the two subsamples is intended to control for possible restructuring that may have occurred between the time that bidders made their first acquisitions and their eventual takeover. One prediction we test in our analysis is that the gains from the takeovers of bad bidders increase in the value lost from bad bidders' prior acquisitions. This prediction assumes that the source of gains in the takeovers of bad bidders is the reversal or better management of bad bidders' prior poor acquisitions. However, this potential for value creation may not be present in bad bidders who experience management turnaround or undergo restructuring programs before they are taken over. To control for this possibility in our analyses, we identify those bidder firms that experience CEO change and those bidder firms that make significant divestitures in the time between their first acquisition and 60 days prior to the announcement of their takeover. We collect the data on CEO turnover by examining Securities and Exchange Commission (SEC) filings in LexisNexis or the Electronic Data Gathering, Analysis, and Retrieval (EDGAR) system and searching for news articles in LexisNexis and Factiva. We collect the divestiture data from SDC and define significant divestitures as those with a value of at least 1% of the market value of the bidder's equity 28 days prior to the divestiture announcement.

We document that 28.9% of bad bidders and 26.6% of good bidders experience prior CEO turnover and that 23.6% of bad bidders and 22.4% of good bidders make at least one significant divestiture prior to being taken over. Neither difference between good and bad bidders is significantly different from 0 at conventional levels. We measure the potential restructuring activity in a number of other ways, such as the value of assets sold from Compustat relative to total assets in the year prior to the takeover and in the 6 years prior to the takeover, the value of all divestitures relative to the value of all acquisitions, the number of significant divestitures, and the number of all divestitures. Regardless of the measurement, potential restructuring activity does not seem to differ between good and bad bidders.

Overall, the comparison of good bidders and bad bidders suggests that these firms are similar in several respects but differ when compared on SCARs, Tobin's Q, and, albeit weakly, on total assets.

In Panel B of Table 3, we report industry-adjusted rather than raw characteristics. Industry adjustment is made by subtracting industry medians from the raw characteristics. Industry medians are calculated by assigning all firms in

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Compustat to the 49 industries defined by Fama and French (1997) based on their primary 4-digit Standard Industrial Classification (SIC) code.[10] The industry-adjusted values indicate that both good and bad bidders have higher free cash flow than their respective industry medians. Good bidders also seem to have higher market leverage, while the market leverage of bad bidders is not statistically different from the industry median. As with unadjusted values, industry-adjusted free cash flow and market leverage are not statistically different between good and bad bidders. The only significant difference we find between the two subsamples is in Tobin's Q. The median Tobin's Q for bad bidders is significantly lower than the industry median Tobin's Q at the 5% level, while the median Tobin's Q for good bidders is not statistically different from the industry Tobin's Q. The difference between medians in industry-adjusted Tobin's Q for bad and good bidders is statistically significant at the 5% level. Thus, it appears that bad bidders have lower valuation not only in comparison to good bidders but also in comparison to their industry peers. Nevertheless, this analysis again suggests that aside from Tobin's Q, good and bad bidders appear to have similar characteristics.

In Panel C of Table 3 we compare the deal characteristics of the takeovers of bad and good bidders. The median deal value appears to be higher when a bad bidder rather than a good bidder is taken over (10% significance level). Hostile bids, tender offers, and competed bids are more common in the takeovers of bad bidders than of good bidders. All of these differences are statistically significant at the 10% level, except for hostile bids, which is significant at the 5% level. This suggests that the takeovers of bad bidders are more likely to be opposed by the target firm's management which, in turn, increases the incentive of the acquirer to bypass the management through a tender offer. This managerial opposition can occur for at least two reasons. First, managers fight for an increase in the offer price if the bid is too low. Second, managers fight to keep their positions. As for the other deal characteristics, the likelihood of an all-cash deal, an all-stock deal, or a diversifying transaction appears similar for the takeovers of good and bad bidders. The intensity of the M&A market in the target firm industry, calculated much like Moeller et al.'s (2004) liquidity index, also appears similar.

In Table 4, we report the results of cross-sectional regressions of the takeover premium on the measures of target bidding quality. For brevity, we report only the regressions with the Raw Premium as a dependent variable. The regressions with CAR premium as a dependent variable produce similar results.[11] In columns (1) and (2), we perform the first set of regressions on the sample of takeovers of all bidders and measure target bidding quality by SCAR (in %). Both regressions include as controls indicator variables for target prior CEO turnover and for prior significant divestiture, since these variables might influence the relationship between takeover gains and target bidding

[10] Industry definitions are obtained on 10/5/2011 from an updated file on Kenneth French's Web site at http://mba.tuck.dartmouth.edu/pages/faculty/ken.french/Data_Library/det_49_ind_port.html.

[11] These results are available from the authors.

TABLE 4

Cross-Sectional Regression of Takeover Premium on Target Bidding Quality

The sample contains 789 completed U.S. corporate takeovers of target firms that made at least one acquisition with a value greater than 1% of their market capitalization in the period from 6 years to 60 days prior to being taken over (Takeovers of Bidders). We include corporate takeovers listed on SDC between 1986 and 2007 with a deal value at least 5% of the market capitalization of the acquirer and with the market capitalization of the target at least $25 million (in year 2000 dollars). Takeover Premium is the offer price divided by the target's stock price 28 days before the takeover announcement date minus 1. SCARs are the sums of 11-day cumulative abnormal returns realized by target firms around the announcements of their past acquisitions. Bad Bidder Dummy takes the value of 1 if the SCAR for that target firm is in the bottom tercile (bad bidder) and takes the value of 0 if the SCAR is in the top tercile (good bidder). All other explanatory variables are described in Table 3. Regressions are estimated using pooled ordinary least squares. All regressions include calendar year dummy variables whose coefficient estimates are suppressed. Statistical significance is based on robust standard errors. Standard errors are reported in parentheses. In the table, *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

	Dependent Variable: Takeover Premium					
	Sample					
	All Targets That Are Past Bidders		Targets With SCARs in Middle Tercile Are Excluded		Targets With Negative SCARs Only	
Variable	(1)	(2)	(3)	(4)	(5)	(6)
Target SCAR	−0.219***	−0.152**			−0.271**	−0.053
	(0.063)	(0.069)			(0.115)	(0.174)
Target bad bidder dummy			0.115***	0.090**		
			(0.033)	(0.035)		
Target prior divestiture	0.003	−0.009	0.015	−0.001	0.001	0.005
	(0.030)	(0.033)	(0.041)	(0.045)	(0.047)	(0.050)
Target prior CEO turnover	−0.051*	−0.046	−0.087**	−0.095**	−0.059	−0.061
	(0.029)	(0.031)	(0.037)	(0.041)	(0.042)	(0.047)
log(Target market cap)	−0.036***	−0.086***	−0.022*	−0.061***	−0.050***	−0.098***
	(0.009)	(0.018)	(0.012)	(0.023)	(0.016)	(0.030)
Target Tobin's Q	−0.002	−0.005	−0.003	−0.001	0.015	−0.002
	(0.007)	(0.012)	(0.006)	(0.013)	(0.012)	(0.014)
Target market leverage	0.012	0.128	−0.009	0.105	0.059	0.296
	(0.088)	(0.116)	(0.106)	(0.143)	(0.143)	(0.185)
Target free cash flow	0.272***	0.250**	0.244**	0.221*	0.297**	0.204
	(0.089)	(0.103)	(0.098)	(0.121)	(0.144)	(0.190)
log(Acquirer market cap)		0.062***		0.054**		0.065**
		(0.017)		(0.024)		(0.028)
Acquirer Tobin's Q		0.021***		0.016**		0.028**
		(0.006)		(0.007)		(0.011)
Acquirer market leverage		−0.026		−0.020		−0.204
		(0.134)		(0.157)		(0.207)
Acquirer free cash flow		0.090		0.209		0.372
		(0.157)		(0.171)		(0.405)
Relative size		0.030**		0.018		0.030*
		(0.014)		(0.024)		(0.017)
Diversifying (3-digit SIC)		−0.011		0.017		−0.006
		(0.029)		(0.038)		(0.046)
Competing bid		0.023		−0.022		0.002
		(0.050)		(0.088)		(0.075)
All cash		0.036		0.062		0.023
		(0.036)		(0.055)		(0.064)
Hostile		0.238***		0.311***		0.288***
		(0.060)		(0.092)		(0.086)
Tender offer		0.005		−0.004		−0.006
		(0.036)		(0.051)		(0.050)
Industry M&A		0.147		0.319		0.504
		(0.180)		(0.256)		(0.312)
No. of obs.	686	599	446	379	336	292
R^2	0.107	0.175	0.141	0.234	0.135	0.239

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quality.[12,13] In column (1), we include as additional controls only target characteristics to ensure that any identified effect of target bidding quality on takeover premium is not driven by the presence of control variables that are potentially endogenously determined, such as acquirer characteristics and deal characteristics (Masulis et al. (2007), Wang and Xie (2009)). Specifically, our control variables include target size, Tobin's Q, leverage, and free cash flow, all measured at the end of the fiscal year prior to the takeover.

The results we obtain are consistent with the results from the univariate analysis. The coefficient estimate on the SCAR is negative and significant at the 1% level. The coefficient estimate of about −0.22 indicates that a 26% lower SCAR (which is the difference between the median SCAR for bad bidders and median SCAR of good bidders) translates to a roughly 5.7% higher takeover premium.

In column (2) of Table 4, we include other control variables in the regression, regardless of whether they are potentially endogenous. Specifically, we include acquirer size, Tobin's Q, leverage, and free cash flow, as well as the deal characteristics, including relative deal size, intensity of M&A activity in the target firm industry, and indicator variables for whether the deal is a diversifying transaction, whether there was a competing bid, whether the deal was 100% cash financed, whether the deal was hostile, and whether the deal was a tender offer.[14] Including these control variables in the regression does not alter the sign of the coefficient estimate on the SCAR but reduces its significance to the 5% level and its magnitude by about a quarter compared to the corresponding coefficient estimate in column (1).

In columns (3) and (4) of Table 4, we perform the same analysis as in columns (1) and (2) but with the Bad Bidder Dummy in place of SCAR. The coefficient estimate on Bad Bidder Dummy is 0.115 in column (3) and 0.090 in column (4), with the first coefficient being significant at the 1% level and the second at the 5% level. This suggests that the shareholders of bad bidders realize 9%–11.5% higher takeover premiums than the shareholders of good bidders, ceteris paribus.

In columns (5) and (6) of Table 4, we conduct the same analysis as in columns (1) and (2) but this time on the subsample of target firms with negative SCARs only rather than on the whole sample. The results from column (5) again suggest that there is a significantly negative relationship between SCAR and takeover premium. However, when we include all control variables in the

[12]In untabulated results, we also include interactions between the indicator variable for prior CEO turnover and SCAR and the indicator for prior significant divestiture and SCAR. The coefficients on these interactions are insignificant and generally small in magnitude. From these results, it appears that the effect of SCAR on takeover premiums is not statistically different for firms that experience prior CEO turnover or prior significant divestiture.

[13]The results reported throughout remain substantively unchanged if we exclude from our sample the takeovers of firms with prior CEO turnover or takeovers of firms that make prior significant divestitures.

[14]In unreported results, we also include as controls managerial ownership, ownership of the largest institutional blockholder, and activist public pension fund ownership calculated as in Cremers and Nair (2005). Including these ownership variables does not change the sign or the significance of the results reported in Table 4 or the regression results reported later in the study.

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regression in column (6), the coefficient on SCAR becomes insignificant and much smaller in magnitude.

A few of the coefficient estimates on the control variables are also noteworthy. We find some evidence that takeover premiums are smaller when the target firms experience prior CEO turnover, but prior significant divestiture activity seems to have no effect on takeover premiums. The lower premiums for firms with prior CEO turnover might reflect target value increase due to management change. The takeover premium also seems to decrease with the target size and increase with the acquirer's size. These findings are similar to those reported by Moeller et al. (2004), who contend that large acquirers tend to overpay for the targets because of managerial hubris. We also find that the premiums increase in bid hostility, target free cash flow, acquirer Tobin's Q, and relative deal size. These results are generally consistent with the results in prior studies.

Collectively, the evidence in this section indicates that, controlling for other determinants of takeover premium, the takeover premium for target shareholders increases as the quality of acquisitions made by target firms decreases. The targets classified as bad bidders receive higher takeover premiums than the targets classified as good bidders. This evidence supports the argument that the shareholders of firms with poor acquisition programs benefit from takeovers and recover, at least partially, the losses from the past value-decreasing acquisitions.

C. Acquirer Gains and Target Bidding Quality

In this section, we examine acquirers' gains at the announcement of the takeover and how those gains relate to the measures of target prior bidding quality. We measure acquirer gains as the CAR calculated using standard event study methodology. We estimate the CAR over an 11-day event window $(-5, +5)$ around the announcement of the takeover using the market model. The parameters of the market model are estimated with the CRSP value-weighted return as the market return over a 208-trading-day estimation period ending 45 trading days before takeover announcement date. The minimum estimation period we require is 100 trading days.

The CARs realized by acquiring firms in different subsamples are reported in Table 5. Comparing medians, acquirers of past bidders earn an abnormal return of -2.9%, while acquirers of nonbidders earn a return of -1.2%. These median returns are significantly different from 0 and from each other at the 1% level, indicating that acquirers of both bidders and nonbidders lose value when they announce the takeovers. However, acquirers of nonbidders suffer smaller losses than do acquirers of bidders. Among acquirers of bidders, acquirers of good bidders earn a significantly negative median abnormal return of -3.3%, and acquirers of bad bidders earn a significantly negative return of -2.9%. The difference between these values is not statistically significant. Inferences from comparing average rather than median CARs are similar. These results suggest that for the acquirer, the market reaction to the announcement of a takeover varies depending upon whether the target firm has a history of making acquisitions but does not vary with target bidding quality.

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TABLE 5

Acquirer Returns: Summary Statistics

The main sample consists of 1,595 completed U.S. corporate takeovers listed on SDC between 1986 and 2007 with a deal value at least 5% of the market capitalization of the acquirer and the market capitalization of the target at least $25 million (in year 2000 dollars). CAR(−5, +5) is the cumulative abnormal return (CAR) realized by the acquiring firm in the period from −5 trading days to +5 trading days relative to the announcement of the takeover. Panel A reports statistics for the full sample of takeovers split into the Takeovers of Bidders and the Takeovers of Nonbidders. Bidders are target firms that made at least one acquisition with a value greater than 1% of their market capitalization in the period from 6 years to 60 days prior to being targeted for corporate takeover. Nonbidders are target firms that did not make any such acquisitions. Panel B reports statistics for the Takeovers of Bidders split based on Bad Bidder Dummy that takes the value of 1 if the SCAR for the target firm is in the bottom tercile (bad bidder) and takes the value of 0 if the SCAR is in the top tercile (good bidder). SCARs are the sums of 11-day cumulative abnormal returns realized by target firms around the announcements of their past acquisitions. In the table, *** indicates a difference statistically significant at the 1% level; [a] indicates values significantly different from 0 at the 1% level.

Panel A. CARs to Acquirers Sorted by Target Acquisition History

	CAR(−5, +5)		
	Takeovers of Nonbidders	Takeovers of Bidders	Difference
	(1)	(2)	(2) − (1)
Mean	−1.6%[a]	−3.4%[a]	−1.7%***
Median	−1.2%[a]	−2.9%[a]	−1.7%***
N	806	789	

Panel B. CARs to Acquirers of Bidders Sorted by Target Bidding Quality

	CAR(−5, +5)		
	Bad Bidder Dummy = 0	Bad Bidder Dummy = 1	Difference
	(1)	(2)	(2) − (1)
Mean	−4.4%[a]	−3.4%[a]	0.7%
Median	−3.3%[a]	−2.9%[a]	−0.9%
N	263	263	

In Table 6, we report summary statistics separately for acquirers of good and bad bidders. The results reported in Table 6 suggest that the acquirers of bad bidders are larger in total assets and market capitalization. However, only the difference in market capitalization is significant. The acquirers of bad bidders do not significantly differ from acquirers of good bidders in free cash flow, Tobin's Q, market leverage, or the number of operating segments.

The last characteristic we examine is the success of the acquirers' prior acquisitions made in the last 6 years. Specifically, we calculate the SCAR for each acquirer who made at least one acquisition in the period from 6 years to 60 days prior to the announcement of the takeover of a bidder. As we did with the target firms, we require that any such acquisition be at least 1% of the market value of the acquirer. We find that 81% of the acquirers of bad bidders and 72% of the acquirers of good bidders made at least one such acquisition. The mean and median SCARs for the acquirers of bad bidders are 3.9% and 3.5%, respectively, both significantly different from 0. The mean and median SCARs for the acquirers of good bidders are 2.0% and 0.9%, respectively, neither of which is significantly different from 0. The difference between the SCARs of the acquirers of good and bad bidders is insignificant. These results suggest that the acquirers of past bidders do not have a bad record when it comes to past acquisitions. If anything, acquirers of bad bidders have a history of making value-increasing acquisitions. However, they seem to lose 3.4% on average around the announcement of the acquisition of a bad bidder. These results seem consistent with the notion

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TABLE 6

Acquirer Characteristics Sorted by Target Bidding Quality

The sample contains 789 completed U.S. corporate takeovers of target firms that made at least one acquisition with a value greater than 1% of their market capitalization in the period from 6 years to 60 days prior to being taken over (Takeovers of Bidders). We include corporate takeovers listed on SDC between 1986 and 2007 with a deal value at least 5% of the market capitalization of the acquirer and the market capitalization of the target at least $25 million (in year 2000 dollars). The takeovers are classified into subsamples based on Bad Bidder Dummy that takes the value of 1 if the target SCAR is in the bottom tercile (bad bidder) and takes the value of 0 if the target SCAR is in the top tercile (good bidder). Target (Acquirer) SCARs are the sums of 11-day cumulative abnormal returns realized by target (acquiring) firms around the announcements of their past acquisitions. Only the values for acquiring firms are reported. All variables for acquirers are calculated the same way as described for targets in Table 3. The dollar values are adjusted for inflation and reported in year 2000 dollars. In the table, ** and * indicate a difference between subsamples significant at the 5% and 10% levels, respectively; [a] and [b] indicate values statistically different from 0 at the 1% and 5% levels, respectively.

	Sample					
	Bad Bidder Dummy = 0		Bad Bidder Dummy = 1		Difference	
Variable	Mean (1)	Median (2)	Mean (3)	Median (4)	Mean (3) − (1)	Median (4) − (2)
Panel A. Acquirer Characteristics						
Assets ($mil)	3,939	1,191	5,247	1,494	1,308	303
Market capitalization ($mil)	5,462	1,592	8,699	2,212	3,237**	619*
Free cash flow/Assets	0.021	0.037	0.032	0.038	0.011	0.000
Tobin's Q	2.70	1.81	2.66	1.83	−0.04	0.02
Market leverage	0.150	0.107	0.134	0.095	−0.016	−0.012
Number of operating segments	2.10	1	2.16	1	0.05	0
Made acquisition in past 6 years	0.722	1	0.810	1	0.087**	
Acquirer SCAR (if made acquisition)	0.020	0.009	0.039[a]	0.035[a]	0.019	0.027
Panel B. Industry-Adjusted Acquirer Characteristics (based on Fama-French 49 industries)						
Free cash flow/Assets	0.038[a]	0.037[a]	0.055[a]	0.047[a]	0.016	0.010
Tobin's Q	0.928[a]	0.269[a]	0.878[a]	0.237[a]	−0.050	−0.032
Market leverage	0.030[a]	−0.003	0.017[b]	−0.003	−0.013	0.000

that successful performance breeds overconfidence (Billett and Qian (2008), Baker et al. (2010)).[15]

Since acquirers of good and bad bidders earn similar abnormal returns around the announcements of the takeover, and their characteristics are also similar, there is no reason to suspect that we would find any significant relationship between the measures of target bidding quality and the acquirer CARs in multivariate analysis. Nevertheless, we do several sets of cross-sectional regressions of acquirer returns on target SCARs or Bad Bidder Dummy and report them in Table 7. In the regressions in columns (1), (3), and (5), we include as explanatory variables only the measures of target bidding quality and controls for prior target CEO turnover and for prior significant divestiture, since these controls potentially influence how the gains from the takeover relate to target prior acquisition quality. In columns (2), (4), and (6), we also control for acquirer characteristics, target characteristics, and other deal characteristics. All control variables are the same as those used to explain takeover premiums in Table 4.

The results indicate that in the whole sample of takeovers of bidders, there is no significant relationship between bidder acquisition quality and abnormal

[15] We further examine whether overconfidence plays a role in explaining acquirer abnormal returns in Section III.F.

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TABLE 7

Cross-Sectional Regression of Acquirer Returns on Target Bidding Quality

The sample contains 789 completed U.S. corporate takeovers of target firms that made at least one acquisition with a value greater than 1% of their market capitalization in the period from 6 years to 60 days prior to being taken over (Takeovers of Bidders). We include corporate takeovers listed on SDC between 1986 and 2007 with a deal value at least 5% of the market capitalization of the acquirer and the market capitalization of the target at least $25 million (in year 2000 dollars). CAR(−5, +5) is the cumulative abnormal return realized by the acquirer in the (−5, +5) event window around the announcement of the takeover. SCARs are the sums of 11-day cumulative abnormal returns realized by target firms around the announcements of their past acquisitions. Bad Bidder Dummy takes the value of 1 if the SCAR for that target firm is in the bottom tercile (bad bidder) and takes the value of 0 if the SCAR is in the top tercile (good bidder). All other explanatory variables are described in Table 3. Regressions are estimated using pooled weighted least squares. The weighting variable is the reciprocal of the variance of the CAR. All regressions include calendar year dummy variables whose coefficient estimates are suppressed. Statistical significance is based on robust standard errors. Standard errors are reported in parentheses. In the table, *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

	Dependent Variable: Acquirer CAR(−5, +5)					
	Sample					
	All Targets That Are Past Bidders		Targets With SCARs in Middle Tercile Are Excluded		Targets With Negative SCARs Only	
Variable	(1)	(2)	(3)	(4)	(5)	(6)
Target SCAR	0.003	0.018			0.102**	0.168***
	(0.022)	(0.025)			(0.043)	(0.063)
Target bad bidder dummy			0.005	−0.003		
			(0.009)	(0.010)		
Target prior divestiture	−0.005	−0.004	−0.008	−0.008	−0.010	−0.009
	(0.008)	(0.009)	(0.011)	(0.013)	(0.012)	(0.015)
Target prior CEO turnover	0.006	0.001	0.013	0.016	0.002	−0.003
	(0.008)	(0.008)	(0.011)	(0.012)	(0.012)	(0.012)
log(Acquirer market cap)		0.005		0.016**		0.010
		(0.005)		(0.008)		(0.009)
Acquirer Tobin's Q		−0.003		−0.002		0.002
		(0.003)		(0.004)		(0.006)
Acquirer market leverage		0.114***		0.160***		0.070
		(0.044)		(0.061)		(0.053)
Acquirer free cash flow		0.061		0.044		0.205**
		(0.054)		(0.069)		(0.102)
log(Target market cap)		−0.011**		−0.021***		−0.016*
		(0.005)		(0.008)		(0.008)
Target Tobin's Q		−0.003		0.001		−0.001
		(0.005)		(0.006)		(0.007)
Target market leverage		−0.007		−0.039		−0.003
		(0.032)		(0.043)		(0.044)
Target free cash flow		0.087**		0.096**		0.003
		(0.040)		(0.048)		(0.074)
Relative size		−0.000		0.015		0.001
		(0.008)		(0.014)		(0.009)
Diversifying (3-digit SIC)		−0.007		−0.009		−0.013
		(0.009)		(0.012)		(0.013)
Competing bid		0.013		−0.015		0.011
		(0.015)		(0.017)		(0.022)
All cash		0.007		0.020		−0.019
		(0.011)		(0.015)		(0.017)
Hostile		0.017		−0.024		0.010
		(0.023)		(0.025)		(0.030)
Tender offer		0.004		−0.003		0.009
		(0.009)		(0.013)		(0.013)
Industry M&A		−0.042		−0.007		−0.043
		(0.068)		(0.091)		(0.103)
No. of obs.	783	610	522	386	386	296
R^2	0.031	0.106	0.033	0.138	0.065	0.157

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returns earned by the acquirer. The coefficients on target SCAR and Bad Bidder Dummy are insignificant in all regression specifications in columns (1)–(4) of Table 7. However, when we restrict the sample to the takeovers of bidders with negative SCARs (columns (5) and (6)), we find a significantly positive relationship between target SCARs and acquirer announcement returns. From these results, it appears that among takeovers of firms with poor acquisition histories, the more value-decreasing the past acquisitions made by target firms are, the lower the abnormal returns earned by the acquiring shareholders. Rather than recovering the value lost due to past acquisitions, the shareholders of firms that acquire bad bidders appear to be made worse off when the value lost from target past acquisitions is larger.

The coefficient estimates on some of the other control variables are also noteworthy. Unlike Moeller et al. (2004), we do not find a significant negative relation between the size of the acquirer and acquirer announcement returns.[16] In our models, the acquirer return increases (significantly in at least two estimations) in target free cash flow and acquirer leverage and decreases in target size.

D. Overall Gains from the Takeovers

The results from the previous two sections indicate that while target shareholders realize significant gains when their firms are taken over, acquiring shareholders realize losses when those takeovers are announced. Additionally, in takeovers of target firms with poor acquisition histories, the more value-decreasing the past acquisitions made by the target firm are, the higher the takeover premium earned by target shareholders but also the higher the losses realized by acquiring shareholders. Although these results suggest a transfer of wealth from acquiring firm shareholders to target firm shareholders, the takeovers can still create value if the combined value of the acquiring firm and target firm after the takeover exceeds the sum of their stand-alone values. We therefore examine whether the takeovers create overall gains and how those gains relate to measures of target bidding quality. If overall value is created by the takeover that offsets some of the value lost due to past acquisitions, then we expect that the value created will be negatively correlated with the measure of target's bidding quality, SCAR.

Similar to Moeller et al. (2004) and Wang and Xie (2009), we use the method developed by Bradley, Desai, and Kim (1988) and calculate the overall value created in the takeover as the CAR realized by the value-weighted portfolio of the target and the acquirer around the announcement of the takeover. The acquirer's and target's weights in the portfolio are based on their market capitalizations on the 6th trading day before the takeover announcement date. We adjust the target's

[16] It appears that the lack of relation between the acquirer's size and acquirer announcement return in our models arises because our models include target characteristics as controls, while the models in Moeller et al. (2004) do not include such controls. When we remove target characteristics from our models, the relation between acquirer size and abnormal returns becomes negative and statistically significant. Wang and Xie (2009), who use models similar to ours, also find no significant relation between acquirer size and abnormal returns.

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weight by subtracting from the target firm's market capitalization the value of target equity held by the acquirer prior to the takeover announcement date. The overall value created in the takeover is defined as the portfolio's CAR during an event window. Borrowing terminology from prior studies, we call the overall value created "synergy." As we did with the acquirer CAR, we estimate the portfolio CAR over an 11-day event window (−5, +5) around the announcement of the takeover using the market model. The parameters of the market model are estimated with the CRSP value-weighted return as the market return over a 208-trading-day estimation period ending 45 trading days before the takeover announcement date. The minimum estimation period we require is 100 trading days.

The synergy gains that obtain in different subsamples of takeovers are reported in Table 8. Comparing medians, takeovers of nonbidders create a significantly positive abnormal gain of 2.5%, while takeovers of bidders create a significantly positive abnormal gain of 1.4%. These values are significantly different from each other at the 5% level. This seems to indicate that takeovers of both bidders and nonbidders create positive median synergy value. However, takeovers of nonbidders create more value than do takeovers of bidders. Among takeovers of bidders, excluding bidders with SCARs in the middle tercile, takeovers of good bidders create a positive but insignificant synergy value of 0.6%, and takeovers of bad bidders create a positive but also insignificant synergy value of 0.8%. The difference between these values is not significantly different from 0 at conventional levels. Inferences from comparing average rather than median synergy gains are

TABLE 8

Synergy Gains: Summary Statistics

The main sample consists of 1,595 completed U.S. corporate takeovers listed on SDC between 1986 and 2007 with a deal value at least 5% of the market capitalization of the acquirer and the market capitalization of the target at least $25 million (in year 2000 dollars). The synergy gains are calculated as the value-weighted cumulative abnormal return realized by the portfolio of the acquiring firm and target firm in the period from −5 trading days to +5 trading days relative to the announcement of the transaction. The portfolio weights are based on the market capitalization of each firm on the 6th trading day prior to the announcement date. Target weight is adjusted for the acquirer's toehold. Panel A reports statistics for the full sample of takeovers split into the Takeovers of Bidders and the Takeovers of Nonbidders. Bidders are target firms that made at least one acquisition with a value greater than 1% of their market capitalization in the period from 6 years to 60 days prior to being taken over. Nonbidders are target firms that did not make any such acquisitions. Panel B reports statistics for the Takeovers of Bidders split based on Bad Bidder Dummy that takes the value of 1 if the SCAR for the target firm is in the bottom tercile (bad bidder) and takes the value of 0 if the SCAR is in the top tercile (good bidder). SCARs are the sums of 11-day cumulative abnormal returns realized by target firms around the announcements of their past acquisitions. In the table, ** indicates a difference statistically significant at the 5% level; [a] indicates values significantly different from 0 at the 1% level.

Panel A. Synergy Gains from Takeover Sorted by Target Acquisition History

	Takeovers of Nonbidders	Takeovers of Bidders	Difference
	(1)	(2)	(2) − (1)
Mean	2.6%[a]	1.1%[a]	−1.4%**
Median	2.5%[a]	1.4%[a]	−1.1%**
N	795	789	

Panel B. Synergy Gains from Takeover Sorted by Target Bidding Quality

	Bad Bidder Dummy = 0	Bad Bidder Dummy = 1	Difference
	(1)	(2)	(2) − (1)
Mean	−0.2%	1.1%	1.3%
Median	0.6%	0.8%	0.1%
N	263	263	

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similar. From this evidence, it appears that synergy gains do not differ for the acquisitions of good or bad bidders.[17]

As in our previous analysis, we perform cross-sectional regressions to examine the relationship between the measures of target bidding quality and synergy value. We use the same specification for the regression models as in Table 7. The results are reported in Table 9. As evidenced from that table, there seems to be little relationship between the synergy value created in the takeovers and target bidding quality in the whole sample. In the subsample of takeovers where the SCARs for the target firms are negative (columns (5) and (6)), the significant coefficients on SCARs indicate that the relationship between SCAR and synergy value is positive. This suggests that the takeovers of firms with poor acquisition histories create less synergy value when the value lost from the target's prior acquisitions is larger.

TABLE 9

Cross-Sectional Regression of Synergy Gains on Target Bidding Quality

The sample contains 789 completed U.S. corporate takeovers of target firms that made at least one acquisition with a value greater than 1% of their market capitalization in the period from 6 years to 60 days prior to being taken over (Takeovers of Bidders). We include corporate takeovers listed on SDC between 1986 and 2007 with a deal value at least 5% of the market capitalization of the acquirer and the market capitalization of the target at least $25 million (in year 2000 dollars). Synergy gain is the value-weighted cumulative abnormal return (CAR) realized by the portfolio of the acquiring firm and target firm in the period from −5 trading days to +5 trading days relative to the announcement of the transaction. The portfolio weights are based on the market capitalization of each firm on the 6th trading day prior to the announcement date. Target weight is adjusted for the acquirer's toehold. SCARs are the sums of 11-day cumulative abnormal returns realized by target firms around the announcements of their past acquisitions. Bad Bidder Dummy takes the value of 1 if the SCAR for the target firm is in the bottom tercile (bad bidder) and takes the value of 0 if the SCAR is in the top tercile (good bidder). All other explanatory variables are described in Table 3. Regressions are estimated using pooled weighted least squares. The weighting variable is the reciprocal of the variance of the CAR. All regressions include calendar year dummy variables whose coefficient estimates are suppressed. Statistical significance is based on robust standard errors. Standard errors are reported in parentheses. In the table, *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

	Dependent Variable: Synergy Gains (−5, +5)					
	Sample					
	All Targets That Are Past Bidders		Targets With SCARs in Middle Tercile Are Excluded		Targets With Negative SCARs Only	
Variable	(1)	(2)	(3)	(4)	(5)	(6)
Target SCAR	−0.015	−0.003			0.067*	0.129**
	(0.019)	(0.021)			(0.038)	(0.062)
Target bad bidder dummy			0.010	0.004		
			(0.008)	(0.009)		
Target prior divestiture	−0.005	−0.007	−0.005	−0.007	−0.012	−0.015
	(0.007)	(0.008)	(0.009)	(0.011)	(0.010)	(0.012)
Target prior CEO turnover	0.006	−0.001	0.015	0.014	0.002	−0.004
	(0.008)	(0.008)	(0.010)	(0.011)	(0.010)	(0.012)
log(Acquirer market cap)		−0.011**		−0.009		−0.012*
		(0.005)		(0.006)		(0.006)
Acquirer Tobin's Q		−0.003		−0.002		0.001
		(0.003)		(0.003)		(0.005)
Acquirer market leverage		0.050		0.068		0.027
		(0.033)		(0.045)		(0.050)

(continued on next page)

[17] As a robustness check, we define good and bad bidders as firms with SCARs in the top and bottom quartiles rather than terciles and repeat the analysis in Table 8. The results we obtain are similar to those reported.

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TABLE 9 (continued)

Cross-Sectional Regression of Synergy Gains on Target Bidding Quality

	Dependent Variable: Synergy Gains (−5, +5)					
	Sample					
	All Targets That Are Past Bidders		Targets With SCARs in Middle Tercile Are Excluded		Targets With Negative SCARs Only	
Variable	(1)	(2)	(3)	(4)	(5)	(6)
Acquirer free cash flow		0.071		0.068		0.188**
		(0.045)		(0.056)		(0.086)
log(Target market cap)		0.005		0.002		0.003
		(0.004)		(0.006)		(0.006)
Target Tobin's Q		−0.005		0.001		−0.002
		(0.004)		(0.004)		(0.005)
Target market leverage		0.016		−0.006		0.016
		(0.029)		(0.038)		(0.040)
Target free cash flow		0.092***		0.104**		0.014
		(0.034)		(0.044)		(0.060)
Relative size		0.016**		0.011		0.013*
		(0.007)		(0.011)		(0.007)
Diversifying (3-digit SIC)		0.000		−0.001		−0.010
		(0.008)		(0.011)		(0.011)
Competing bid dummy		−0.005		−0.040***		−0.025
		(0.013)		(0.015)		(0.018)
All cash dummy		0.011		0.017		−0.004
		(0.009)		(0.012)		(0.015)
Hostile dummy		0.054***		0.031		0.045**
		(0.018)		(0.021)		(0.022)
Tender offer dummy		0.021**		0.019		0.030**
		(0.009)		(0.013)		(0.012)
Industry M&A		−0.024		−0.027		−0.004
		(0.052)		(0.068)		(0.078)
No. of obs.	783	610	522	386	386	296
R^2	0.040	0.206	0.040	0.164	0.079	0.239

In summary, our findings indicate that the takeovers of firms with poor acquisition histories create little synergy values. While target shareholders realize greater takeover premiums when prior acquisitions made by target firms appear more value decreasing, acquiring shareholders suffer greater losses. These results suggest that rather than creating value, takeovers of firms with poor acquisition histories merely redistribute the wealth from acquiring firm to target firm shareholders.

E. Post-Takeover Target CEO Turnover and Restructuring Activity

Throughout the study we argue that if the takeovers of firms with poor acquisition histories are disciplinary, they should create positive overall value. We also argue that this overall value can be created by replacing the managers that made those poor prior acquisitions so that the acquired assets can be more efficiently utilized or by selling off those prior acquisitions to buyers that can put them to better use. However, we find no evidence that overall value is created when firms with poor prior acquisition histories are taken over. In this section, we examine

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post-takeover target CEO turnover and post-takeover restructuring activity for the acquirers of past bidders to gain some insight as to whether the takeovers of bad bidders are indeed disciplinary. If they are, we expect both target CEO turnover rates and restructuring activity rates to be higher when compared to the takeovers of good bidders.

To identify target CEO turnover, we examine the acquirer's first proxy statement or annual report issued after the takeover. We also search news articles in LexisNexis and Factiva for any news about the employment of the target firm CEO after the takeover. We identify those CEOs that retain an executive position or a position of chairman or vice-chairman of the board in the merged company. We also identify those CEOs that retain only a directorship position in the merged company. In untabulated results, we find that about 21.6% of good bidders' CEOs and 29.3% of bad bidders' CEOs retain an executive position in the merged company. We also find that about 32.2% of good bidders' CEOs and 41.3% of bad bidders' CEOs retain either an executive or a director position in the merged company. Both differences in CEO retention rates are significantly different from 0 at the 5% level. This suggests that the CEOs of bad bidders are disciplined *less* often than the CEOs of good bidders.

To further investigate whether the takeovers of bad bidders are disciplinary, we construct a number of variables to compare the post-takeover restructuring activity between acquirers of good and bad bidders. Specifically, we compare the divestiture rates 1 year and 3 years after the takeover, we compare the value of all divestitures scaled by the value of the takeover, and we compare asset sales (from Compustat) relative to total assets 1 year and 3 years after the takeover. In all cases, we find that there is no significant difference between the restructuring activity after the takeovers of good bidders and bad bidders. These comparisons provide no evidence to suggest that the takeovers of bad bidders are more disciplinary than the takeovers of good bidders. This evidence, combined with our findings that the takeovers of bad bidders lead to no overall value creation, suggests that managers of acquiring firms that engage in the takeovers of bad bidders may do so for reasons other than to correct for the value lost due to poor prior acquisitions. We explore this possibility in the following section.

F. Gains from Takeovers, Target Complexity, and Overconfidence

In Table 8, we report that takeovers of nonbidders create more synergy values than the takeovers of bidders (significant median values of 2.5% and 1.4%, respectively). Additionally, the significant median synergy value of 1.4% from the takeovers of all bidders in the sample is higher than the insignificant median synergy values of 0.6% and 0.8% from takeovers of good bidders and bad bidders, respectively (bidders with SCARs in the top and bottom terciles). The results of further tests (untabulated) indicate that the takeovers of bidders with SCARs in the middle tercile create a statistically significant median synergy gain of 1.9%, which is statistically different at the 5% level from the insignificant median synergy gain of 0.7% for the combined sample of good or bad bidders.

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We propose two explanations for the above pattern in synergy gains. According to the first explanation, this pattern might arise if the target firms identified as bad or good bidders are more complex targets that are more difficult to value than other targets because of their past acquisition history. Additionally, perhaps because of managerial hubris (Roll (1986)), managers of acquiring firms are more likely to make valuation errors and more likely to overestimate the synergy values from the takeovers of more complex targets than from the takeovers of less complex targets. We examine this possibility below, using the number of prior acquisitions made by target firms as a proxy for target firm complexity. Because firms that make multiple acquisitions in the recent past change their asset bases more frequently, they are arguably harder to value than firms that made fewer or no acquisitions.

If our conjectures are correct and if the number of prior acquisitions proxies for target firm complexity, we should see a difference in the number of prior acquisitions made by target firms for various subsamples of data. Obviously, there is a difference between the number of acquisitions made by bidders and nonbidders. However, we should also see a difference in the number of acquisitions made by the bidders with SCARs in the middle tercile and the combined sample of good and bad bidders. In Table 3, we report that the average number of acquisitions made by bad and good bidders is similar, around 2.5 and 2.6, respectively. In comparison, the average number of acquisitions made by the bidders with SCARs in the middle tercile is 1.8, which is significantly smaller. These univariate results indicate that the synergy gains may be a function of the number of acquisitions that the target firms made prior to being taken over.

The regression results reported in Panel A of Table 10 indicate that the negative relationship between the number of prior acquisitions made by target firms (we call this variable Target Number of Prior Acquisitions) and synergy gains obtains even after controlling for other determinants of synergy gains. The control variables we include in those regressions are the same as those included in previous cross-sectional regressions. In all regression specifications, the coefficient on the Target Number of Prior Acquisitions is negative and significant at the 5% level. The coefficient estimates range from -0.004 when the regressions are estimated using the full sample of takeovers of bidders and nonbidders, to -0.008 or -0.009 when the regressions are estimated on the subsample of takeovers whose targets have negative SCARs. These results suggest that each additional acquisition made by a target firm in the past is associated with a 0.4%–0.9% decrease in synergy gains.

In Panel B of Table 10, we repeat the analysis from Panel A but with the acquirer gains as a dependent variable in the regression models. If the valuation errors made by acquirers are due to managerial hubris, we expect that they should be reflected in the acquirer market reaction to the announcement of the takeover. The results reported in Panel B indicate that the acquirers experience significantly more negative announcement returns if they intend to acquire a target that made more acquisitions in the past, ceteris paribus. The coefficient estimates on the Target Number of Prior Acquisitions range between -0.006 and -0.011, indicating that for each additional acquisition made by the target firm in the past, the losses to the acquiring shareholders increase by 0.6% to 1.1%. These results lend further

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TABLE 10

Cross-Sectional Regression of Synergy Gains and Acquirer Returns on the Intensity of Target Acquisition Programs

The main sample consists of 1,595 completed U.S. corporate takeovers listed on SDC between 1986 and 2007 with a deal value at least 5% of the market capitalization of the acquirer and the market capitalization of the target at least $25 million (in year 2000 dollars). Bidders are target firms that made at least one acquisition with a value greater than 1% of their market capitalization in the period from 6 years to 60 days prior to being taken over. Nonbidders are target firms that did not make any such acquisitions. The dependent variable in Panel A is the synergy gain calculated as the value-weighted cumulative abnormal return (CAR) realized by the portfolio of the acquiring firm and the target firm in the period from −5 trading days to +5 trading days relative to the announcement of the takeover. The dependent variable in Panel B is the acquirer CAR realized in the period from −5 trading days to +5 trading days relative to the announcement of the takeover. SCARs are the sums of 11-day CARs realized by target firms around the announcements of their past acquisitions. Target Number of Prior Acquisitions is the number of acquisitions that the target firm completed in the period from 6 years to 60 days prior to being taken over. All other explanatory variables are described in Table 3. Acquirer, target, and deal characteristics are included as in Tables 7 and 9 but are not reported for brevity. Regressions are estimated using pooled weighted least squares. The weighting variable is the reciprocal of the variance of the CAR. All regressions include calendar year dummy variables whose coefficient estimates are suppressed. Statistical significance is based on robust standard errors. Standard errors are reported in parentheses. In the table, *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

	Sample					
	All Targets, Bidders, and Nonbidders		All Targets That Are Past Bidders		Targets With Negative SCARs Only	
Variable	(1)	(2)	(3)	(4)	(5)	(6)
Panel A. Dependent Variable: Synergy Gains (−5, +5)						
Target number of prior acquisitions	−0.004**	−0.004**	−0.005**	−0.005**	−0.008**	−0.009**
	(0.001)	(0.002)	(0.002)	(0.002)	(0.003)	(0.004)
Target prior divestiture			−0.001	−0.003	−0.006	−0.007
			(0.007)	(0.008)	(0.010)	(0.012)
Target prior CEO turnover			0.007	−0.000	0.002	−0.004
			(0.008)	(0.007)	(0.010)	(0.011)
Other acquirer, target, and deal characteristics as in Table 9 included	No	Yes	No	Yes	No	Yes
No. of obs.	1,584	1,240	783	610	386	296
R^2	0.027	0.166	0.049	0.216	0.094	0.254
Panel B. Dependent Variable: Acquirer CAR(−5, +5)						
Target number of prior acquisitions	−0.006***	−0.006***	−0.006***	−0.006**	−0.010***	−0.011***
	(0.001)	(0.002)	(0.002)	(0.002)	(0.004)	(0.004)
Target prior divestiture			−0.000	0.001	−0.002	0.000
			(0.008)	(0.009)	(0.012)	(0.015)
Target prior CEO turnover			0.007	0.002	0.003	−0.003
			(0.008)	(0.008)	(0.011)	(0.012)
Other acquirer, target, and deal characteristics as in Table 7 included	No	Yes	No	Yes	No	Yes
No. of obs.	1,595	1,247	783	610	386	296
R^2	0.037	0.098	0.048	0.119	0.083	0.169

support to the idea that the value gains from corporate takeovers are affected by target firm complexity and perhaps also by managerial hubris.[18]

The second explanation that we propose for the observed pattern of synergy gains (and acquirer announcement returns) is based on recent findings on how managerial overconfidence affects acquisitions. Studies suggest that more overconfident managers make more acquisitions and experience better operating performance prior to making acquisitions, and that the value effects of the

[18]In untabulated results, we alternatively measure target firm complexity as the 5-year asset growth rate to capture the changing asset base of the target firm. We find that acquirer CARs also significantly decrease in target asset growth.

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acquisitions made by more overconfident managers are more negative (Malmendier and Tate (2008), Billett and Qian (2008), and Baker et al. (2010)). If the acquirers of either good or bad bidders (i.e., more complex firms) are more overconfident than the acquirers of other (less-complex) firms, then we expect that the acquirers of either good or bad bidders make more acquisitions themselves. We also expect that they experience superior operating performance prior to acquiring a good or bad bidder.

In untabulated results, we find that this indeed is the case. The acquirers of either good or bad bidders make significantly more acquisitions in the 6 years prior to the takeover than do the acquirers of other firms. They also have significantly higher operating income to assets than the acquirers of other firms in the year prior to the takeover.[19] These results are consistent with the view that either good or bad bidders are acquired by firms with more overconfident managers, who are more likely to overestimate their ability to create value from these takeovers.

IV. Conclusion

We use a sample of corporate takeovers of firms that have made value-decreasing acquisitions in the past to examine whether disciplinary takeovers create value. We document that the takeover premiums realized by target firm shareholders are higher when the value destroyed by their firms' past acquisitions is greater. This result is consistent with the view that target shareholders recover, at least partially, the value lost from poor prior acquisitions when their firms are taken over. However, this gain to target shareholders seems to come at the expense of acquiring shareholders. Acquiring shareholders realize a significant loss when the takeovers of firms with poor acquisition histories are announced. Additionally, the larger the value loss from the target's past acquisition, the more negative the acquirer announcement return. Finally, the combined acquirer and target announcement return is insignificant and lower when the value lost from the target's prior acquisitions is higher. These findings have two implications: that no net economic value is created when firms that make poor acquisitions are taken over, and that the gains to the target shareholders seem to be the result of a value transfer from the acquiring shareholders.

Our results are inconsistent with the classic theories on the market for corporate control and do not support the assertions made in prior studies that the takeovers of firms with poor acquisition histories create value. Rather, our results point to the possibility that acquiring firms' managers overestimate their ability to create value from these takeovers and overpay for the target firms they acquire.

[19] Specifically, we find that the acquirers of good or bad bidders make on average 2.58 acquisitions, while the acquirers of other firms make 2.11 acquisitions in the 6 years prior to the takeover. We also find that the acquirers of good or bad bidders have mean (median) industry-adjusted operating income to assets of 0.072 (0.056), while the acquirers of other firms have industry-adjusted income to assets of 0.045 (0.031). The differences in the number of acquisitions and industry-adjusted operating income are significant at the 1% level.

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