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Mergers and Persistence

Jeffrey Jaffe
David Pedersen
Torben Voetmann

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The Wharton School
University of Pennsylvania

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Jeffrey Jaffe, David Pedersen, and Torben Voetmann*

Abstract

Despite the voluminous literature on mergers and acquisitions, little research has investigated whether acquirers exhibit persistence in performance. Nevertheless, this issue should be of interest to academicians, acquirers, their financiers, legislators and regulators. Using a sample of nearly 12,000 mergers announced between 1981 and 2007, this study provides initial evidence that acquirers do indeed demonstrate persistence that is both statistically and economically meaningful. An acquirer that was successful in its last deal earns, on average, 44 basis points more on its next acquisition than does a previously-unsuccessful acquirer. This incremental return is 64% of the average return to acquirers and equivalent to $29 million in value created for the bidder's shareholders. The findings are robust to alternative explanations of persistence, including method of payment, target listing status, and managerial quality. In our opinion, these results support the hypothesis that acquirers display differential skill in extracting value from mergers.

*Jeffrey Jaffe is with the Wharton School of the University of Pennsylvania, David Pedersen is with the LeBow College of Business, Drexel University, and Torben Voetmann is with Cornerstone Research. We would like to thank Simon Benninga, Jan Jindra, Craig MacKinlay, Michael Roberts, Ralph Walkling, Motohiro Yogo, and seminar participants at Drexel University for their helpful comments. Any remaining errors are our own.

For decades, financial economists have measured the benefit of acquisitions to both acquirers and targets, with the basic approach examining the abnormal return to the two parties around the date of merger announcement. While targets invariably gain from acquisition, since they are bought out at premiums, conclusions are more tenuous for the buyer[1]. Some studies show gains to buyers, others show losses and still others show that buyers break even. In their often-cited review article, Jensen and Ruback (1983, p.22) say (italics theirs), "The evidence suggests, however, that returns to *successful bidding* firms in *mergers* is zero." In another well-known, but more recent, review article, Bruner (2002, p.15) states[2]:

> "One must conclude that in the aggregate, abnormal (or market-adjusted) returns to buyer shareholders from M&A activity are essentially zero. … A reasonable conclusion from these studies is that buyers essentially break even (i.e., that acquisitions tend to offer zero net present values, or equivalently, that investors earn their required return.)"

Over the same time period, a parallel literature has developed on money managers. Jensen's seminal articles (1967, 1969) measure the performance of mutual funds, reaching the surprising conclusion (at the time) that these funds do not, on average, outperform appropriate benchmarks. More sophisticated measurement techniques and updated datasets have not led later researchers (for example, Malkiel (1995), Gruber (1996), Pastor and Stambaugh (2002)) to overturn these conclusions, even while weathering a steady attack from industry apologists.

Of course, while money managers may not, on average, outperform their relevant benchmarks, a significant percentage of managers do so in any finite time period. And, the industry can always point to the Warren Buffetts and Peter Lynchs, who have outperformed over

[1] We use the words "acquirer," "buyer," and "bidder" interchangeably.
[2] Both Jensen-Ruback and Bruner only review studies covering acquisitions of publicly-traded targets.

impressively long time periods. Thus, beginning with Jensen, academics have examined managerial persistence, i.e. whether managers either over- or underperforming in one period are likely to repeat in subsequent periods. The evidence on persistence is not as clear-cut as the evidence on average mutual fund performance. Though Jensen (1969) does not find evidence of persistence, a number of later articles (for example, Lehman and Modest (1987), Grinblatt and Titman (1988, 1992), Hendricks, Patel and Zeckhauser (1993), Goetzmann and Ibbotson (1994), Elton, Gruber and Blake (1996), and Cohen, Coval and Pastor (2005)) do. And, while not directly testing persistence, Chevalier and Ellison (1999) report that managers from "better" undergraduate institutions had higher returns, a result broadly consistent with persistence. However, Brown, Goetzmann, Ibbotson and Ross (1992) attribute empirical evidence of persistence to survivorship bias, while Carhart (1997), as well as Wermers (1997) and Daniel, Grinblatt, Titman and Wermers (1997), attribute the phenomenon to expense ratios and momentum. And, although Bollen and Busse (BB) (2005) report persistence, their finding holds only in the short-run.

The obvious question then arises in acquisitions: Do acquirers exhibit persistence in performance? However, little research has attempted to answer this question, perhaps because the data are less tidy here than in money management.[3] That is, while money managers report

[3] To our knowledge, only four papers have addressed this question. And, because another issue was the central focus of each of these papers, persistence was either given scant attention and/or the sample selection needed to address the other issue necessitated a bias concerning persistence. Holderness and Sheehan (HS) (1985) examine the abilities of six individual investors to make acquisitions, so HS's results cannot be generalized to the entire sample of acquirers. In their Table 6, Conn, Cosh, Guest and Hughes (2004) regress the success of future acquisitions on, among other variables, the success of the acquirer's first acquisition, expressed as a dummy variable. However, the authors devote only a few sentences in the text to the result, probably because their paper focuses on the effect of the number of previous acquisitions on performance. As part of a larger paper on serial

performance every period, mergers occur sporadically, with some firms acquiring frequently and other acquirers never repeating. Nevertheless, the methodological problems are hardly insurmountable, as indicated by the number of recent papers (Billett and Qian (2008), Conn, Cosh, Guest and Hughes (2004), and Ismail (2008)) examining a related, but distinctly different, question: Do serial acquirers outperform single acquirers?

Our paper's question is important for a number of reasons. First, differential ability across acquiring firms is clearly of interest to academicians, just as differential ability across money managers is. Second, acquiring managers, as well as their financiers, care whether the success of their previous acquisitions is predictive of future success. Third, target firms care about this persistence as well. If an acquirer that earned high returns on previous deals is likely to generate high returns on its next deal, the target may demand a larger takeover premium.

Our methodology is the essence of simplicity; we relate the success of a firm's last acquisition to the success of its current acquisition. We view success from three perspectives: the ability to

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acquisitions, Croci (2005) performs a few tests on what he terms "managerial acquisition skill," which is essentially the same as our "persistence." However, his sample is composed of 591 firms making at least five acquisitions. While he needs a sample of this type to investigate serial acquisitions, his tests of managerial acquisition skill (or persistence) are affected by hindsight bias. That is, earlier mergers of an acquirer are likely to have been successful ones, since these firms would enter his sample only if they make more (at least a total of five) acquisitions. In his Table 25, Deighton's (2006) unpublished master's thesis regresses the cumulative average return of a current acquisition on a number of variables, including a dummy variable set equal to 1 if the firm's previous deal involved the same CEO and had a positive cumulative average return and another dummy variable set equal to 1 if the previous two deals exhibited these characteristics. The findings in this table are not extended elsewhere in the paper. In addition, the table employs another dummy variable set equal to one if a deal is the last for a firm-CEO pair. This variable introduces a hindsight bias into the regression. In addition to these four papers, Bao and Edmans (2008) document significant persistence in the average announcement bidder returns to acquisitions advised by an investment bank. Their persistence, however, is in bidder returns associated with a particular investment bank, rather than with an individual acquirer. Finally, Gompers, Kovner, Lerner and Scharfstein (GKLS) (2006) investigate skill and luck in entrepreneurship and venture capital. While GKLS and our paper both look at skill, their work examines whether successful entrepreneurs are more likely to succeed in their next venture than either first-time entrepreneurs or entrepreneurs who previously failed, a research question different from ours.

create value, the ability to extract value and the ability to bargain. Accordingly, we ask the following three questions:

1. Do acquirers exhibit persistence in the combined returns on both target and acquirer?
2. Do acquirers exhibit persistence in their own returns?
3. Do acquirers exhibit persistence in the ratio of the bidder's dollar gain to the combined dollar gain of both target and bidder?

The paper's univariate analysis shows evidence of persistence among bidders in both extracting value and bargaining. However, our multivariate analysis only provides evidence of persistence in extracting value. In our opinion, the multivariate results support the hypothesis that acquiring firms display differential skill in value extraction, just as a finding of persistence among the returns of money managers would imply differential investing skill. While the strong statistical relation in our study may be due to our large dataset, we argue that it is economically significant as well. In particular, an acquirer that was successful in its last deal earns, on average, 44 basis points more on its next acquisition than does a previously-unsuccessful one. This incremental return is 64% of the average return to acquirers and is equivalent to $29 million in value created for the bidder's shareholders.

The rest of the paper is organized as follows. Our data are described in Section I. Summary statistics are provided in the next section. The main results of the paper are presented in Section III. Section IV explores alternative measures of performance and a sensitivity analysis is conducted in Section V. In Section VI, persistence in large deals is analyzed. Conclusions are drawn in Section VII.

I. Data

Following Fuller, Netter, and Stegemoller (FNS) (2002), our sample includes all mergers and acquisitions, both foreign and domestic, from Securities Data Corporation's (SDC) Mergers and Acquisitions Database meeting the following criteria:

- The announcement date occurred between January 1, 1981 and December 31, 2007.
- The deal was completed and had a disclosed dollar value.
- The value of the deal was at least $1 million.
- The acquirer purchased more than 50% of the target firm in the transaction.
- The acquirer was a U.S. public company traded on the New York Stock Exchange, American Stock Exchange, or NASDAQ.
- The target was a private company, public company, or subsidiary of a public company.
- The takeover did not occur within two trading days of another takeover by the same bidder.
- The bidder's share price was above $2 two trading days prior to the announcement.

Based on these criteria, we have 20,625 deals in our initial sample.

Our stock data come from the Center for Research in Security Prices (CRSP) U.S. Stock Database. For 302 of the deals in our sample, CRSP data on prices and/or returns are unavailable for the acquirer. These transactions are excluded from our analysis.

Since the announcement date for each deal is central to our analysis, we also exclude 1,421 bids for two additional reasons: (1) SDC can only estimate the announcement date and (2) SDC finds that the announcement date occurs after the date when the target company is first publicly disclosed as a possible takeover target. The latter case typically occurs with competitive bidding. Our final sample includes 18,902 mergers and acquisitions.

Each merger in our sample is classified by method of payment. Using the methodology of Loughran and Vijh (1997) and Schwert (2000), we assign deals in which the consideration is all cash or all equity to the "Cash" and "Stock" categories, respectively. Takeovers which are funded with a combination of cash, equity or other types of consideration are assigned to the "Combination" category. We classify acquisitions for which SDC does not report the type of consideration as "Unknown".

II. Summary Statistics

Table 1 provides the number of acquirers and the number and total dollar value of acquisitions of various types in each calendar year of our sample period. The second column shows the number of acquirers across all types of acquisitions in each year. The count for acquisitions of all types is shown in the third column. As indicated at the bottom of the column, the total number of acquisitions over our period was 18,902. Acquisition frequency was highest

in the late 1990s. Nevertheless, growth occurred over the entire sample period, since the number of acquisitions per year after 2000 was somewhat higher than it was before the mid-1990s. A similar pattern for the total dollar value of acquisitions, as shown in the fourth column, is observed.[4] Dollar value per year was highest in the late 1990s. While the dollar value per year after 2000 was lower than it had been in the late 1990s, the annual dollar value after 2000 was still greater than it had been prior to the mid-1990s.

The next eight columns break down the sample by method of payment. The last row shows that the number of stock mergers was barely greater than the number of cash mergers over our entire sample period, with the number of combination mergers exceeding the number of either cash or stock mergers. While fewer than the numbers in the other categories, a substantial number of mergers were of unknown consideration. Almost all of the mergers in the first few years of our dataset were classified as combination.[5] While the number of cash mergers grew fairly steadily over our sample period, the number of mergers in the other three categories fell off after 2000. The pattern in dollar value of the four groups was somewhat different. The dollar values for stock mergers and combination mergers were approximately equal over our sample period, with both greatly exceeding the dollar value of either cash or unknown mergers.

The last six columns break down the sample by target listing status. The bottom row shows that about 60% of targets were private companies. There were somewhat more public targets

[4] The dollar amount for an individual acquisition is the value of the transaction, as reported by SDC.
[5] In addition, the combination deals were of an unusual type in the early years. For example, 98% of these deals between 1981 and 1984 had neither cash nor stock, implying that they were financed totally from "other" sources. By contrast, less than 4% of the combination deals in the rest of our sample period were totally financed from other sources. We, therefore, rerun our analysis excluding bids announced between 1981and 1984 and find no material difference in our results.

than subsidiaries of other firms in the sample. Unlike the changes over time in consideration, the relative proportions of the three types of targets seem relatively stable over the sample period. Again, the pattern in monetary values is somewhat different, with the dollar value of public targets greatly exceeding the dollar value of the other two groups. This result is not surprising, since one would expect publicly-traded targets to be bigger than either private targets or subsidiaries.

Various descriptive statistics are shown in Table 2. The acquirer's (target's) average cumulative abnormal return (CAR) is defined as the difference between the return on the acquirer's (target's) stock and the return on the CRSP value-weighted market index over the three-day period centered on the merger announcement date. This return is denoted as Bidder (Target) CAR(-1,+1) in the table.[6] The Target CAR of a subsidiary is based on the three-day abnormal return of the subsidiary's parent. One cannot obtain the CAR of a private target. The Combined CAR(-1,+1) is defined as:

$$\frac{\mathrm{MV}(\mathrm{Bidder}) \cdot \mathrm{Bidder\,CAR}(-1,+1) + \mathrm{MV}(\mathrm{Target}) \cdot \mathrm{Target\,CAR}(-1,+1)}{\mathrm{MV}(\mathrm{Bidder}) + \mathrm{MV}(\mathrm{Target})}, \qquad (1)$$

where MV(Bidder) and MV(Target) are the market values of equity for the bidder and target, respectively, two days before the announcement.

[6] While we use the terms "bidder" and "target," our sample includes only successful, not failed, bids.

The first column of Panel A of the table shows various statistics for Combined CAR(-1,+1) for three subperiods and for the entire 1981 to 2007 period as well. The average CAR is 1.25% over the entire sample period, with little variability over the three subperiods. The average CAR for the entire sample and the average CARs for the subsamples are all significantly positive[7]. The next column shows that the average Bidder CAR is 0.95% over the entire sample, again with little variability across the subperiods. And again, the average CARs are all statistically significant. The mean Target CAR of 14.44% across the entire sample is much higher than the mean Bidder CAR, a finding consistent with previous academic work.

We have far fewer observations for either the Combined CAR or the Target CAR than for the Bidder CAR since, as stated above, the Target CAR cannot be obtained when a private company is acquired. Even for acquisitions of public targets and subsidiaries, the lack of data for target firms leads to far fewer observations for either Target CAR or Combined CAR than for Bidder CAR, as can be seen in Panels C and D of Table 2.[8]

The next column shows Bidder Share, defined as:

$$\frac{\mathrm{MV}(\text{Bidder}) \cdot \text{Bidder CAR}(-1,+1)}{\text{Bidder CAR}(-1,+1) \cdot \mathrm{MV}(\text{Bidder}) + \text{Target}(-1,+1) \cdot \mathrm{MV}(\text{Target})} \qquad (2)$$

[7] Unless otherwise stated, the phrase "statistical significance" implies a p-value below 5%. All p-values in the paper come from two-sided test statistics.

[8] Moreover, we found four observations where CRSP provided returns, but not prices, for the target, resulting in four more observations for Target CAR than for Combined CAR.

The average Bidder Share over the sample period is 51.61%, with little variation over the subperiods. However, the sample sizes in this column are much smaller than those in the previous columns because we exclude all observations where either Bidder CAR or Combined CAR is negative. The reason for this exclusion can be explained in a simple example. Imagine that the Bidder CAR and the Target CAR are -1% and 3%, respectively, and both firms are of equal size. The Bidder Share is -0.5 (= -1% / (-1% + 3%)). If, alternatively, the Target CAR is 4%, the Bidder Share becomes -0.33 (= -1% / (-1% + 4%)). The Bidder Share rises from the first to the second example, though an increase in Target CAR is the only difference between examples. However, elimination of all acquisitions with negative Bidder CARs is itself problematical, so care must be exercised in interpreting our results.

The next three panels show performance for acquisitions of private companies, public companies, and subsidiaries. While we cannot calculate a Combined CAR for private companies, the mean Combined CARs are significantly positive for both public companies and subsidiaries.

The average Bidder CAR is significantly positive when targets are either private firms or subsidiaries. By contrast, the mean Bidder CAR is significantly negative for the entire sample period for public targets, raising the question: Why do public firms acquire other public firms? Findings of this sort have been reported many times before in the literature, with recent articles including FNS (2002), Moeller, Schlingemann and Stulz (2005) and Faccio, McConnell and Stolin (2006). A possible explanation for the effect of the target on the acquirer's CAR is provided by Officer (2007), who finds that public companies are sold at higher multiples than are

either private companies or subsidiaries, a likely result of the stronger need for liquidity in these latter two types of targets.

While the average Target CAR is significantly positive whether the target is a public company or a subsidiary, the Target CAR is much lower for subsidiaries, a likely result since any subsidiary represents only a fraction of the entire firm. The mean Bidder Share is lower for subsidiaries than for public companies, suggesting that the low Target CAR for subsidiaries is not due to the target's weak bargaining power. However, caution must be exercised here; as mentioned above, we deleted all observations with negative Bidder Shares, and acquisitions of public targets have the highest probability of negative CARs.

The last four panels of the table separate acquisitions by method of payment. Both the means of the Combined CAR and the Bidder CAR are significantly positive when the deal is for cash, combination or unknown consideration. The mean of the Combined CAR is insignificantly different from zero for stock acquisitions. The average Bidder CAR, while significantly positive at the 10% level for stock acquisitions, is lower than the average Bidder CAR for either cash, combination or unknown consideration, perhaps because stock issuance signals an overpriced buyer. By contrast, the average Target CAR is lowest for acquisitions financed with unknown consideration. This is not surprising since we find that the targets in 88% of Unknown deals are subsidiaries. The Bidder CARs seem to drive the results for Combined CARs since the mean Combined CAR is lowest for stock acquisitions. The means of Bidder Share are roughly similar for all four types of consideration though, again, caution must be exercised here since negative values for Bidder Share have been deleted.

The last three columns of the table provide various data on size. The acquirer's average market value of equity (two days prior to the announcement date) across the entire sample period is over $5 billion, while the median value is below $500 million. Size increases over time, as would be expected from the historical rise in stock prices. Acquirers of public targets are, on average, somewhat larger than acquirers of either private firms or subsidiaries. Acquirers doing cash deals are, on average, larger than acquirers doing any of the other three types of deals.

The next column presents target size, based on the value of the deal as reported by SDC. Deal value is the total value of consideration paid by the acquirer, excluding fees and expenses. As with acquirer size, target size has increased over time. Public targets are bigger than subsidiaries, which in turn are bigger than private targets. Targets are larger for stock deals than for deals using cash, combination, or unknown consideration.

The last column presents the relative size of the target, defined as the ratio of the value of the deal, as reported by SDC, to the market value of the acquirer's equity two days prior to the announcement date. While the mean ratio is slightly above 23% for the entire sample, the median ratio is below 8%. The relative size of the target declines over time.

Relative size is bigger for public targets than for either subsidiaries or private targets. Relative size is small for cash deals, an unsurprising result since cash reserves are limited. Relative size is similar for stock and combination deals, with deals using unknown consideration having the lowest relative size.

III. Persistence in Performance

In this section, we relate the performance of an acquisition to the performance of the prior acquisition of the same acquirer.

A. Univariate Results

We first run a univariate analysis before controlling for other factors. All mergers in our subsample where the acquirer has a later acquisition of a public or subsidiary target are ranked by Combined CAR(-1,+1) and placed into ten decile portfolios. The second column in Table 3 displays the average Combined CAR for each of the ten deciles. As can be seen, the spread between the CAR in decile 10 and the CAR in decile 1 is quite large.

For each acquisition in our subsample, we then calculate the Combined CAR(-1,+1) for the acquirer's next acquisition of a public or subsidiary target. The average of these CARs for each of the 10 deciles is displayed in column 3 of the table. The last row of the table shows the difference between the two extreme deciles. As can be seen, the difference of 0.99% is insignificantly different from zero.

We next rank all acquisitions in our sample on Bidder CAR (-1,+1) and place the acquisitions into ten deciles, as displayed in the fourth column of the table. For each acquisition, we then calculate the Bidder CAR for the next acquisition. The average CAR for each decile is shown in the fifth column. The difference in CAR between the extreme deciles is a statistically significant 1.25%. However, Bidder CAR is not monotonically increasing across the deciles, with the average CAR rising very little from decile 2 to decile 8.

The difference between the average CARs in the extreme deciles appears to be economically significant as well. The average Bidder CAR for the subsample where the acquirer made a prior acquisition is 69 basis points, a number not reported previously. With an average difference between the CARs in the extreme deciles of 1.25%, the average difference in performance between the extreme deciles is 181% (=1.25/0.69) of the average Bidder CAR. This ratio suggests economic significance to us.

Finally, we rank all acquisitions in our sample on Bidder Share (-1, +1) and place them into ten deciles, as shown in the next to last column in the table. For each acquisition, we then calculate the Bidder Share for the next acquisition. The average Bidder Share for each decile is shown in the last column. The difference in extreme deciles is statistically significant, though the numbers in the column do not increase monotonically. We rerun the results for Bidder Share after including negative values for Bidder CAR (as long as the Combined CAR was positive), obtaining statistical significance at the 1% level.

Results for the different deciles were presented in Table 3. Table 4 provides findings from regressions. The first three models of this table are simple regressions. In the first model, the Combined CAR(-1,+1) of the acquirer's current acquisition is regressed on the Combined CAR(-1, +1) of the acquirer's prior acquisition.[9] The slope coefficient of 0.0518 is statistically insignificant, providing no evidence of persistence.[10] The Bidder's CAR(-1,+1) of the acquirer's

[9] In the Combined CAR and Bidder Share models, the prior acquisition is defined as the Bidder's prior acquisition of a public or subsidiary target. There may be intervening acquisitions of private targets, for which a Combined CAR cannot be calculated. By contrast, in the Bidder CAR models, the prior acquisition is the one that immediately precedes the current one, regardless of the listing status of the target.

[10] For all regressions in the paper, p-values are calculated using clustered standard errors (see Petersen (2008)).

current acquisition is regressed on the Bidder's CAR(-1,+1) of the acquirer's prior acquisition in Model 2. In Model 3, the Bidder's Share(-1,+1) of the acquirer's current acquisition is regressed on the Bidder's Share(-1,+1) of the acquirer's prior acquisition. The slope coefficients are significantly positive in these two models. Taken together, the univariate results in Tables 3 and 4 suggest persistence in Bidder CAR and Bidder Share, but not in Combined CAR.

B. Multivariate Results

Of course, much of the perceived persistence may be due to other variables. We report some basic multivariate regressions in the rest of Table 4. The prior literature provides many more regressions when Bidder CAR is the dependent variable than when either Combined CAR or Bidder Share is the dependent variable. Accordingly, the literature provides better justification for control variables when Bidder CAR is the dependent variable. Thus, our explanations below for use of specific variables are more frequently cast in terms of their impact on Bidder CAR.

We control for the following variables pertaining to the current acquisition in the rest of Table 4:

- Status of Target Firm: Hansen and Lott (1996), Chang (1998), and FNS (2002), as well as the results in our Table 2, indicate that acquirers' CARs are higher for acquisitions of both private firms and subsidiaries than for acquisitions of public firms.
- Method of Payment: Travlos (1987) and Franks, Harris, and Mayer (1988), as well as our Table 2, indicate that acquirers' CARs are higher for takeovers of public targets funded with cash or other compensation than for those paid with equity. FNS (2002)

show that CARs stemming from acquisitions of private firms and subsidiaries paid for with stock are higher than those paid for with cash or other compensation.

In order to control for both the status of target and the type of consideration, we create a set of dummy variables, each of which is set equal to 1 for a specific combination, e.g. an acquisition of a public company using cash, which we label "public/cash," an acquisition of a public company using stock, which we label "public/stock," and so on.

- Same Industry (Acquirer and Target): Morck, Shleifer, and Vishny (1990) argue that firms benefit from focus, suggesting that mergers where the acquirer and target are in the same industry might be more beneficial than mergers with the two parties in different industries. However, FNS (2002) do not find different returns across vertical, horizontal and conglomerate mergers. We create a dummy variable equaling 1 if the target and acquirer are in the same industry and zero otherwise. Following FNS (2002), industry classifications are based on Fama and French (1997).
- Time (in years) Since Last Acquisition, expressed as a natural logarithm: For at least two reasons, one might expect poor performance from an acquisition following quickly on the heels of the prior one. First, managers are likely to pick the best acquisition first. Second, the next merger may occur while the acquirer is still "digesting" the first one. However, one could argue that an acquirer gets "out of practice" if the time between acquisitions is too long. Aktas, de Bodt, and Roll (AdBR) (2008) find that larger CARs are associated with a longer time between deals.

- Competitive Bids: Based on the findings of Bradley, Desai, and Kim (1988), one would expect competition to reduce the acquirer's performance. Accordingly, a dummy variable is set equal to one if SDC reports multiple bidders for the target and zero otherwise.
- Acquirer Age (in years), expressed as a natural logarithm: Gondhalekar (2002) finds that announcement-period bidder returns are positively related to a firm's age.
- Same Industry for both Current and Prior Acquisitions: A dummy variable is set equal to 1 if the targets of both an acquirer's current and prior acquisition come from the same industry and zero otherwise. This variable attempts to control for learning, although the expected sign is ambiguous. Work on the prior deal may yield gains in the current deal. Conversely, AdBR (2007) hypothesize that learning improves target selection, which in turn decreases the risk, and thus the return, associated with the current deal.
- International: Moeller and Schlingemann (2005) find that U.S. firms acquiring international targets experience significantly lower announcement returns than do acquirers taking over domestic firms. Accordingly, we set a dummy variable equal to 1 if SDC classifies the target as a non-U.S. firm and zero otherwise.
- Hostile: Servaes (1991) posits that hostile takeovers may reduce the gains to acquirers because the premium is larger or because takeover defenses have made the target firm less valuable. Accordingly, we set a dummy variable equal to 1 if SDC classifies the deal as hostile and zero otherwise.

- Year dummies: In order to control for the market environment, we create a set of dummy variables where each one takes the value of 1 for a given calendar year and zero otherwise.
- Industry dummies: We create a set of dummy variables where each one takes the value of 1 for a given industry and zero otherwise. As stated above, industry classifications are based on Fama and French (1997).
- Relative Size: Following Masulis, Wang, and Xie (2007) and Moeller, Schlingemann, and Stulz (2007), we define relative size as the ratio of the size of the deal to the market capitalization of the acquiring firm's equity two days before the announcement. Asquith, Bruner, and Mullins (1983) show that CARs are higher when the ratio of the size of the target to the size of the acquiring firm is higher.
- Acquirer Size, expressed as the natural logarithm of the market capitalization of the acquirer's equity two days prior to the announcement of the deal.

Controlling for both relative size and acquirer size is important in avoiding a potential bias in our regressions. To see this, imagine that the expected NPV per unit of merger investment is identical for all acquisitions across all acquirers. It is hard to claim true persistence in this world. Further imagine a world with two types of acquirers, Type A (B), where all acquisitions are small (large) relative to the acquirer's market capitalization. Because of this difference in relative sizes, the expected CAR would be small (large) for any current or prior acquisition by a Type A (B) firm. Thus, a regression of the CAR of the current acquisition on the CAR of the

prior acquisition would produce a positive slope coefficient, with Type A firms lining up closer to the origin than Type B firms. However, if relative size is added as an independent variable, its coefficient should be positive, reducing or eliminating the positive slope coefficient on the CAR of the prior acquisition. To be on the safe side, we add the natural log of acquirer size as well.

The above control variables are introduced in Models 4 through 8 of Table 4. In Model 4, the coefficient on Prior CAR is insignificantly positive, consistent with the null hypothesis of no persistence in Combined CAR. The coefficient on relative size is significantly positive, and the coefficient on acquirer size is significantly negative. The coefficient on public/cash is significantly positive. The coefficients on the other control variables are all insignificantly different from zero.

While these results do not provide evidence of persistence, persistence may still occur among either bad or good acquirers. This separation is important; we want to know both whether acquirers whose last acquisition was poorly-received by the capital markets should avoid future acquisitions and whether acquirers whose last acquisition was well-received should expand their merger activity. This question is analogous to persistence research in mutual funds. Studies showing performance persistence at the high end suggest that some managers have special ability. By contrast, studies indicating persistence only at the low end merely show that some managers regularly falter, perhaps because their expense ratios more than offset any stock-picking ability.

To this end, we create Winner (Loser) Dummy, which takes on the value of 1 if Combined CAR on the prior acquisition is positive (negative) and zero otherwise. In Model 5, these

dummy variables are interacted with Prior Combined CAR(-1,+1). As can be seen, the coefficient on Prior CAR interacted with Winner Dummy is insignificantly positive and the coefficient on Prior CAR interacted with Loser Dummy is insignificantly negative, consistent with the null hypothesis of no persistence among either prior losers or prior winners. The p-values on the coefficients of the control variables in Model 5 are quite similar to those in Model 4.

Models 6 and 7 of Table 4 use Bidder CAR as the dependent variable. The coefficient on Prior CAR (-1,+1) is significantly positive in Model 6, though the size of the coefficient is lower here than in Model 2. Thus, we still find evidence of persistence, even after taking the various control variables into account. Except for public/stock and subsidiary/stock, the coefficients on all of the target/consideration dummies are significantly positive. The coefficient on the log of acquirer size is significantly negative.[11] The coefficients on all other control variables are insignificantly different from zero.

In Model 7, Winner (Loser) Dummy takes on a value of 1 if the acquirer's CAR on the prior acquisition is positive (negative) and zero otherwise. The two dummy variables are each interacted with Prior Bidder CAR. As can be seen, the coefficients are both insignificantly positive, consistent with the null hypothesis of no persistence. Also, the p-values on the coefficients of the control variables in Model 7 are quite similar to those in Model 6.

In Model 8, the dependent variable is the bidder's share of the acquirer's current acquisition. The coefficient on Bidder's Share is insignificant, providing no evidence of persistence. In

[11] Because of the potential for bias mentioned above, we tried alternative functional forms of both relative size and acquirer size, always with similar results.

addition, among all of the control variables, only the coefficients on public/cash, public/stock, public/combination, subsidiary/cash, and acquirer size are significantly different from zero. We do not report results with winner and loser dummies, since only acquirers with positive CARs are included. However, we also rerun Model 8 including acquirers with negative CARs, generating similar results.

Since we restricted the number of observations on Bidder Share, as described in Section II, the lack of persistence in this variable is not surprising. However, the bidder's bargaining ability should also be reflected in the size of the takeover premium. Betton, Eckbo, and Thorburn (BET) (2008) present a model of the determinants of this premium.[12] Applying a similar model to acquisitions of public targets in our data, we find coefficient estimates close to those of BET. To test for persistence, we then include the premium paid on the prior acquisition of a public target as an additional explanatory variable. Because the restrictions on Bidder Share do not, for the most part, apply to the takeover premium, our sample size is 999, as opposed to the 194 observations in Model 8 of Table 4. Consistent with our Bidder Share findings, the coefficient on the prior premium is statistically insignificant, a result we do not present in tabular form. Taking the results on both Bidder Share and the offer premium together, we do not find evidence that acquirers exhibit persistence in bargaining ability.[13]

C. Economic Significance

[12] BET define offer premium as the natural logarithm of the ratio of the initial offer price to the target's stock price 42 trading days before the announced deal.

[13] We also estimate a modified version of BET's model with Target CAR (-1,+1) proxying for the premium. The coefficient on Prior Target CAR (-1,+1) is significantly positive here. However, we place little weight on this finding, given BET's argument that Target CARs are "noisy estimates of offer premiums."

Table 5 measures the economic significance of persistence in bidder performance, using data from Table 4. Line 1 of the first column shows the cross-sectional standard deviation, 0.0723, of the independent variable, Prior Bidder CAR(-1,+1). Line 2 presents the coefficient on Prior CAR from Model 6 of Table 4, 0.0307. Line 3 indicates that the impact of persistence is approximately 44 basis points. That is, Line 3 provides the difference in the expected Bidder CAR of the next acquisition between an acquirer with a Bidder CAR on its last acquisition one standard deviation above the mean and an acquirer with a Bidder CAR on its last acquisition one standard deviation below the mean. In comparison, the average Bidder CAR for the subsample where the acquirer made a prior acquisition is 69 basis points, as reported in Section IIIA. This number is shown in Line 4. Our estimate of persistence is 64% (= 0.0044/0.0069) of the average return to an acquirer, as reported in Line 5. We conclude that the persistence observed in our sample has economic significance.

One can also estimate a dollar value from persistence. The average market value of equity, measured two days before the acquisition, of bidders with at least one prior deal is $6,475 million. Since the impact of persistence, as given in Line 3, is 0.0044, the dollar impact of persistence is $29 million (=0.0044 x $6,475 million). That is, for a bidder of average size, its expected dollar gain on its next acquisition if it had a CAR on its previous acquisition one standard deviation above the average would be $29 million dollars more than the expected dollar gain if the acquirer had a CAR on its previous acquisition one standard deviation below the average.

IV. Alternative Measures of Performance

If the market is efficient, the effect of an acquisition on a firm's market value should occur upon announcement. It is unclear in SDC whether the source of the initial announcement of any particular acquisition is a periodical, e.g., *Wall Street Journal*, or a press release. If the source is a periodical, the precipitating announcement could have occurred either before or during business hours of the previous day, resulting in price movement on day -1, or after business hours of the previous day, resulting in price movement on day 0. If the source is a press release, the release could have occurred before or during business hours, resulting in price movement on day 0, or the release could have occurred after business hours, resulting in price movement on day 1.

Because of this timing issue, market efficiency implies that market impact occurs over the three-day interval from day -1 to day +1. Thus, we have used CAR(-1,+1) as our performance measure. However, since previous authors sometimes measure performance over other periods, we repeat our analysis using the performance measure CAR(-2,+2) in Table 6.

In Table 6, we first repeat the regression of Bidder CAR(-1,+1) of the current acquisition on Bidder CAR(-1,+1) of the prior acquisition and our control variables. The number in the first column and row, 0.0307, is the slope coefficient on the CAR of the prior acquisition, which previously appeared in Model 6 of Table 4. Due to space considerations, we do not report the coefficients on the remaining independent variables. The number in the second column is the analogous slope coefficient when Bidder CAR(-2,+2) of the current acquisition is regressed on

Bidder CAR(-2,+2) of the prior acquisition and our other control variables. As can be seen, the slope coefficient is insignificant here.

So far, we have used the Bidder CAR of the prior acquisition as the measure of a firm's past acquisition performance. However, success of earlier deals may provide additional information. To this end, we replace the Bidder CAR of the prior acquisition with the average Bidder CAR across all of the firm's prior acquisitions, with the results reported in the second row of Table 6. As can be seen, the coefficient is statistically significant when the independent variable is CAR(-1,+1), while the coefficient is insignificantly different from zero when the independent variable is CAR(-2,+2).

Error may well be reduced when using the average performance of many acquisitions rather than the performance of just the last one. However, one might imagine that persistence, if it exists, is a short-term phenomenon. Managerial turnover, adjustments in corporate culture, and changes in industry conditions are likely to reduce the relation between the performance of today's acquisition and the performance of another one years earlier. Since our sample runs from 1981 to 2007, the independent variable in row two of the table might contain acquisitions from the distant past. Accordingly, we replace the average Bidder CAR across all of the firm's prior acquisitions with the average Bidder CAR across all acquisitions occurring within the last year. The results are presented in the third row of the table. As can be seen, the coefficient on CAR is significantly positive, whether performance is measured over a three-day or a five-day window.

The fourth row uses the average Bidder CAR across all acquisitions occurring within the last two years as the independent variable. Again, the coefficient on CAR is significantly positive for both windows. The last two rows of the table report results for acquisitions occurring within the last three years and the last five years, respectively. All four coefficients are insignificantly different from zero here.

Taken together, we view the evidence in Table 6 as indicative of persistence in bidder performance. First, of the 12 coefficients in the table, two have p-values below 1% and six have p-values below 5%, though the coefficients cannot be regarded as independent. In addition, market efficiency implies full market impact within the three-day window surrounding announcement. Four of the six coefficients are significantly positive when the three-day window is used. Furthermore, as mentioned above, persistence is likely to dissipate with time between acquisitions. The two coefficients are both significantly positive when average CARs are calculated using acquisitions within the last two years and significantly positive at the 1% level using acquisitions within the last year. Finally, when the prior deal is used, we find significance at slightly above the 1% level for the three-day window. By definition, this sub-sample throws out all earlier deals.

While we measure persistence in a number of different ways in Table 6, we will use one measure only in later tables for space considerations. Because of our views on market efficiency and the dissipation of persistence, we present all further results on bidder performance using CAR(-1,+1) of the prior acquisition, as we did in Table 4.

We repeat the regressions in Table 6, first replacing Bidder CAR with Combined CAR and then replacing Bidder CAR with Bidder Share. We find no significant t-values for any of the 12 coefficients for either variable. Thus, we cannot reject the null hypothesis of no persistence for either Combined CAR or Bidder Share. Because all the coefficients are insignificant here, we do not present these results in a table. In addition, we do not present any further results in this paper on either Combined CAR or Bidder Share.

A simple interpretation of our results is that, while bidders show persistence in extracting value, they do not show persistence in either creating value or bargaining. However, the relation between Combined CAR, Bidder CAR and Bidder Share suggests that persistence in Bidder CAR comes from persistence in either Combined CAR or Bidder Share. In particular, it follows from formulas (1) and (2) that:

$$\text{Combined CAR} \cdot \text{Bidder Share} = \frac{\text{Bidder CAR}(-1,+1) \cdot \text{MV}(\text{Bidder})}{\text{MV}(\text{Bidder}) \cdot \text{MV}(\text{Target})} \qquad (3)$$

The only difference between this formula and Bidder CAR is that the denominator of the right hand side of (3) contains MV(Target).

Perhaps the reason we find persistence in Bidder CAR, but not in either Combined CAR or Bidder Share, is just the difference in datasets. The sample size for the first row in Table 6 is 11,797. The sample sizes for the same regression for Combined CAR and Bidder Share are only 1,625 and 194, respectively. To examine the impact of different samples, we rerun the Bidder

CAR regressions with the smaller sample sizes, no longer finding significance in persistence. In addition, any calculation of Bidder Share is problematical. We showed earlier that, if Bidder Share is negative, an increase in Target CAR actually raises Bidder Share. Our approach, to exclude all observations with a negative value for Bidder Share, appears to us to be the best of a bad lot.

V. Sensitivity Analysis

A. Model Specification

Our basic results on persistence were presented in Table 4, with past performance being measured by CAR(-1,+1) of the bidder's prior acquisition. Alternative measures of bidder performance were shown in Table 6. We now present a few variations of the bidder regressions in Table 7.[14] We introduced the log of the time since the last acquisition as an independent variable in Table 4. The coefficients were marginally significant (p-value below 10%) in the bidder regressions of Models of 6 and 7, suggesting some evidence that time between acquisitions impacts bidder performance. This time variable may also affect bidder persistence. In particular, as stated earlier, we would expect persistence to decrease with time since the last acquisition, due to both executive turnover and changes in corporate culture and industry conditions. To test this conjecture, we interact this log of time variable with the CAR(-1,+1) on the prior acquisition, adding it to all the other variables in Model 6 of Table 4. The coefficients

[14] Because the results in Table 4 do not support persistence for either Combined CAR or Bidder Share, we do not present any sensitivity analysis for either of these two variables. However, our results here, which are negative as a whole, are available upon request.

from this regression on both Prior Bidder CAR(-1,+1) and the interaction term are presented in the first row of Table 7. As with the results in Table 6, the coefficients on all the other variables are not presented. As can be seen, the coefficient on Prior CAR is significantly positive, indicative of persistence. However, the coefficient on the interactive term, while of the right (negative) sign, is only marginally significant. Thus, our results are, at best, only suggestive that persistence declines with time between acquisitions.

However, in order to focus on time between acquisitions in another way, we rerun Model 6 of Table 4, ignoring any observations when the prior acquisition occurred more than five years before the current acquisition. The coefficient on Prior CAR, reported in the second row of Table 7, is significantly positive.

We observed in Table 3 that a conclusion of persistence may be due to behavior in the tails of the distribution of Prior CAR. To explore this possibility further, we introduce the cube of Prior CAR (-1,+1) as another independent variable, with the results being displayed in the third row of Table 7. Though the coefficient on Prior CAR is significantly positive, again indicative of persistence, the coefficient on the cubed variable is insignificant. Thus, we do not find evidence of unusual behavior in the tails.

Academic studies in finance frequently exclude both financial firms and utilities. In this vein, we rerun Model 6 of Table 4, excluding acquirers in the Fama and French (1997) industries of banking, insurance, real estate, trading and utilities. The results, reported in the fourth row of Table 7, still show a significant coefficient on Prior CAR.

Just as persistence may be high if two acquisitions occur within a short time frame, persistence may be high if consecutive acquisitions occur in the same industry. To this end, we create a dummy variable with a value of 1 if the current and the prior acquisitions are in the same Fama and French industry and 0 otherwise. We then interact this dummy variable with Prior CAR. The results are shown in the fifth row of Table 7. Again, the coefficient on Prior CAR is significantly positive, indicative of persistence. However the coefficient on the interactive term is insignificant, providing no evidence of additional persistence when the current and the prior target are in the same industry.

There is a possible inconsistency in the models of Table 4. The performance of any specific current acquisition can be viewed as the difference between the CAR from the acquisition and the fitted value from the regression. Thus, performance of the current acquisition takes into account the effect of control variables. To be consistent, one might measure the performance of the prior acquisition as the difference between its CAR and the fitted value from a regression employing control variables. To this end, we regress CAR(-1,+1) on our control variables,[15] using all acquisitions in our sample. We then calculate a residual CAR (-1,+1) for each acquisition in our sample as the difference between the CAR and the fitted value from the regression. Next, Model 6 in Table 4 is rerun where, for each prior acquisition, CAR(-1,+1) is replaced by Residual CAR(-1,+1). As can be seen in the last row of Table 7, the coefficient on Prior CAR of 0.0315 is significantly positive and quite similar to the coefficient of 0.0307 in Model 6 of Table 4. Because the residual approach provides no noticeable difference from

[15] Since many of these acquisitions are the first in the series of deals for a given bidder, we are unable to include the time since last acquisition and same industry (current and prior targets) control variables.

Model 6 of Table 4, we use CAR(-1,+1), rather than Residual CAR(-1,+1), in all remaining work.

B. Endogenous Control Variables

The addition of exogenous control variables in Models 4 through 8 of Table 4 should make the coefficient on Prior CAR in these models more meaningful than the coefficient on this variable in Models 1 through 3. However, while most of the control variables are exogenous, at least one is not; firms can choose between acquiring public and private companies. Since we know from Table 2 (and the literature) that the average CAR to acquirers is higher if the target is private, one can view firms as exhibiting positive (negative) skill if they repeatedly acquire private (public) companies.

We test for repetition in Panels A and B of Table 8. On the vertical (horizontal) dimension of the 3x3 table in Panel A, the target of each acquirer's previous (current) acquisition is classified as public, private or subsidiary. In an analogous manner, the target is classified in Panel B as either public or non-public, where a non-public target is either a private firm or a subsidiary. Each of the cells reports the number of acquisitions. The chi-square statistics in both panels are significant, implying that acquirers tend to repeat acquiring the same type of target. Thus, the results of Table 8 can be viewed as further evidence of differences in skill across acquirers.

The results of a similar analysis for consideration paid indicate that firms tend to repeat the type of consideration from one merger to the next. We saw in Table 2 that the average Bidder CAR is higher when cash is used than when stock is used. However, research by Travlos (1987)

and Shleifer and Vishny (2001) suggests that firms are more likely to issue stock (cash) when their company is overvalued (undervalued). Thus, the difference in CAR here may be due to signaling, not to a difference in value added from the acquisition. Because of this, firms repeatedly acquiring with cash (stock) are not necessarily exhibiting positive (negative) skill. We therefore do not present our results in a table.

C. Subperiod Results

Using Model 6 of Table 4, we provide findings on bidder persistence for various subperiods in Table 9. The coefficient on Prior CAR is significant in two of the six subperiods and marginally significant (a p-value below 10%) in a third. (As in previous tables, we do not present coefficients for the various control variables.) We interpret these results as evidence that Bidder persistence is not sample specific.

D. Managerial Ability

Morck, Shleifer and Vishny (MSV) (1990, p.33) conjecture that, "Bad managers might make bad acquisitions simply because they are bad managers." The empirical evidence in their Tables 3 and 5 suggest that the success of an acquisition is indeed affected by the ability of the acquiring firm's managers. Following MSV, we introduce managerial ability in Table 10. Jovanovic and Rousseau (2002), Moeller, Schlingemann, and Stulz (2004), and Dong, Hirshleifer, Richardson, and Teoh (2006) both hypothesize that a high Tobin's Q indicates a well-run firm and use market-to-book (M/B) as a proxy for Tobin's Q. Accordingly, we measure the quality of the acquirer's management by this proxy for Tobin's Q, defined in our paper as the ratio of the

market value of the acquirer's equity to the book value of the acquirer's equity at the end of the fiscal year prior to the announced deal.

The dependent variable in the three regressions in Table 10 is Bidder CAR(-1,+1). Model 1 in the table is identical to Model 6 in Table 4, though the coefficients on the control variables are not presented in the current table. The sample size in Model 1 is lower than that of Table 4 because we do not have the necessary data to calculate M/B in all cases. The coefficient on Prior CAR is significant. Model 2 introduces M/B. The coefficient on Prior CAR is still significant, while the coefficient on M/B is insignificant. Lang, Stulz, and Walkling (1989) conjecture that firms with Q ratios below one accept investment projects with negative net present value. Since M/B is our proxy for Q, model 3 uses a dummy variable equal to 1 if M/B is above 1 and 0 otherwise. Again, the coefficient on Prior CAR is significant but the coefficient on the dummy variable is not. Thus, introduction of managerial quality does not change our conclusions.

VI. Large Deals

A. Errors-in-Variables

The regressions in Tables 4 and 5 likely suffer from an errors-in-the-variables (EIV) problem. That is, we want to regress the impact of the current acquisition on the acquirer's value on the impact of the prior acquisition on the acquirer's value. We measure impact by CAR. Since, in addition to the merger announcement, other information concerning the acquirer's value is simultaneously released, CAR measures impact with error. Error is likely greater for acquisitions of small relative size, because the NPV of a small acquisition is presumably low

relative to the dollar impact of other news. EIV problems arise when the independent variable, not the dependent variable, is measured with error. Thus, one might expect to minimize the EIV problem by examining firms where the relative size of the prior acquisition is high.

To this end, we rank all firms on the relative size of their prior acquisitions and select firms in the highest relative size quintile portfolio. The results are presented in Table 11. Model 1 in this table is identical to Model 2 in Table 4, where Bidder CAR of the current acquisition is regressed on Bidder CAR of the previous acquisition. The coefficient on Bidder CAR is statistically significant. Next, our control variables are added in Model 2, as was done in Model 6 of Table 4. Now, the coefficient on Prior CAR is insignificantly different from zero. Thus, our attempt to reduce the EIV bias does not seem to have yielded stronger results.

B. "Important" Mergers

Firms may view large mergers as more "important," with acquiring managers devoting more resources to them. If so, the acquirer's CAR might well rise with relative size. The results of Table 4 indicate that CAR is positively related to relative size, though this relation may merely reflect the greater impact of a large acquisition on the acquirer's market value.

In addition, if managers devote more resources to mergers of large relative size, persistence may rise with relative size. For example, top managers may primarily involve themselves in large mergers, with small mergers left to subordinates. Aktas, de Bodt, and Roll (2007) suggest that the CEO might handle large deals, with the CFO handling intermediate deals, and some lower-ranking executive handling small deals. Since subordinates differ across divisions, persistence may vanish if consecutive small mergers involve different divisions. Under this

reasoning, we would expect to find the strongest evidence of persistence among those acquirers where both the current and the prior merger involve targets of the largest relative size.

We now consider only firms where the targets of both the current merger and the prior one are in the top relative size quintile. The results are presented in Models 3 and 4 of Table 11. Model 3 of this table is equivalent to Model 2 of Table 4, where the Bidder CAR of the current acquisition is regressed on the Bidder CAR of the prior acquisition. The coefficient in Model 3 is positive, highly significant and over twice as large as the corresponding one in Table 4. The control variables are added in Model 4. Here, the coefficient on Prior CAR (-1,+1) has a p-value of 0.062 which, while above 0.05, is at least suggestive of persistence. Though the p-value is lower than that in Model 6 of Table 4, the slope coefficient of 0.0686 is greater than the slope coefficient of 0.0307 in Model 6 of Table 4. Perhaps the reduction in sample size has offset any effect from focusing on mergers with high likelihood of persistence.

An alternative explanation is that pooling prior winners and losers from large deals biases towards a finding of no persistence. Using a sample of large acquisitions, Lehn and Zhao (LZ) (2006) report that firms are more likely to fire CEOs after an unsuccessful merger than a successful one. This finding is not surprising since one might anticipate boards being particularly aggressive in removing CEOs following unsuccessful large mergers. If turnover lowers persistence, one would not expect persistence for large prior losers, perhaps leading to an insignificant result for our model pooling winners and losers. To examine this possibility, we rerun Model 7 from Table 4 using the large deal sample. This model employs dummy variables for both winners and losers. As shown in the last column of Table 11, prior winners exhibit a

high degree of persistence, while there is no significant relation between current and prior CAR for prior losers. Thus, our findings are consistent with the conjecture that successful large deals are followed by other successful large deals, while unsuccessful large deals are not followed by other unsuccessful large deals.

VII. Conclusions

With all the academic research on mergers and acquisitions, it is surprising how little work has been done on the persistence of acquirer performance. Our paper relates the performance of a firm's current acquisition to the performance of the firm's previous acquisitions, where performance is measured by stock returns around the merger announcement. We examine performance from three perspectives: the ability to create value, the ability to extract value and the ability to bargain. Accordingly, we ask three questions:

1. Do acquirers exhibit persistence in the combined returns on both target and acquirer?
2. Do acquirers exhibit persistence in their own returns?
3. Do acquirers exhibit persistence in the ratio of the bidder's dollar gain to the combined dollar gain of both target and bidder?

In univariate regressions, we find evidence of persistence among bidders in both extracting value and bargaining. However, multivariate analysis only provides evidence of persistence in extracting value.

Our basic results, reported in Table 4, show a positive relation between the bidder's abnormal announcement return from the firm's current acquisition and the bidder's abnormal

announcement return from the firm's prior acquisition (Prior Bidder CAR). As presented in Table 5, our conclusions hold when alternative measures of the bidder's past acquisition performance are substituted for Prior Bidder CAR. Our conclusions also hold under alternative regression models, as shown in Table 6, and after the addition of managerial ability as an independent variable, as reported in Table 10.

An acquirer that was successful in its last deal earns, on average, 44 basis points more on its next acquisition than does a previously-unsuccessful one. As shown in Table 5, this incremental return is 64% of the average return to acquirers and is equivalent to $29 million in value created for the bidder's shareholders. In our opinion, the persistence observed in our sample is economically significant.

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Table 1
Numbers and Dollar Values for Various Classifications of Acquisitions

This table reports the number and dollar values of acquisitions classified by type of consideration, status of target, and calendar year. Sample comes from SDC and includes completed acquisitions of at least $1 million announced between 1981 and 2007 by U.S. acquirers traded on the AMEX, NASDAQ, or NYSE in which the bidder acquires at least 50% of the target company. The sample excludes deals occurring within two trading days of another of the acquirer's acquisitions, deals of bidders with a stock price less than $2 two days prior to the announcement, deals for which CRSP data are unavailable for the bidder, deals for which SDC can only estimate the announcement date, and deals for which SDC finds that the announcement date occurs after the date when the target company is first publicly disclosed as a possible takeover target. Number of acquirers is the number of firms in each year making at least one acquisition. Consideration in a cash (stock) merger is all cash (stock). Combination deals use more than one type of consideration. Consideration is classified as Unknown when SDC does not report the method of payment. There are two columns for each type of consideration and each type of target. The first column includes the number of acquisitions, and the second column shows the dollar value (in millions) of those acquisitions.

		Acquisitions															
				Consideration								Target					
Year	Number of Acquirers	All		Cash		Stock		Combination		Unknown		Private		Public		Subsidiary	
1981	175	212	$31.3	2	$0.1	1	$0.2	207	$20.8	2	$10.1	141	$5.5	44	$22.8	27	$3.0
1982	226	295	$21.9	0	$0.0	0	$0.0	295	$21.9	0	$0.0	196	$5.8	62	$9.4	37	$6.7
1983	327	402	$29.7	0	$0.0	0	$0.0	402	$29.7	0	$0.0	234	$8.3	60	$12.6	108	$8.8
1984	384	465	$51.8	7	$5.2	7	$1.9	437	$43.1	14	$1.5	231	$4.8	105	$20.7	129	$26.3
1985	178	201	$55.9	66	$21.3	43	$10.2	42	$20.8	50	$3.6	49	$2.2	90	$44.0	62	$9.6
1986	264	300	$47.5	63	$11.9	82	$11.8	46	$9.3	109	$14.4	132	$8.7	95	$20.2	73	$18.7
1987	248	277	$32.3	64	$7.5	76	$7.4	53	$12.9	84	$4.5	110	$5.5	87	$17.9	80	$8.9
1988	254	278	$37.9	69	$14.4	50	$5.8	54	$7.9	105	$9.8	100	$7.8	85	$15.1	93	$15.0
1989	296	335	$65.5	78	$11.7	92	$20.5	71	$27.4	94	$5.9	150	$6.1	83	$35.1	102	$24.3
1990	255	291	$21.1	61	$7.8	65	$4.6	65	$4.1	100	$4.5	142	$5.5	54	$6.8	95	$8.7
1991	301	360	$30.2	74	$3.3	92	$14.5	113	$10.2	81	$2.2	192	$5.7	65	$15.3	103	$9.3
1992	432	523	$33.6	81	$5.3	173	$14.6	146	$9.5	123	$4.3	307	$9.7	86	$15.5	130	$8.5
1993	570	728	$84.4	139	$7.6	252	$35.5	188	$36.2	149	$5.0	444	$11.2	106	$39.5	178	$33.8
1994	744	973	$95.8	190	$23.6	304	$35.4	289	$28.4	190	$8.5	578	$23.8	190	$52.2	205	$19.9
1995	821	1,051	$155.9	226	$22.4	339	$65.2	256	$55.8	230	$12.5	604	$20.4	217	$111.1	230	$24.4
1996	916	1,228	$220.5	227	$20.5	423	$84.8	327	$101.0	251	$14.2	792	$34.3	235	$150.2	201	$35.9
1997	1,074	1,524	$297.0	247	$30.2	512	$163.8	446	$86.7	319	$16.3	997	$48.5	316	$187.1	211	$61.5
1998	1,122	1,623	$680.7	307	$51.1	497	$405.1	477	$208.1	342	$16.3	1,051	$54.0	370	$413.1	202	$213.6
1999	985	1,322	$503.5	264	$38.2	449	$246.4	326	$201.7	283	$17.2	826	$61.7	343	$329.9	153	$111.8
2000	909	1,205	$714.0	217	$33.6	441	$412.5	328	$247.5	219	$20.5	804	$110.3	267	$338.1	134	$265.7
2001	615	750	$284.4	186	$24.2	167	$53.0	244	$197.1	153	$10.1	437	$32.0	208	$144.6	105	$107.7
2002	538	655	$152.4	222	$25.4	80	$79.0	227	$39.0	126	$9.0	401	$24.5	146	$108.1	108	$19.8
2003	540	652	$221.0	200	$32.3	91	$101.6	211	$72.8	150	$14.3	404	$28.2	156	$153.2	92	$39.6
2004	661	845	$255.6	314	$43.9	75	$130.8	280	$67.3	176	$13.6	579	$43.3	171	$191.7	95	$20.6
2005	661	840	$373.1	325	$70.7	57	$90.8	295	$197.3	163	$14.3	590	$62.7	153	$272.9	97	$37.5
2006	676	837	$403.2	363	$84.6	55	$63.9	266	$234.3	153	$20.4	577	$54.3	176	$330.6	84	$18.3
2007	571	730	$222.1	308	$116.5	21	$14.7	247	$73.3	154	$17.5	541	$49.0	136	$132.7	53	$40.3
Total	6,098	18,902	$5,122.2	4,300	$713.3	4,444	$2,074.0	6,338	$2,064.1	3,820	$270.9	11,609	$733.8	4,106	$3,190.2	3,187	$1,198.2

Table 2
Bidder and Target Performance for Various Classifications of Acquisitions

This table reports bidder and target performance for acquisitions classified by type of consideration, status of target, and time period. Sample comes from SDC and includes completed acquisitions of at least $1 million announced between 1981 and 2007 by U.S. acquirers traded on the AMEX, NASDAQ, or NYSE in which the bidder acquires at least 50% of the target company. The sample excludes deals occurring within two trading days of another of the acquirer's acquisitions, deals of bidders with a stock price less than $2 two days prior to the announcement, deals for which CRSP data are unavailable for the bidder, deals for which SDC can only estimate the announcement date, and deals for which SDC finds that the announcement date occurs after the date when the target company is first publicly disclosed as a possible takeover target. Bidder (Target) Cumulative Abnormal Return (CAR (-1,+1)) is the difference between the return on the acquirer's (target's) stock and the return on the CRSP value-weighted index over the three-day period centered on the merger announcement date. Combined CAR (-1,+1) is the weighted-average cumulative abnormal return on the bidder's and target's stocks from the day before the merger announcement to the day after the announcement. The weights are based on the market values of the bidder's and target's equity (the equity of the target's parent for subsidiaries) two days prior to the announcement. Target return and pricing data are only available for public and subsidiary targets. Bidder Share is the ratio of the value created for the bidder's shareholders (Bidder CAR (-1, +1)) multiplied by the market value of the bidder's equity two days prior to the announcement) to the value created for the stockholders of the combined firm. The Bidder Share sample is limited to deals that create value for the combined firm (Combined CAR (-1,+1) is positive), do not destroy value for the bidder (Bidder CAR (-1,+1) is non-negative) and have Bidder Share less than 100%. Acquirer size is the market capitalization of the bidder's equity two days before the announcement date of the deal. Deal size is the total consideration paid for the target, excluding fees and expenses, as reported by SDC. Relative size is defined as the ratio of the size of the deal to the market capitalization of the acquiring firm's equity. Consideration in a cash (stock) merger is all cash (stock). Combination deals use more than one type of consideration. Consideration is classified as Unknown when SDC does not report the method of payment. p-values are shown in parentheses. N is the number of observations.

Period		Combined CAR (-1,+1)	Bidder CAR (-1,+1)	Target CAR (-1,+1)	Bidder Share (-1,+1)	All Deals: Acquirer Size ($ millions)	All Deals: Target/ Deal Size ($ millions)	All Deals: Relative Size
				Panel A: All				
1981-1989	Mean	1.72%	0.54%	11.03%	47.47%	$1,175	$135	33.85%
	Median	0.80%	0.08%	4.03%	45.70%	$264	$25	10.86%
	p-value	(0.000)	(0.000)	(0.000)	(0.000)			
	N	919	2,765	922	329			
1990-1999		1.16%	1.26%	13.57%	51.57%	$3,224	$221	23.97%
		0.67%	0.48%	7.62%	50.74%	$343	$24	7.84%
		(0.000)	(0.000)	(0.000)	(0.000)			
		2,373	9,623	2,374	843			
2000-2007		1.12%	0.67%	18.06%	54.27%	$9,377	$403	17.83%
		0.69%	0.29%	11.78%	55.76%	$866	$43	5.39%
		(0.000)	(0.000)	(0.000)	(0.000)			
		1,440	6,514	1,440	524			
1981-2007		1.25%	0.95%	14.44%	51.61%	$5,045	$271	23.30%
		0.70%	0.35%	8.18%	51.62%	$463	$30	7.26%
		(0.000)	(0.000)	(0.000)	(0.000)			
		4,732	18,902	4,736	1,696			
				Panel B: Private				
1981-2007	Mean		1.38%			$3,634	$63	16.48%
	Median		0.60%			$350	$19	5.69%
	p-value		(0.000)					
	N		11,609					
				Panel C: Public				
1981-2007		1.47%	-0.89%	21.65%	55.19%	$8,970	$777	36.35%
		0.92%	-0.62%	17.46%	56.00%	$1,068	$125	14.30%
		(0.000)	(0.000)	(0.000)	(0.000)			
		3,004	4,106	3,007	1,106			

Period		Combined CAR (-1,+1)	Bidder CAR (-1,+1)	Target CAR (-1,+1)	Bidder Share (-1,+1)	Acquirer Size ($ millions)	Target/ Deal Size ($ millions)	Relative Size
				Panel D: Subsidiary				
1981-2007		0.87%	1.77%	1.90%	44.90%	$5,127	$376	31.31%
		0.49%	0.72%	0.56%	40.64%	$544	$40	8.24%
		(0.000)	(0.000)	(0.000)	(0.000)			
		1,728	3,187	1,729	590			
				Panel E: Cash				
1981-2007	Mean	2.02%	1.17%	17.87%	55.29%	$7,993	$166	15.88%
	Median	1.21%	0.54%	9.47%	55.65%	$738	$36	5.05%
	p-value	(0.000)	(0.000)	(0.000)	(0.000)			
	N	1,319	4,300	1,319	571			
				Panel F: Stock				
1981-2007		0.14%	0.25%	16.49%	56.55%	$5,708	$467	26.40%
		0.21%	-0.24%	13.19%	59.50%	$599	$42	7.79%
		(0.473)	(0.065)	(0.000)	(0.000)			
		1,392	4,444	1,392	431			
				Panel G: Combination Consideration				
1981-2007		1.80%	1.07%	14.05%	47.14%	$2,376	$326	31.61%
		0.87%	0.40%	8.56%	43.26%	$278	$28	11.43%
		(0.000)	(0.000)	(0.000)	(0.000)			
		1,403	6,338	1,406	480			
				Panel H: Unknown Consideration				
1981-2007		0.89%	1.33%	3.41%	41.86%	$5,382	$71	14.23%
		0.26%	0.59%	0.48%	34.38%	$490	$20	4.20%
		(0.000)	(0.000)	(0.000)	(0.000)			
		618	3,820	619	214			

Table 3
Bidder and Target Performance for Acquisitions
Classified by Performance of Bidder's Prior Acquisition

This table reports the performance of bidders and targets for deciles ranked by performance of bidder's prior acquisition. All mergers in our sample where the acquirer has a later acquisition are ranked by Combined CAR, Bidder CAR, and Bidder Share, respectively, and placed into ten decile portfolios. Sample comes from SDC and includes completed acquisitions of at least $1 million announced between 1981 and 2007 by U.S. acquirers traded on the AMEX, NASDAQ, or NYSE in which the bidder acquires at least 50% of the target company. The sample excludes deals occurring within two trading days of another of the acquirer's acquisitions, deals of bidders with a stock price less than $2 two days prior to the announcement, deals for which CRSP data are unavailable for the bidder, deals for which SDC can only estimate the announcement date, and deals for which SDC finds that the announcement date occurs after the date when the target company is first publicly disclosed as a possible takeover target. Bidder (Target) Cumulative Abnormal Return (CAR (-1,+1)) is the difference between the return on the acquirer's (target's) stock and the return on the CRSP value-weighted index over the three-day period centered on the merger announcement date. Combined CAR (-1,+1) is the weighted-average cumulative abnormal return on the bidder's and target's stocks from the day before the merger announcement to the day after the announcement. The weights are based on the market values of the bidder's and target's equity (the equity of the target's parent for subsidiaries) two days prior to the announcement. Target return and pricing data are only available for public and subsidiary targets. Bidder Share is the ratio of the value created for the bidder's shareholders (Bidder CAR (-1, +1)) multiplied by the market value of the bidder's equity two days prior to the announcement) to the value created for the stockholders of the combined firm. The Bidder Share sample is limited to deals that create value for the combined firm (Combined CAR (-1,+1) is positive), do not destroy value for the bidder (Bidder CAR (-1,+1) is non-negative) and have Bidder Share less than 100%. Prior CAR (-1, +1) is the CAR on the acquirer's last acquisition preceding the current merger. Prior Bidder's Share (-1, +1) is similarly defined. p-values are shown in parentheses.

Decile (Prior Acquisition)	Mean Prior Combined CAR (-1,+1)	Mean Combined CAR (-1,+1)	Mean Prior Bidder CAR (-1,+1)	Mean Bidder CAR (-1,+1)	Mean Prior Bidder Share (-1,+1)	Mean Bidder Share (-1,+1)
1	-7.57%	0.44%	-10.57%	0.19%	5.61%	38.33%
	(0.000)	(0.313)	(0.000)	(0.430)	(0.000)	(0.000)
2	-2.95%	0.40%	-4.18%	0.73%	15.55%	60.52%
	(0.000)	(0.359)	(0.000)	(0.025)	(0.000)	(0.000)
3	-1.60%	0.64%	-2.27%	0.58%	25.38%	47.13%
	(0.000)	(0.085)	(0.000)	(0.001)	(0.000)	(0.000)
4	-0.67%	0.87%	-1.05%	0.37%	36.93%	52.67%
	(0.000)	(0.006)	(0.000)	(0.037)	(0.000)	(0.000)
5	0.20%	0.57%	-0.10%	0.29%	51.01%	55.72%
	(0.000)	(0.108)	(0.000)	(0.144)	(0.000)	(0.000)
6	1.04%	1.62%	0.87%	0.70%	64.05%	52.36%
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
7	1.97%	1.03%	2.02%	0.69%	78.03%	59.60%
	(0.000)	(0.005)	(0.000)	(0.000)	(0.000)	(0.000)
8	3.13%	0.43%	3.54%	0.83%	85.81%	60.68%
	(0.000)	(0.134)	(0.000)	(0.000)	(0.000)	(0.000)
9	5.14%	0.98%	6.19%	1.08%	93.35%	73.76%
	(0.000)	(0.025)	(0.000)	(0.000)	(0.000)	(0.000)
10	12.16%	1.43%	15.33%	1.45%	98.54%	77.82%
	(0.000)	(0.015)	(0.000)	(0.000)	(0.000)	(0.000)
Diff of Means Decile 1 v. Decile 10		0.99%		1.25%		39.48%
		(0.176)		(0.000)		(0.000)
Observations	1,626	1,626	11,812	11,812	194	194

Table 4
Regressions Examining Persistence in Acquisition Performance

This table reports results from regressions of the performance of the bidder's current acquisition the performance of the prior acquisition of the bidder and various control variables. Sample comes from SDC and includes completed acquisitions of at least $1 million announced between 1981 and 2007 by U.S. acquirers traded on the AMEX, NASDAQ, or NYSE in which the bidder acquires at least 50% of the target company. The sample excludes deals occurring within two trading days of another of the acquirer's acquisitions, deals of bidders with a stock price less than $2 two days prior to the announcement, deals for which CRSP data are unavailable for the bidder, deals for which SDC can only estimate the announcement date, and deals for which SDC finds that the announcement date occurs after the date when the target company is first publicly disclosed as a possible takeover target. Bidder (Target) Cumulative Abnormal Return (CAR (-1,+1)) is the difference between the return on the acquirer's (target's) stock and the return on the CRSP value-weighted index over the three-day period centered on the merger announcement date. The dependent variable in the Combined CAR models is the weighted-average cumulative abnormal return (CAR) of the bidder's and target's stocks from the day before the merger announcement to the day after the announcement (-1, +1). The weights are based on the market values of the bidder's and target's equity (the equity of the target's parent for subsidiaries) two days prior to the announcement. Combined Return regressions are limited to acquisitions of public and subsidiary targets. The dependent variable in the Bidder CAR models is Bidder CAR (-1, +1). The Bidder CAR models include all private, public, and subsidiary targets. The Bidder Share sample is limited to deals that create value for the combined firm (Combined CAR (-1,+1) is positive), do not destroy value for the bidder (Bidder CAR (-1,+1) is non-negative) and have Bidder Share less than 100%. The dependent variable in the Bidder Share models is the ratio of the value created for the bidder's shareholders (Bidder CAR (-1, +1) multiplied by the market value of the bidder's equity two days prior to the announcement) to the value created for the stockholders of the combined firm. Prior CAR (-1, +1) is the CAR on the acquirer's last acquisition preceding the current merger. Prior Bidder's Share (-1, +1) is similarly defined. The Winner (Loser) dummy equals one if the prior CAR is positive (non-positive) and zero otherwise. Combined Return and Bidder Return models include year and industry dummy variables, for which the coefficients are not reported in the table. Results are from OLS regressions with firm-level clustered standard errors. p-values are shown in parentheses. See the Appendix for a description of the control variables.

	Simple Regressions			**Multiple Regressions**				
	Combined CAR	**Bidder CAR**	**Bidder Share**	**Combined CAR**		**Bidder CAR**		**Bidder Share**
				Pooled	**Win/Lose**	**Pooled**	**Win/Lose**	
	Model 1	**Model 2**	**Model 3**	**Model 4**	**Model 5**	**Model 6**	**Model 7**	**Model 8**
Intercept	0.0078	0.0064	0.4193					
	(0.000)	(0.000)	(0.000)					
Prior Combined CAR (-1,+1)	0.0518			0.0228				
	(0.125)			(0.478)				
Prior Bidder CAR (-1,+1)		0.0523				0.0307		
		(0.000)				(0.013)		
Prior Bidder's Share (-1,+1)			0.2855					0.0490
			(0.000)					(0.522)
Prior Combined CAR (-1,+1) x Winner Dummy					0.0415			
					(0.367)			
Prior Combined CAR (-1,+1) x Loser Dummy					-0.0137			
					(0.789)			
Prior Bidder CAR (-1,+1) x Winner Dummy							0.0235	
							(0.204)	
Prior Bidder CAR (-1,+1) x Loser Dummy							0.0432	
							(0.063)	

	Simple Regressions			Multiple Regressions				
	Combined CAR	Bidder CAR	Bidder Share	Combined CAR		Bidder CAR		Bidder Share
				Pooled	Win/Lose	Pooled	Win/Lose	
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
Private/Cash						0.0418	0.0425	
						(0.000)	(0.000)	
Private/Stock						0.0501	0.0510	
						(0.000)	(0.000)	
Private/Combination						0.0399	0.0407	
						(0.000)	(0.000)	
Private/Unknown						0.0455	0.0462	
						(0.000)	(0.000)	
Public/Cash				0.0679	0.0667	0.0426	0.0434	0.3230
				(0.042)	(0.045)	(0.000)	(0.000)	(0.032)
Public/Stock				0.0453	0.0440	0.0182	0.0190	0.3192
				(0.172)	(0.182)	(0.132)	(0.120)	(0.032)
Public/Combination				0.0561	0.0548	0.0239	0.0246	0.3276
				(0.090)	(0.095)	(0.043)	(0.038)	(0.018)
Public/Unknown				0.0582	0.0570	0.0427	0.0435	0.2486
				(0.085)	(0.090)	(0.001)	(0.001)	(0.299)
Subsidiary/Cash				0.0560	0.0548	0.0509	0.0516	0.3601
				(0.092)	(0.097)	(0.000)	(0.000)	(0.009)
Subsidiary/Stock				0.0448	0.0433	0.0264	0.0272	0.2217
				(0.191)	(0.204)	(0.055)	(0.050)	(0.315)
Subsidiary/Combination				0.0501	0.0489	0.0533	0.0541	0.2916
				(0.133)	(0.140)	(0.000)	(0.000)	(0.073)
Subsidiary/Unknown				0.0438	0.0425	0.0479	0.0487	0.1990
				(0.189)	(0.199)	(0.000)	(0.000)	(0.192)

	Simple Regressions			Multiple Regressions				
	Combined CAR	Bidder CAR	Bidder Share	Combined CAR		Bidder CAR		Bidder Share
				Pooled	Win/Lose	Pooled	Win/Lose	
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
Relative Size				0.0231	0.0231	0.0013	0.0013	-0.1389
				(0.000)	(0.000)	(0.496)	(0.498)	(0.091)
Same Industry: Acquirer/Target				0.0015	0.0015	-0.0022	-0.0022	-0.0204
				(0.663)	(0.667)	(0.239)	(0.237)	(0.689)
Log(Acquirer Size)				-0.0029	-0.0029	-0.0038	-0.0038	0.0665
				(0.002)	(0.002)	(0.000)	(0.000)	(0.000)
Log(Acquirer Age)				0.0011	0.0012	0.0004	0.0003	0.0263
				(0.563)	(0.512)	(0.700)	(0.743)	(0.344)
Competitive Bid				0.0009	0.0009	0.0026	0.0026	0.1304
				(0.945)	(0.947)	(0.731)	(0.731)	(0.213)
Log(Time Since Last Acquisition)				-0.0005	-0.0006	0.0008	0.0009	-0.0058
				(0.563)	(0.535)	(0.066)	(0.061)	(0.715)
Same Industry: Prior Acquisition				-0.0004	-0.0004	-0.0007	-0.0007	0.0701
				(0.895)	(0.903)	(0.681)	(0.675)	(0.196)
International Target				0.0120	0.0115	-0.0019	-0.0019	-0.0005
				(0.086)	(0.098)	(0.328)	(0.330)	(0.995)
Hostile Deal				0.0165	0.0163	-0.0051	-0.0051	
				(0.137)	(0.137)	(0.421)	(0.420)	
Adjusted R^2	0.0023	0.0024	0.0773	0.1258	0.1256	0.0418	0.0417	0.8387
Number of Obs.	1,625	11,797	194	1,625	1,625	11,797	11,797	194

Table 5
Economic Significance of Persistence to Bidder

This table provides estimates of the economic significance of persistence to bidders. Sample comes from SDC and includes completed acquisitions of at least $1 million announced between 1981 and 2007 by U.S. acquirers traded on the AMEX, NASDAQ, or NYSE in which the bidder acquires at least 50% of the target company. The sample excludes deals occurring within two trading days of another of the acquirer's acquisitions, deals of bidders with a stock price less than $2 two days prior to the announcement, deals for which CRSP data are unavailable for the bidder, deals for which SDC can only estimate the announcement date, and deals for which SDC finds that the announcement date occurs after the date when the target company is first publicly disclosed as a possible takeover target. Bidder Cumulative Abnormal Return (Bidder CAR (-1,+1)) is the difference between the return on the acquirer's stock and the return on the CRSP value-weighted index over the three-day period centered on the merger announcement date. Prior CAR (-1, +1) is the Bidder CAR on the acquirer's last acquisition preceding the current merger. Persistence Estimate is the coefficient on Prior CAR (-1,+1) from Model 6 in Table 4. Mean CAR (-1,+1) for Acquirers with Prior Acquisition is the average Bidder CAR (-1,+1) across all deals that were preceded by at least one merger by the same acquirer. Mean Bidder Size Prior to Acquisition is the average market capitalization of acquirers two days before the acquisition in deals that were preceded by at least one merger by the same acquirer.

[1]	Standard Deviation of Prior CAR (-1,+1)	0.0723
[2]	Persistence Estimate	0.0307
[3]	Impact of Persistence (2 x [1] x [2])	0.0044
[4]	Mean CAR (-1,+1) for Acquirers with Prior Acquisition	0.0069
[5]	Persistence as % of Mean CAR for Acquirers with Prior Acquisition ([3] / [4])	64.2%
[6]	Mean Bidder Size Prior to Acquisition ($ millions)	$6,475
[7]	Value Created by Persistence ($ millions) ([3] x [6])	$29

Table 6
Persistence Regressions Using Alternative Measures of Bidder Past Performance

This table provides results from regressions of a bidder's performance from its current acquisition on various measures of the bidder's performance from its prior acquisitions and control variables. Sample comes from SDC and includes completed acquisitions of at least $1 million announced between 1981 and 2007 by U.S. acquirers traded on the AMEX, NASDAQ, or NYSE in which the bidder acquires at least 50% of the target company. The sample excludes deals occurring within two trading days of another of the acquirer's acquisitions, deals of bidders with a stock price less than $2 two days prior to the announcement, deals for which CRSP data are unavailable for the bidder, deals for which SDC can only estimate the announcement date, and deals for which SDC finds that the announcement date occurs after the date when the target company is first publicly disclosed as a possible takeover target. Bidder Cumulative Abnormal Return (Bidder CAR (-1,+1)) is the difference between the return on the acquirer's stock and the return on the CRSP value-weighted index over the three-day period centered on the merger announcement date. Bidder CAR (-2,+2) is defined similarly, but returns are measured over a five-day period. The dependent variables in these models are Bidder CAR (-1, +1) and Bidder CAR (-2,+2). The independent variable measuring persistence in the Prior Deal row is the Bidder CAR on the acquirer's last acquisition preceding the current merger. Mean of All Prior Deals is the average CAR across all of the acquirer's previous mergers in the sample. Mean of Deals within t years is similarly defined based on the acquisitions within the past t years. Independent variables measuring persistence are calculated over the same time window as the dependent variable. All models include control variables shown in Table 4, year dummy variables, and industry dummy variables. Intercept and coefficients on control and dummy variables are not displayed. Results are from OLS regressions with firm-level clustered standard errors. p-values are shown in parentheses. See the Appendix for a description of the control variables.

	Persistence Estimates		
Past Performance Measure	**Bidder CAR (-1,+1)**	**Bidder CAR (-2,+2)**	**N**
Prior Deal	0.0307 (0.013)	0.0189 (0.120)	11,797
Mean of All Prior Deals	0.0339 (0.024)	0.0199 (0.152)	12,816
Mean of Deals within 1 Year	0.0639 (0.000)	0.0492 (0.002)	6,864
Mean of Deals within 2 Years	0.0368 (0.015)	0.0337 (0.014)	9,270
Mean of Deals within 3 Years	0.0248 (0.103)	0.0185 (0.182)	10,454
Mean of Deals within 5 Years	0.0252 (0.101)	0.0128 (0.399)	11,616

Table 7
Alternative Specifications of Persistence Regressions Involving Bidder Performance

This table provides results from various regression specifications of a bidder's performance from its current acquisition on the bidder's performance from its past acquisitions and control variables. Sample comes from SDC and includes completed acquisitions of at least $1 million announced between 1981 and 2007 by U.S. acquirers traded on the AMEX, NASDAQ, or NYSE in which the bidder acquires at least 50% of the target company. The sample excludes deals occurring within two trading days of another of the acquirer's acquisitions, deals of bidders with a stock price less than $2 two days prior to the announcement, deals for which CRSP data are unavailable for the bidder, deals for which SDC can only estimate the announcement date, and deals for which SDC finds that the announcement date occurs after the date when the target company is first publicly disclosed as a possible takeover target. Bidder Cumulative Abnormal Return (Bidder CAR (-1,+1)) is the difference between the return on the acquirer's stock and the return on the CRSP value-weighted index over the three-day period centered on the merger announcement date. The dependent variable in these models is Bidder CAR (-1, +1). Prior CAR is the Bidder CAR on the acquirer's last acquisition preceding the current merger. Time Since Last is the number of years between the bidder's current acquisition and prior acquisition. The "Mergers within 5 Years" model is based on a sample limited to deals in which the Time Since Last is less than or equal to five years. The "Exclude Financials and Utilities" model is based on a sample that excludes acquirers from the following Fama and French (1997) industries: Banking, Insurance, Real Estate, Trading, and Utilities. Same Industry is a dummy variable equal to one if the current target and the target in the prior acquisition belong to the same industry (Fama and French (1997)) and zero otherwise. Prior Residual CAR equals the residual from a regression in which Bidder CAR (-1,+1) is regressed on all the control variables in Table 4, excluding Log (Time Since Last Acquisition) and Same Industry: Prior Acquisition. All models include control variables shown in Table 4, year dummy variables, and industry dummy variables. Intercept and coefficients on control and dummy variables are not displayed. Results are from OLS regressions with firm-level clustered standard errors. p-values are shown in parentheses. See the Appendix for a description of the control variables.

Row	Model	Persistence Measure	Bidder CAR (-1,+1)	N
1	Time Since Last Interaction	Prior CAR	0.0268	11,797
			(0.027)	
		Prior CAR x Log (Time Since Last)	-0.0168	
			(0.067)	
2	Mergers within 5 Years	Prior CAR	0.0329	10,847
			(0.013)	
3	Prior CAR Cubed	Prior CAR	0.0287	11,797
			(0.028)	
		Prior CAR^3	0.0226	
			(0.475)	
4	Exclude Financials and Utilities	Prior CAR	0.0288	8,956
			(0.032)	
5	Same Industry Interaction (Current and Prior Target in Same Industry)	Prior CAR	0.0384	11,797
			(0.043)	
		Prior CAR x Same Industry	-0.0141	
			(0.545)	
6	Residual CAR	Prior Residual CAR	0.0315	11,797
			(0.010)	

Table 8

Association Between the Status of an Acquirer's Current Target and the Status of the Acquirer's Prior Target

This table reports tests of the relationship between the status (public, private or subsidiary) of an acquirer's current target and the status of the acquirer's prior target. In Panel A, each target is classified as a public firm, a private firm, or a subsidiary of a public firm. In Panel B, each target is classified as public or non-public, where a non-public target is either a private firm or a subsidiary. In either panel, each cell shows the number of acquirers whose current acquisition has a particular status and whose prior acquisition has a particular status. Sample comes from SDC and includes completed acquisitions of at least $1 million announced between 1981 and 2007 by U.S. acquirers traded on the AMEX, NASDAQ, or NYSE in which the bidder acquires at least 50% of the target company. The sample excludes deals occurring within two trading days of another of the acquirer's acquisitions, deals of bidders with a stock price less than $2 two days prior to the announcement, deals for which CRSP data are unavailable for the bidder, deals for which SDC can only estimate the announcement date, and deals for which SDC finds that the announcement date occurs after the date when the target company is first publicly disclosed as a possible takeover target. Chi-squared p-values are provided at the bottom of each panel.

Panel A: Public, Private, and Subsidiaries

	Current Acquisition			
Prior Acquisition	**Public**	**Private**	**Subsidiary**	**Total**
Public	1,071	1,175	390	2,636
Private	1,269	5,057	906	7,232
Subsidiary	445	954	530	1,929
Total	2,785	7,186	1,826	11,797
Chi-squared p-value				0.000

Panel B: Public and Non-Public

	Current Acquisition		
Prior Acquisition	**Public**	**Non-Public**	**Total**
Public	1,071	1,565	2,636
Non-Public	1,714	7,447	9,161
Total	2,785	9,012	11,797
Chi-squared p-value			0.000

Table 9
Regressions Examining Persistence of Bidder's Performance for Various Sub-Periods

This table reports results from regressions of a bidder's performance from its current acquisition on the bidder's performance from its prior acquisition and control variables for various sub-periods. Sample comes from SDC and includes completed acquisitions of at least $1 million announced between 1981 and 2007 by U.S. acquirers traded on the AMEX, NASDAQ, or NYSE in which the bidder acquires at least 50% of the target company. The sample excludes deals occurring within two trading days of another of the acquirer's acquisitions, deals of bidders with a stock price less than $2 two days prior to the announcement, deals for which CRSP data are unavailable for the bidder, deals for which SDC can only estimate the announcement date, and deals for which SDC finds that the announcement date occurs after the date when the target company is first publicly disclosed as a possible takeover target. Bidder Cumulative Abnormal Return (Bidder CAR (-1,+1)) is the difference between the return on the acquirer's stock and the return on the CRSP value-weighted index over the three-day period centered on the merger announcement date. The dependent variable in these models is Bidder CAR (-1, +1). Prior CAR (-1, +1) is the Bidder CAR on the acquirer's last acquisition preceding the current merger. All models include control variables shown in Table 4. Intercept and coefficients on control variables are not displayed. Results are from OLS regressions with firm-level clustered standard errors. p-values are shown in parentheses. See the Appendix for a description of the control variables.

	1981-1985	**1986-1990**	**1991-1995**	**1996-2000**	**2001-2004**	**2005-2007**
Prior CAR (-1,+1)	0.0761	-0.0161	0.0663	0.0368	-0.0014	0.0533
	(0.110)	(0.742)	(0.028)	(0.062)	(0.958)	(0.013)
Adjusted R^2	0.0535	0.0397	0.0764	0.0473	0.0314	0.0541
Number of Obs.	662	675	2,010	4,487	2,142	1,821

Table 10

Regressions of a Bidder's Performance from its Current Acquisition on the Bidder's Performance from its Prior Acquisition, Control Variables, and Managerial Ability

This table reports results from regressions of a bidder's performance from its current acquisition on the bidder's performance from its prior acquisition and control variables, including managerial ability. Sample comes from SDC and includes completed acquisitions of at least $1 million announced between 1981 and 2007 by U.S. acquirers traded on the AMEX, NASDAQ, or NYSE in which the bidder acquires at least 50% of the target company. The sample excludes deals occurring within two trading days of another of the acquirer's acquisitions, deals of bidders with a stock price less than $2 two days prior to the announcement, deals for which CRSP data are unavailable for the bidder, deals for which SDC can only estimate the announcement date, and deals for which SDC finds that the announcement date occurs after the date when the target company is first publicly disclosed as a possible takeover target. Bidder Cumulative Abnormal Return (Bidder CAR (-1,+1)) is the difference between the return on the acquirer's stock and the return on the CRSP value-weighted index over the three-day period centered on the merger announcement date. The dependent variable in these models is Bidder CAR (-1, +1). Prior CAR (-1, +1) is the Bidder CAR on the acquirer's last acquisition preceding the current merger. M/B is equal to the ratio of the market value of the acquirer's equity to the book value of the acquirer's equity at the end of the fiscal year prior to the announced deal. High M/B is a dummy variable equal to one if M/B is greater than 1 and zero otherwise. All models include control variables shown in Table 4, year dummy variables, and industry dummy variables. Intercept and coefficients on control and dummy variables are not displayed. Results are from OLS regressions with firm-level clustered standard errors. p-values are shown in parentheses. See the Appendix for a description of the control variables.

	Model 1	**Model 2**	**Model 3**
Prior CAR (-1,+1)	0.0343	0.0343	0.0343
	(0.010)	(0.010)	(0.010)
M/B		0.0000	
		(0.891)	
High M/B (M/B > 1)			0.0038
			(0.138)
Adjusted R^2	0.0405	0.0404	0.0406
Number of Obs.	9,253	9,253	9,253

Table 11
Regressions of a Bidder's Performance from its Current Acquisition on the Bidder's Performance from its Prior Acquisition for a Sample of Large Deals

This table reports results from regressions of a bidder's performance from its current acquisition on the bidder's performance from its prior acquisition and control variables for a sample of large deals. Sample comes from SDC and includes completed acquisitions of at least $1 million announced between 1981 and 2007 by U.S. acquirers traded on the AMEX, NASDAQ, or NYSE in which the bidder acquires at least 50% of the target company. The sample excludes deals occurring within two trading days of another of the acquirer's acquisitions, deals of bidders with a stock price less than $2 two days prior to the announcement, deals for which CRSP data are unavailable for the bidder, deals for which SDC can only estimate the announcement date, and deals for which SDC finds that the announcement date occurs after the date when the target company is first publicly disclosed as a possible takeover target. Bidder Cumulative Abnormal Return (Bidder CAR (-1,+1)) is the difference between the return on the acquirer's stock and the return on the CRSP value-weighted index over the three-day period centered on the merger announcement date. The dependent variable in these models is Bidder CAR (-1, +1). Prior CAR (-1, +1) is the CAR on the acquirer's last acquisition preceding the current merger. The Winner (Loser) dummy equals one if the prior CAR is positive (non-positive) and zero otherwise. "Errors in Variables" models are limited to deals in which the relative size of the prior acquisition is in the highest quintile across all acquisitions. "Important Deals" models are limited to mergers with a relative size in the top quintile and for which at least one of the acquirer's preceding deals in the sample also has a relative size in the highest quintile. Prior CAR (-1,+1) is the Bidder CAR on the acquirer's last large deal acquisition preceding the current merger. Pooled and Win/Lose models include control variables shown in Table 4, year dummy variables, and industry dummy variables. Intercept and coefficients on control and dummy variables are not displayed. Results are from OLS regressions with firm-level clustered standard errors. p-values are shown in parentheses. See the Appendix for a description of the control variables.

	Errors in Variables		**Important Deals**		
	Simple	**Pooled**	**Simple**	**Pooled**	**Win/Lose**
	Model 1	**Model 2**	**Model 3**	**Model 4**	**Model 5**
Prior CAR (-1,+1)	0.0592	0.0261	0.1172	0.0686	
	(0.002)	(0.197)	(0.001)	(0.062)	
Prior CAR (-1,+1) x Winner Dummy					0.1059
					(0.020)
Prior CAR (-1,+1) x Loser Dummy					-0.0255
					(0.722)
Adjusted R^2	0.0068	0.0836	0.0124	0.1345	0.1352
Number of Obs.	1,994	1,994	1,028	1,028	1,028

Appendix
Control Variables

Control Variable	Description
Public/Cash	Binary variable equal to one if SDC identifies the target as public and SDC's percent cash variable equals 100%; otherwise, equal to zero.
Public/Stock	Binary variable equal to one if SDC identifies the target as public and SDC's percent stock variable equals 100%; otherwise, equal to zero.
Public/Combination	Binary variable equal to one if SDC identifies the target as public, method of payment is known, and neither SDC's percent cash variable nor percent stock variable equals 100%; otherwise, equal to zero.
Public/Unknown	Binary variable equal to one if SDC identifies the target as public and method of payment is unknown.
Private/Cash	Binary variable equal to one if SDC identifies the target as private and SDC's percent cash variable equals 100%; otherwise, equal to zero.
Private/Stock	Binary variable equal to one if SDC identifies the target as private and SDC's percent stock variable equals 100%; otherwise, equal to zero.
Private/Combination	Binary variable equal to one if SDC identifies the target as private, method of payment is known, and neither SDC's percent cash variable nor percent stock variable equals 100%; otherwise, equal to zero.
Private/Unknown	Binary variable equal to one if SDC identifies the target as private and method of payment is unknown.
Subsidiary/Cash	Binary variable equal to one if SDC identifies the target as subsidiary and SDC's percent cash variable equals 100%; otherwise, equal to zero.
Subsidiary/Stock	Binary variable equal to one if SDC identifies the target as subsidiary and SDC's percent stock variable equals 100%; otherwise, equal to zero.
Subsidiary/Combination	Binary variable equal to one if SDC identifies the target as subsidiary, method of payment is known, and neither SDC's percent cash variable nor percent stock variable equals 100%; otherwise, equal to zero.
Subsidiary/Unknown	Binary variable equal to one if SDC identifies the target as subsidiary and method of payment is unknown.

Control Variable	Description
Relative Size	The ratio of the deal value (as reported by SDC) to the market value of the acquirer's equity two days prior to the announcement. Per SDC, deal value is the total value of consideration paid by the acquirer, excluding fees and expenses. The dollar value includes the amount paid for all common stock, common stock equivalents, preferred stock, debt, options, assets, warrants, and stake purchases made within six months of the announcement date of the transaction.
Same Industry: Acquirer/Target	Binary variable equal to one if acquirer and target belong to the same industry (Fama and French 48).
Log(Acquirer Size)	Natural log of the market value of the acquirer's equity two days prior to the announcement.
Log(Acquirer Age)	Natural log of the time between the announcement and the date of the acquirer's first appearance in CRSP.
Competitive Bid	Binary variable equal to one if SDC's Bidder Count variable is greater than one; otherwise, equal to zero.
Log(Time Since Last Acquisition)	Natural log of the number of years since the acquirer's last acquisition. If the prior deal is excluded from the sample, then time since last acquisition is set to missing and the current acquisition is excluded from the analysis.
Same Industry: Prior Acquisition	Binary variable equal to one if the current target and the target in the prior acquisition belong to the same industry (Fama and French 48).
International Target	Binary variable equal to one if the target is a non-U.S. firm (based on SDC's target nation code); otherwise, equal to zero.
Hostile	Binary variable equal to one if the attitude of the deal is hostile (as reported by SDC); otherwise, equal to zero.

The Rodney L. White Center for Financial Research

The Wharton School
University of Pennsylvania
3254 Steinberg Hall-Dietrich Hall
3620 Locust Walk
Philadelphia, PA 19104-6367

(215) 898-7616
(215) 573-8084 Fax
http://finance.wharton.upenn.edu/~rlwctr

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