Spring-loading when no one is looking?
Earnings and cash flow management around acquisitions

Shuping Chen
University of Texas at Austin
shuping.chen@mccombs.utexas.edu

Jake Thomas
Yale University
jake.thomas@yale.edu

Frank Zhang
Yale University
frank.zhang@yale.edu

May 9, 2013

We thank Shane Heitzman, Henock Louis, Phil Shane, and participants at workshops at London Business School, University of Minnesota, Nanyang Technological University, University of Southern California, and Yale University for helpful comments and suggestions. We are grateful for financial support from the McCombs Research Excellence Fund of the University of Texas at Austin and Yale School of Management. Brett Cantrell provided excellent research assistance.

Spring-loading when no one is looking?
Earnings and cash flow management around acquisitions

Abstract

We identify how targets and acquirers collaborate to manage earnings and cash flows around acquisitions. Using a sample of 2,128 completed deals from 1985-2010, we find that targets depress earnings and cash flows when investor attention declines once the deal parameters are set. Our results suggest that acquirers induce targets to understate performance during this "quiet" period to create reserves that are transferred to the acquirer. Not only is acquirer performance boosted after the acquisition, that overstatement is related cross-sectionally to target performance understatement during the quiet period. We contribute to the earnings management literature by showing that earnings and cash flows are transferred not just within firms but also across firms, and to the mergers and acquisitions literature by documenting that the incentives to manage performance exist not only before but also after the deal is announced.

1 Introduction

Mergers and acquisitions (M&A) are arguably the most significant investment decisions that firms make. Research has shown that earnings management during acquisitions can have substantial economic impact because of the associated wealth transfers among stakeholders. The literature investigating earnings management behavior around M&As focuses mainly on earnings management by acquirers and targets *before* acquisitions are announced.[1] We focus on the "quiet" period, *after* acquisitions are announced but before transactions are completed, to investigate whether targets understate earnings and also cash flows, and whether that understatement is linked to post-acquisition overstatement by acquirers.

Our motivation to investigate these questions is illustrated by the description of Tyco, a serial acquirer, provided in a Fortune article by Herb Greenberg, dated 4/1/2002.[2] The article discusses various efforts by Tyco to make acquired targets report lower earnings and cash flows during the quiet period, with the intent of "spring-loading" Tyco's earnings and cash flows immediately after the acquisition is completed. The quote below refers to Tyco's acquisition of Raychem, an electronics manufacturer, which was completed on Aug. 12, 1999, for $2.9 billion:

> "FORTUNE spoke to five former Raychem financial employees as well as a former Raychem consultant, all of whom said that after the deal was announced in May—but before it was completed in August—they were asked by Tyco officials to do such things as accelerate the payment of expenses, hold back the posting of payments received until after the acquisition date—which they refused to do—and overstate reserves. The implied purpose, they say, was to help boost Tyco's post-acquisition cash flow."

While the example cited above emphasizes improved post-acquisition cash flows, other

---

1 Prior research analyzes the earnings of acquirers (e.g., Erickson and Wang 1999) and targets, both those taken over by public acquirers (e.g., Raman, Shivakumar, and Tamayo 2008; Anilowski, Macias, and Sanchez 2009; and Marquardt and Zur 2010) and via management buyouts (DeAngelo 1986; Perry and Williams 1994.)

2 Another anecdotal example is Pfizer's acquisition of Wyeth in 2009. Wyeth reported a tax contingency reserve of about $1 billion in its last filing prior to the acquisition (Q2 of 2009). The reserve balance increased to about $1.5 billion upon acquisition. Subsequent to the acquisition, Pfizer settled its position with the IRS and reversed about $0.7 billion, thereby boosting reported income.

examples in the article refer to improving Tyco's post-acquisition earnings by managing target accruals. For example, the quote below refers to overstating Raychem's reserves:

> "One former Raychem division controller recalls how a Tyco official specifically discussed inflating reserves. She would literally ask, 'How high can we get these things. How can we justify getting this higher?' The employee … says he personally inflated reserves for such items as workers' compensation, medical insurance, and pensions by at least $10 million."

Managers of acquiring firms have clear economic incentives to encourage targets to depress performance—measured by earnings and cash flows—if that understatement allows managers to overstate post-acquisition performance, which helps to increase executive compensation and to alleviate capital market pressure. Given investor skepticism about synergies projected by acquirers (e.g., Bens et al., 2012), acquirers are willing to incur substantial costs to boost post-acquisition performance (e.g., Lys and Vincent, 1995). Unlike the typical case of earnings management considered in prior studies, where firms must depress earnings in one period to benefit from earnings increases in another period, here the acquirer has the opportunity to avail of "free" earnings and cash flows because the reserves are transferred from a different firm. The transfer of earnings and cash flows *across* firms as a form of earnings management has not been studied in prior research.

The incentives for target managers to cooperate with acquirers and understate quiet period performance are not as clear, however, and depend on relevant benefits and costs. Target managers might benefit from higher post-acquisition performance if they are retained by the combined entity. If their services are to be terminated, however, some inducement would be required to obtain cooperation. While the benefits to target managers of understating performance might vary across deals, the costs are low. Target stock prices are unlikely to fall in response to lower performance during the quiet period, as the compensation to be received by

target shareholders is relatively certain. Also, disclosures made during the quiet period receive less scrutiny from market participants, because targets will soon be absorbed by acquirers.

Just as the incentives to transfer performance vary across deals, there is variation in the extent to which performance can be transferred from the target. For example, the reserves created by overstating negative and understating positive accruals, which result in overstated liabilities and understated assets, are not available to the acquirer if assets and liabilities are marked to fair value in acquisitions accounted for under the purchase method. These limits on earnings transfers from targets to acquirers are less relevant for cash flow transfers.

Overall, while it is possible that acquirers' incentives might drive widespread transfers of performance around acquisitions, in practice the extent of such transfers might be limited by the ability to do so and the lower incentives for target managers to cooperate. In this paper, we investigate whether the thesis posited by the Fortune article on Tyco is generalizable to other mergers and acquisitions by examining three testable predictions.[3] First, *targets* manage earnings and operating cash flows downward during the quiet period. Second, *acquirer* performance is overstated during the quarters immediately following the acquisition. Third, target quiet period performance understatement is cross-sectionally related to acquirer post-acquisition performance overstatement. Although each prediction can be separately generated from alternative explanations, we believe that acquirers' incentives to boost post-acquisition performance are the only explanation that is consistent with all three predictions.

Before discussing our results, we provide a description of some relevant institutional features. As shown in Figure 1, the true quiet period extends from the announcement date, when common or unilateral intent to pursue the transaction is publicly announced, to the completion

[3] Here is another anecdotal example: In 1996 Medaphis managed earnings by directing a target to create reserves that were subsequently rejected by the SEC. http://www.sec.gov/litigation/admin/34-43570.htm.

date, when the acquisition is consummated. Because we do not have intra-quarter performance data we cannot separate the announcement quarter into the subperiods before and after the announcement date. As a result, our quiet period effectively starts a bit earlier, at the beginning of the fiscal quarter that contains the announcement date. We split this quiet period into two parts: a) quiet quarters, and b) the stub portion. The quiet quarter (quarter 0) refers to the complete fiscal quarter that includes the announcement date, and the stub portion refers to the remainder of the quiet period. Whereas a 10-Q is filed for the quiet quarter, no 10-Q is filed for the stub portion. For about a third of our sample, more than one 10-Q is filed during the quiet period. In such cases, we average target performance across the multiple quiet quarters.

Assume that targets experience positive growth in seasonal differences for reported *unmanaged* performance measures over the quarters leading up to the quiet quarter (e.g., U-1 is greater than U-5 in Figure 1). Per the first prediction, targets manage performance down during the quiet quarter (from U0 to M0). If target's under-stated performance were not transferred to the acquirer post acquisition, we assume the acquirer's post-acquisition performance would experience positive growth in seasonal differences, corresponding to the profile depicted by U+1 to U+9. Under the second prediction, understatement of target performance is available to the acquirer to spread across the first few post-acquisition quarters (e.g., M+1 is higher than U+1). The third prediction relates the extent of target performance understatement during the quiet quarter to the extent of acquirer overstatement during the first few post-acquisition quarters.

We document the following results, based on a sample of 2,128 M&A deals completed between 1985 and 2010. Consistent with our first prediction, targets appear to understate earnings and operating cash flow substantially during the quiet quarter. Whereas per share quarterly earnings and cash flows grow (relative to four quarters ago) at approximately 1 percent

and 1.3 percent of target equity book value in the quarters leading up to the quiet quarter, they decline during the quiet quarter by 0.18 percent and 0.41 percent, respectively. The lower quiet-quarter target earnings is due mainly to higher expenses, rather than lower revenues, and appear to be driven mainly by transactions that result in lower cash flows rather than lower accruals. While a portion of the lower quiet quarter performance reported by targets is due to acquisition-related charges, such as fees paid to advisors, "core" earnings that exclude such one-time items also exhibits substantial declines during the quiet quarter.

When investigating the second prediction, we face three challenges that generate considerable measurement error: a) the lack of a sharply defined period over which acquirer performance is likely to be boosted; b) the absence of comparable pre-acquisition data for the combined entity, required to compute seasonal differences; and c) the presence of acquisition-related items, such as write-offs and amortization of goodwill, which can reduce post-acquisition performance. In response, we a) assume that performance boosting occurs over the first four post-acquisition quarters, b) estimate *inverted* seasonal differences by comparing earnings and cash flows with the corresponding amounts for the same fiscal quarter from the *next* year, rather than the prior year, and c) emphasize measures of core earnings that likely exclude acquisition-related items. Despite these efforts, we expect substantial measurement error, which biases against the second prediction.

Our results are partially consistent with the second prediction. We find evidence of significant overstatement of GAAP and core earnings, but not cash flows, during the first post-acquisition year, relative to benchmarks obtained from corresponding quarters in the second post-acquisition year. This overstatement of earnings is observed for the second, third, and fourth post-acquisition quarters. Overstatement is greater for large acquisitions, for which potential

target performance understatement is larger in magnitude, and is confirmed by core earnings exceeding analyst forecasts. The opposite pattern observed for the first post-acquisition quarter, which includes the closing date, is likely due to the large acquisition-related charges taken in this quarter.

Our third prediction, which links the first two predictions, is supported by the strong negative cross-sectional relations we observe between understatement of target earnings (cash flows) and different measures of overstated acquirer earnings (cash flows). These negative relations are strongest for the first post-acquisition quarter, smaller yet still significant for the second quarter, and become insignificant thereafter. Our coefficient estimates suggest that 16.4 (32.8) cents of each dollar of earnings (cash flow) understatement by targets during the quiet quarter is used to overstate acquirer performance during the first two post-acquisition quarters. Evidence consistent with the third prediction provides the strongest support for the view that acquirers and targets collaborate to overstate post-acquisition performance.

Taken together, our results suggest that targets understate quiet period performance by substantial amounts, and acquirers benefit by reversing that understatement soon after completion of the acquisition. Note that our results underestimate the extent to which target performance is understated (because we exclude the stub portion of the quiet period) and they also underestimate the full extent to which post-acquisition performance is overstated (because of the measurement error noted earlier). Our results also likely underestimate the extent to which accruals are used to transfer target earnings to acquirers if accrual management—as opposed to cash flow management—occurs mainly during the stub portion.

This study contributes to the literature investigating earnings management as well as the broader M&A literature. First, we show how performance management can occur *across* firms,

not just within firms, because of collaboration between targets and acquirers. Second, the magnitude of target earnings understatement is quite large, relative to other documented instances of earnings management. Third, we show that in addition to earnings management, acquirers and targets also engage in substantial cash flow management. Finally, we extend the M&A literature by documenting that performance management is not limited to the period before the deal is struck.

We organize the rest of the paper as follows. Section 2 reviews relevant literature and presents our empirical predictions. Sections 3 and 4 describe our sample and empirical results, respectively, and Section 5 concludes.

2 Background Literature and Predictions

Prior research on earnings management around M&A transactions has focused mainly on the earnings management behavior of acquiring firms *before* the acquisition is announced. Researchers find that acquirers have incentives to manage earnings upward prior to stock-for-stock acquisitions in an effort to increase their stock price and reduce the number of shares issued in exchange (e.g., Erickson and Wang 1999). Researchers have also examined pre-acquisition earnings management by targets as well as how target earnings quality affects different economic aspects of the acquisition.[4] One strand of this literature examines earnings management by targets prior to management buyouts (DeAngelo 1986; Perry and Williams 1994). The general finding in those studies is that managers have incentives to understate earnings prior to the buyout in an effort to depress stock prices and reduce the purchase price.

[4] For example, Raman, Shivakumar, and Tamayo (2008) examine the impact of targets' earnings quality on acquirer decisions along three dimensions: takeover method, offer premium, and form of payment. This study finds that when targets exhibit poor earnings quality—proxied by Dechow-Dichev (2002) residuals—acquirers are less likely to stage a hostile takeover, but more likely to offer lower premiums and pay with stock to share the risk of overpayment with target shareholders. Other examples include Marquardt and Zur (2010), and Anilowski, Macias, and Sanchez (2009).

We seek to add to the overall literature on earnings management around M&A transactions by examining targets' earnings management behavior *after* the acquisition is announced, and then link the potential impact of target earnings management to acquirer earnings management after the acquisition. The potential for earnings transfers *across firms* is a novel aspect of earnings management that has not been studied before. We also add to this literature by examining whether operating cash flows are managed in a similar manner.

The validity of the predictions that arise from the Fortune article is contingent on assumptions about the costs and benefits of performance management to targets and acquirers. First, the costs to targets of understating performance during this quiet period should be relatively low. Earnings understatement at this point is less likely to result in lower target share prices, relative to understated earnings at other points in time, because the payments to be received by target shareholders are already set. Similarly, contracts that rely on reported numbers are less likely to be affected by understated earnings because many of those contracts will either expire or be renegotiated. Finally, costs are lower because targets face substantially reduced scrutiny from market participants, such as investors and analysts, during this "lame duck" period as the formalities of the acquisition process are being completed. Public trading in target shares will cease soon, which reduces the incentives for market participants to monitor and gather information on the target.

The level of scrutiny by market participants and the associated costs of understated performance are even lower during the stub portion of the quiet period, because no financial statements are filed.[5] We recognize that our results, which are based on the visible portion of the

[5] Reduced scrutiny by market participants and increased opportunities to manage earnings have been shown by Du and Zhang (2013) to arise for stub periods that are created when firms change fiscal year-end. These stub periods refer to the period between the last fiscal quarter end prior to the change in the fiscal year-end and the beginning of the first quarter after the fiscal year-end change. Unlike the stub periods in our study, financial

quiet period and exclude stub period performance, will likely understate both the magnitude of performance understatement by targets as well as the fraction that is accruals-based.

Second, not only should the costs of understating target performance during the quiet period be low, they should be lower than the benefits of understatement to target managers.[6] The benefits to target managers are quite clear when they are likely to continue with the acquirer, because the incentives of acquirer and target managers are aligned in this case. If target managers exit after the transaction is completed, however, acquirer managers will need to create incentives for target managers to cooperate. Given the low costs to target managers of understating earnings during the quiet period, even a relatively small side-payment should be sufficient to induce cooperation.[7]

Third, when considering the costs and benefits of performance management to acquirers, acquirers should be able to transfer reserves from targets and acquirer managers should perceive the resulting overstatement as beneficial. We rely on the general motivations for earnings management described in prior literature (e.g., Healy and Wahlen 1999), and allow for the possibility that acquirer managers believe that market participants adjust less than fully for

---

statements for the stub periods in that study are filed with the SEC. Those numbers, however, tend to be excluded from databases such as COMPUSTAT.

[6] Prior research has documented that firms tend to take large, income-decreasing negative one-time charges around structural changes, such as non-routine executive changes (Pourciau 1993). The incentives to understate performance around M&A transactions, which are also often associated with considerable changes, can thus be viewed as being similar to those around structural changes. The main difference is that the benefits of understatement are potentially lower for target managers, since they may not remain with the firm.

[7] While we assume that acquirer and target interests can be aligned, there are many potential sources of conflict (e.g., Johnson, 2011). For example, acquirers are concerned about targets' reduced incentives to maintain normal operations. As a result, acquirers require targets to sign a number of covenants, representations, and warranties. Also, since asset and liability values can change during the quiet period, acquirers might insist on purchase price adjustment clauses, that reprice the deal at completion based on changes in net worth and working capital. In the presence of such adjustment clauses, target managers may be less willing to accelerate cash outflows and expenses, which biases against our first prediction. We note, however, that these clauses are typical for private targets, not the public targets we study here.

overstated acquirer performance (e.g., Erickson and Wang 1999). *Ceteris paribus*, higher post-acquisition performance can help acquirer managers justify the acquisition.[8]

Target earnings can be understated using both accruals (e.g., writing down assets or writing up liabilities) as well as real transactions that accelerate cash outflows and defer cash inflows (e.g., accelerating R&D and maintenance expenditures). The requirement under purchase accounting to mark target assets and liabilities to fair values for M&A transactions might suggest that earnings management via accruals will not benefit the acquirer in such cases. However, conversations with auditors suggest that target assets and liabilities are typically carried over to the acquirer at book values when the purchase method is used.

Overall, as long as performance understatement by targets can potentially benefit acquirers, and as long as acquirers can create incentives for target managers to understate performance, the discussion above suggests the following general predictions regarding performance management by targets and acquirers:

> ***P1****: Targets understate performance during the quiet period.*
>
> ***P2****: Acquirers overstate performance during the four quarters immediately following the acquisition.*
>
> ***P3****: Cross-sectionally, management of post-acquisition performance by the acquirer is negatively related to the management of quiet period performance by the target.*

3 Sample and data

Our sample consists of 2,128 mergers and acquisitions completed between 1985 and 2010 from the Security Data Corporation (SDC) database. We require both the acquirer and target to be U.S. corporations and the transaction value to be at least $100 million. We also

[8] Higher post-acquisition earnings appear to be an important objective when designing M&A transactions. For example, acquirers go to great lengths, often to the extent of incurring substantial costs, to be able to account for acquisitions under the pooling of interests method. When describing the billions in value destroyed during AT&T's acquisition of NCR, Lys and Vincent (1995) state: "We find that AT&T paid a documented $50 million and possibly as much as $500 million to satisfy pooling accounting, thus boosting EPS by roughly 17% but leaving cash flows unchanged."

require that the acquirer obtain complete control of the target upon deal completion. We require that at least one fiscal quarter ends during the quiet period (to obtain data from 10-Q reports on target performance during the quiet period) and that seasonally-differenced earnings per share (EPS), before extraordinary items and discontinued operations, are available for quarters in the quiet period and the quarter before. We obtain financial data from Compustat, stock return data from CRSP, and analyst forecast data from *I/B/E/S*.

Table 1 provides descriptive statistics for our sample. The first row in Panel A shows that the mean (median) pre-acquisition target market value, *T_MV*, in our sample is $1,738 million ($352 million), which is larger than the corresponding mean (median) market value of $1,524 million ($88 million) for the Compustat universe over the same 1985 to 2010 period, as reported in the second block in Panel A. The mean (median) target book-to-market ratio, *T_BM*, is 0.60 (0.54), which is similar to the corresponding values reported for the Compustat universe. The mean (median) transaction value is $2,380 million ($488 million). Transaction values exceed pre-acquisition target market values because of the premiums paid by acquirers. On average, stock (cash) represents 51 (39) percent of the total consideration paid in these acquisitions.

The mean (median) length of the quiet period, *Ndays*, is 174 days (151 days); i.e., on average the acquisition is completed within about six months after the acquisition is announced. Note that our requirement of a quarter-end during the quiet period eliminates transactions with relatively short gaps between announcement and completion of the deal. Our quiet period begins before the true quiet period for two reasons: a) the first quarter in the quiet period includes days before the acquisition was announced, and b) we use the date when the successful acquirer made its first bid rather than the date that the deal parameters were settled, because the SDC database provides the former but not the latter date. Prior literature has suggested that target firms might

overstate earnings during the period when potential acquirers might bid (Anilowski et al. 2009). To the extent that measurement error in our estimate of the quiet period causes us to include the period during which performance is managed *upward*, we are less likely to observe evidence of understated target performance.

The third and fourth blocks in Panel A provide representative levels of performance for targets and acquirers. We use the quarter before the quiet period for targets and the fifth quarter after the acquisition for acquirers, because target performance in the quite period might be understated and acquirer performance in the first four post-acquisition quarters might be overstated. We use these performance levels as benchmarks when investigating performance management in later Tables.

Table 1, Panel B, describes the distribution of the number of quarters ending during the quiet period for our sample.[9] For a majority of our sample (65 percent) the quiet period consists of only one quarter. For observations where the quiet period spans multiple fiscal quarters we report the average of each measure across those fiscal quarters.

Panel C of Table 1 describes the year-by-year distribution of acquisitions in our sample. Consistent with prior research, the flow of transactions varies over time, increasing during the merger booms of the mid 1980s, mid to late 1990s and mid 2000s. The intervening years, especially the period of the recent financial crisis, are associated with fewer transactions. Given that our minimum deal size of $100 million is not adjusted for inflation, earlier years in our sample are underrepresented.

[9] As noted above, because our quiet period begins before the true quiet period, these results overstate the number of quarters actually ending during the quiet period, especially for acquisitions associated with multiple rounds of competitive bids and acquisitions that are initially resisted by targets.

4 Empirical results

4.1 Target performance management during the quiet period: tests of P1

4.1.1 Earnings and cash flow for the quiet quarter relative to the quarter before

To examine whether target firms report lower performance during the quiet period we first compare seasonally-differenced earnings and cash flows during the quiet quarter with seasonal differences for the quarter before (quarters 0 and -1 in Figure 1, respectively). Essentially, we adopt a difference-in-difference research design, where seasonal differences control for firm-specific growth. Specifically, the seasonal difference for the quarter before (U-1 minus U-5 in Figure 1) represents the expected growth for quarter 0, or the observed growth in quarter 0 if targets did not suppress quiet period performance (U0 minus U-4). If, however, targets suppress quiet period performance (say, from U0 to M0), actual growth (M0 minus U-4) observed during the quiet quarter would be lower than that for the quarter before.

We believe that same-firm prior quarters represent better controls than peer firms during the same quarter, as we expect fewer concerns about potential correlated omitted variables with our difference-in-seasonal-differences design. As the quarter immediately preceding the quiet period might be associated with incentives for target managers to overstate earnings, we also examine each of the six quarters before the quiet period to confirm that quarter -1 is indeed an appropriate benchmark. To provide confirmation of performance management, we also compare analyst forecast errors as well as growth in sales and accruals between quarters 0 and -1.

The results of our comparisons are provided in Table 2, with mean and median values reported in Panels A and B, respectively. We compute seasonal differences for per share target GAAP earnings before extraordinary items (*T_E*), cash flows (*T_CFO*), sales (*T_S*), and accruals (*T_ACC*), and scale by *TBV*, the book value of equity per share from four quarters ago (see

Appendix for details of variable definitions). All variables are Winsorized at the 1st and 99th percentiles of the cross-sectional distributions to mitigate the impact of outliers. The number of observations varies across performance metrics due to data availability.

We also consider two measures of core earnings—earnings before special items, adjusted for taxes (*T_EB*) and actual earnings according to I/B/E/S (*T_IE*)—to reduce the impact of any quiet-quarter earnings understatement that is due to one-time items. Acquisitions generate a number of costs—such as fees paid to advisors—that reduce performance during the quiet period, but are not available to be transferred to the acquirer. These costs bias our tests in favor of P1. Detailed analysis of a subsample of 51 target firms indicates that a) many firms report substantial acquisition-related charges, but b) all such charges are classified by Compustat as Special Items.[10] While some portion of those charges may represent efforts to understate target earnings, much of it likely reflects acquisition-related costs that are not transferred to the acquirer. Thus, while our results for GAAP earnings are likely biased in favor of P1, our results for the two core earnings measures are likely biased *against* P1 because all one-time items, including those that are available to be transferred to the acquirer, are removed.

Table 2 shows that mean and median seasonally-differenced earnings before extraordinary items (*T_ΔE/TBV*) for targets are negative during the quiet period and significantly lower than the positive growth observed for the quarter before. The mean (median) *T_ΔE/TBV* reported in Row 1 of Panel A (Panel B) is –0.18 (–0.02) percent of lagged equity book value per share during the quiet period versus 0.81 (0.27) percent in the quarter before, resulting in a difference of –0.99 (–0.29) percent. Not only are these differences statistically significant, they

[10] To better understand the incidence, magnitude, and classification of acquisition-related charges, we select 100 deals (from our Table 4 subsample) for which targets are not too small, relative to the acquirer, and experience large earnings declines but not sales declines in the quiet quarter. We are able to obtain quiet-quarter 10-Q filings for 51 of these firms. Observing that all acquisition-related charges for this subsample are classified as Special Items by Compustat suggests that this classification also holds in general for our overall sample.

are economically significant relative to typical *levels* of quarterly earnings, which are around 2 percent of equity book values (e.g., the mean value of *T_E* in the third block of Table 1, Panel A, is 1.76 percent).

The corresponding difference between quarters 0 and −1 for seasonally-differenced operating cash flows (*T_ΔCFO/TBV*), reported in Row 2 of Panels A and B of Table 2, suggests that target cash flows are similarly understated during the quiet period. The mean (median) difference is −1.25 (−0.36) percent of lagged equity book value per share, both of which are statistically significant. They are also economically significant, relative to the mean level of quarterly cash flow (*T_CFO*) of 5.46 percent of book value of equity, reported in the third block of Table 1, Panel A.

Results reported in Rows 3 and 4 in both Panels of Table 2 suggest that about half of the negative difference between quarters 0 and −1 observed for earnings before extraordinary items arises from core earnings. The mean (median) difference for earnings before tax-adjusted special items (*T_ΔEB/TBV*) and actual earnings according to IBES (*T_ΔIE/TBV*) is −0.50 (−0.20) percent and −0.51 (−0.10) percent of equity book value, respectively. Again, these differences are statistically and economically significant. As some of the one-time items removed from our measures of core earnings might represent efforts by target management to understate earnings, we view the core earnings results as a conservative estimate of the total amount of understatement that occurs during quiet quarters.

An alternative explanation for lower quiet-period performance is that it is due to factors such as reduced target manager effort, divestiture of target divisions, and customers holding back on purchases from the target until after the acquisition is completed. If so, we expect substantially lower quiet-period sales. To determine the portion of the earnings reduction that can

be explained by sales declines, we need to multiply any sales decline by the net income margin or ratio of net income to sales, which is on average about 5 percent.

The results reported in row 5 of Panels A and B of Table 2 for seasonally-differenced sales (*T_ΔS/TBV*) contradict this alternative explanation. The mean difference between quarters 0 and −1 for *T_ΔS/TBV* in Panel A is −0.10 percent of equity book value, which is statistically insignificant. It is also economically insignificant, when multiplied by an average net income margin and compared with the earnings understatement of about 1 percent of equity book value. While the median difference for *T_ΔS/TBV* in Panel B is larger, -0.39 percent of equity book value, and statistically significant at the 5 percent level, it remains economically insignificant when multiplied by the net income margin. These results suggest that the substantially lower quiet period performance is due mainly to higher expenses and cash outflows rather than lower sales and cash inflows.

In contrast to the understated earnings and cash flows observed during the quiet period, neither the mean nor median difference between quarters *t* and *t-1* for seasonally-differenced accruals (*T_ΔACC/TBV*), reported in Row 6 of Panels A and B, respectively, is significantly different from zero. These results suggest that the lower earnings reported by target firms during the quiet period are due to lower cash flows, rather than more negative accruals.

The analysis reported in Row 7 of both panels of Table 2, relating to analyst forecast errors during the quiet quarter, offers an independent assessment of the understatement of core earnings implied by our results so far. Analysts should rationally anticipate target quiet-quarter understatement of core earnings if such understatement is common, and reflect that anticipation in their forecasts. If so, analysts should not be surprised negatively by the lower actual core earnings reported during quiet quarters.

We define forecast errors (*T_FE1/TBV*) as actual earnings according to IBES minus the average of individual analyst forecasts made in the last month of the fiscal quarter, scaled by book value of equity per share four quarters ago.[11] The mean (median) forecast error for our sample of target firms in quarter *–1* is –0.17 (0.07) percent of lagged equity book value per share, which indicates that analysts are generally optimistic for target firms. Consistent with P1, the mean (median) forecast error of –0.39 (0.04) observed during the quiet quarter is even more negative. While the magnitudes of forecast error differences are smaller than the corresponding differences in seasonally-differenced earnings, reflecting some anticipation by analysts of earnings understatement by targets, they are highly statistically significant.

Overall, our results in Table 2 show that targets report substantially lower earnings and cash flows during the quiet quarter, relative to the quarter before. Lower earnings are due to higher expenses, not lower sales, and accruals play a minor role. We recognize that some of the target performance understatement we document is likely due to acquisition-related charges taken by the target that are not available to be transferred to the acquirer. However, our results based on core earnings and analyst forecast errors suggest that understatement of recurring items plays an important role. Additional confirmation that understatement of target performance is designed to boost acquirer post-acquisition performance is observed when we investigate predictions P2 and P3 (described in Section 4.2).

4.1.2 Is the quarter before the quiet period an appropriate benchmark?

It is possible that the quarter immediately preceding the quiet period is associated with incentives for target managers to overstate earnings. That is, the results reported in Table 2 might reflect overstated performance for quarter –1, rather than understated performance for quarter 0.

[11] We find that the consensus forecast as of the last month in the fiscal quarter includes more stale forecasts in the quiet quarter, relative to the quarter before. As stale forecasts also tend to be more optimistic, using the consensus forecast biases upward slightly the magnitudes of the differences reported in those rows.

To confirm that quarter −1 is indeed an appropriate benchmark, we examine each of the six quarters before the quiet period. We tabulate in Panel A of Table 3 the time-series of seasonally-differenced earnings (*T_ΔE/TBV*) and cash flow surprises (*T_ΔCFO/TBV*) for the quiet quarter and the six quarters before. To provide an alternative benchmark for the observed quiet quarter decline in performance, we report in Panel B the mean and median level of seasonally-differenced quarterly earnings and cash flows for the Compustat universe during the same 1985-2010 sample period.

The results from both Panels of Table 3 suggest that the findings reported for quarter −1 are not skewed upward by incentives to overstate performance. Seasonally-differenced earnings and cash flows in Panel A are strongly positive and relatively stationary in all six quarters leading up to the quiet period.[12] The quiet period is strikingly different as it exhibits considerably lower mean and median values for *T_ΔE/TBV* and *T_ΔCFO/TBV*. The differences in earnings and cash flow surprises between the quiet period and previous quarters are highly significant regardless of which prior quarter is considered.[13] Additional confirmation that quarter −1 provides a reasonable benchmark is provided in Panel B: seasonal differences for the Compustat universe are much higher than those reported for the quiet quarter and yet they resemble the corresponding statistics reported for quarters −1 through –6.

4.1.3 Target earnings management during the stub portion of the quiet period

Given that no financial reports are filed with the SEC for the stub portion of the quiet period, managers of both targets and acquirers likely face lower costs and higher benefits from understating performance during this stub portion, relative to the more visible portion of the

[12] While the sample sizes for quarters *t* and *t-1* are the same, the number of observations decline as we go back each quarter from *t-1* to *t-6*. For each lag we report statistics based on the subset of targets with available data.

[13] As a robustness check, we examine earnings and cash flow surprises for up to 20 quarters before the quiet period and find similar results. For example, median earnings surprises are very stable, ranging from 0.33% to 0.44% from quarter *t-20* to *t-7*.

quiet period. As a result, we expect considerable performance understatement, especially through accruals, to occur during the stub portion. Although we are unable to conduct a full analysis for the stub portion, our search of footnotes in post-acquisition filings indicates that some acquirers provide partial "as-if" statements that describe sales and earnings that would have been observed if the target had been acquired at the beginning of the fiscal year. We can infer stub portion earnings and sales as the earnings and sales provided in the as-if disclosures minus the sum of actual earnings and sales reported for the acquirer and target over the same period.

Post-acquisition filings exhibit wide variation in the format and content of such disclosures, and each transaction has to be analyzed manually on a case-by-case basis. Given the cost of collecting and analyzing such data, we conduct an exploratory analysis on a subsample (the first 300 observations from our full sample, sorted by acquirer CUSIP). We find that most acquirers do not provide the necessary "as if" data.[14] We are able to calculate stub portion earnings and sales for 106 and 93 observations, respectively. We then obtain quarter-equivalent numbers by dividing stub portion earnings and sales by the number of calendar days in the stub portion and multiplying by 91 (the approximate number of days in a fiscal quarter).

Table 4 compares surprises for earnings and sales for the stub portion of the quiet period with surprises for the quiet quarter and the quarter before. The main finding is that there is considerable understatement of income during the stub portion, even more than that during the quiet quarter. Specifically, the mean (median) difference between target earnings surprise (*T_ΔE/TBV*) during the stub portion and the quarter before, reported in Row 5, represents an earnings understatement of 4.96 (3.59) percent of equity book value. Not only is that understatement substantial relative to the normal level of quarterly earnings (approximately 2

[14] Firms with larger acquisitions are more likely to report "as if" numbers. The median deal size is 43.8 percent of acquirer's market value (in the last quarter prior to deal announcement) for firms reporting "as if" numbers, compared with 10.37 percent for firms not reporting such numbers.

percent of equity book value), it is many times the mean (median) understatement during the quiet period of 0.32 (0.32) percent of equity book value, reported in Row 4.

Whereas there is no evidence of sales declines during the quiet quarter, relative to the quarter before, there is considerable evidence of sales declines during the stub portion, indicated by a mean (median) value of sales surprise difference, *T_ΔS/TBV*, of 2.42 (2.45) percent of equity book value, reported in Row 5, which is statistically insignificant (significant). As discussed in Section 4.1.1., however, these sales declines need to be multiplied by the ratio of net income to sales before they can be compared with earnings declines. Using a typical value of 5 percent for net income margins, the earnings effect of the sales declines represents a small fraction of observed earnings declines; i.e., much of the earnings understatement occurring in the stub portion is due to overstated expenses, rather than sales declines.

Overall, the evidence in Tables 2, 3, and 4 suggests considerable performance understatement by targets during the quiet period. Whereas the evidence in Table 4 suggests that the extent of target performance understatement is even greater during the stub portion than that reported for the quite quarter, there is an important caveat. As described earlier for quiet quarters, some of the performance reduction during the stub portion may represent acquisition-related charges, not understatement. While we are able to control for such charges in quiet quarters by investigating two measures of core earnings, there are no data available to conduct that same analysis for the stub portion.

4.2 Acquirer financial performance after completion of acquisition

We turn next to an analysis of performance management by acquiring firms over quarters following the closing date. Note that the post-acquisition performance of the acquirer is the performance of the combined entity as our sample is limited to transactions where the acquirer

obtains complete control of the target. As mentioned in the Introduction, we make three research design choices in response to challenges that arise when investigating post-acquisition performance of the combined entity. First, performance is compared to levels from four quarters *later* to estimate overstated performance.[15] Second, we assume that performance management related to the acquisition is more likely to be reflected in the first four post-acquisition quarters than in subsequent quarters. Third, we also report results based on core earnings and analyst forecast errors to supplement our results based on earnings numbers that include the effect of post-acquisition charges.

These design choices have the following implications for our results. Because of normal growth, subtracting future levels of earnings and cash flows from current levels results in negative values, which suggests performance *declines* to the casual reader. To avoid reporting negative values, we invert those seasonal differences. Whereas seasonal differences equal performance in quarter q minus that in quarter q-4, inverted seasonal differences equal performance in quarter q+4 minus that in quarter q. Overstatement of performance levels in quarter +1 (M+1 exceeds U+1 in Figure 1) would reduce inverted seasonal differences (U+5 minus M+1) relative to the case of no overstatement (U+5 minus U+1).

The second design choice—assuming that performance boosting is limited to the first four post-acquisition quarters—allows us to use the next four quarters, from +5 through +8, as an observable proxy for the unobservable, no overstatement case. That is, average inverted seasonal differences observed for quarters +5 through +8 (U+9 minus U+5 through U+12 minus U+8)

[15] The sum of the acquirer's and target's pre-acquisition performance is not an appropriate benchmark for post-acquisition performance. Pre-acquisition performance does not include synergies created by the acquisition. On the other hand, post-acquisition performance could be systematically lower than the sum of the two stand-alone companies for acquisitions accounted for using the purchase method, because of additional depreciation and amortization/write-downs associated with assets that have been marked up to fair values and to reflect goodwill. Similarly, the divestiture of some target and acquirer assets will reduce the base of operating assets available to generate sales and earnings after the acquisition. Finally, transactions between the acquirer and target will be eliminated after the acquisition, further reducing post-acquisition performance.

proxy for inverted seasonal differences for quarters +1 through +4 for the unobservable, no overstatement case (U+5 minus U+1 through U+8 minus U+4). Evidence of acquirer performance overstatement in the first four post-acquisition quarters will be indicated by smaller observed inverted seasonal differences than the average inverted seasonal difference observed for the benchmark quarters. If performance overstatement continues past quarter +4, which is quite likely, this second design choice biases against observing acquirer performance overstatement in the first four post-acquisition quarters.[16]

The third design choice—reporting supplementary results based on performance measures that are less affected by one-time items—allows us to mitigate the bias against P2 caused by the impact of acquisition-related charges (especially for the first post-acquisition quarter which includes the completion date). These charges would depress measures of performance that include one-time items resulting in *higher* measures of inverted differences relative to the benchmark period, which make it harder to detect overstatement. The measures of performance we use that are less affected by such charges include cash flows, core earnings, and analyst forecast errors.

4.2.1 Evidence of overstatement of post-acquisition performance: test of P2

Table 5 reports the time-series behavior of mean inverted seasonal differences for earnings and cash flows and analysts' forecast errors for acquirers over the first four quarters following the acquisition. The average of the benchmark quarters (quarters +5 through +8) is provided in the bottom row. Panel A presents results for all firms in our sample, whereas Panel B presents results for 518 large deals, where deal values are at least half the market value of

[16] To the extent that performance overstatement is evenly distributed from quarter +1 to +8, we should not find significant results for P2 and P3.

acquirers. We expect the results to be stronger in Panel B because the magnitudes of potential performance management will be larger.

Results in column (1) are for inverted seasonal differences in GAAP earnings (*C_ΔE/CBV)*, which equal EPS before extraordinary items for the combined entity four quarters later minus EPS in that post-acquisition quarter, scaled by that quarter's book value per share for the combined equity (*CBV*). We deflate by end-of-quarter rather than beginning-of-quarter or four-quarters-ago book values because we cannot obtain reliable estimates of pre-acquisition book values for the combined entity. The inverted difference in quarter +1 is quite large, much larger than the average of the benchmark quarters. While this result is inconsistent with the overstatement predicted by P2, it is consistent with earnings for quarter +1 being reduced sharply by acquisition-related charges. The inverted differences for quarters +2, +3, and +4, on the other hand, are lower than the average of the benchmark quarters, which is consistent with P2. The results are significant at the 5 percent level for quarter +4 in Panel A and quarters +2, +3, and +4 in Panel B.

Results in column (2) examine inverted differences in our first measure of core earnings (*C_ΔEB/CBV)*, which adds back tax-adjusted special items to GAAP earnings. These results are similar to those for GAAP earnings: whereas the first post-acquisition quarter exhibits larger inverted differences, relative to the benchmark reported in the bottom row, the next three quarters are associated with smaller values. The inverted differences for quarters +2 and +4 in Panel A are significantly lower at the 5 percent level than the benchmark, whereas the corresponding values in Panel B are significantly lower at the 5 percent level for quarters +2, +3, and +4.

Column (3) provides results for our second measure of core earnings, inverted difference in I/B/E/S EPS (*C_ΔIE/CBV)*. While inverted differences in the first four post-acquisition quarters are all smaller than the benchmark, none of the differences are statistically significant in Panel A. For the sample in Panel B, all four post-acquisition quarters exhibit lower inverted differences than the benchmark, but only the differences for quarters +3 and +4 are statistically significant at the 5 percent level.

To provide an indication of economic significance of the magnitude of earnings overstatement, we can compare the overstatement we document with the levels of quarterly GAAP earnings reported by acquirers. The mean of quarterly earnings before and after exclusion of tax-adjusted special items—C_E and C_EB, respectively—reported in Table 1 is 1.66 and 2.32 percent of equity book value. The extent of overstatement for each quarter is the excess of the benchmark in the bottom row over the inverted difference in the row for that quarter. For example, the excess amounts for quarter +4 in columns 1 to 3 are 0.51 percent, 0.36 percent, and 0.17 percent of equity book value in Panel A, and 1.55 percent, 0.90 percent, and 0.46 percent in Panel B, respectively. Summing up the corresponding estimates across quarters +2 to +4 suggests that the total overstatement by acquirers is comparable in magnitude to the mean levels of GAAP quarterly earnings, especially for the larger targets described in Panel B.[17]

Results reported in column (4) for forecast errors (*C_FE/CBV)* suggest that analyst forecast errors are less negative for post-acquisition quarters +2, +3, and +4, relative to the benchmark quarters, in both Panels A and B. All of those differences, except that for quarter +4 in Panel A, are statistically significant. Again, these results confirm our inferences based on the first three performance measures. Not only are core earnings reported in the first year overstated

[17] The results reported below in Section 4.2.2 offer an alternative indication of economic significance by comparing magnitudes of acquirer performance overstatement with levels of target performance understatement.

relative to benchmarks derived from core earnings reported in the next year, they are overstated relative to benchmarks based on analyst forecasts. Apparently, analysts did not anticipate fully these overstatements.

Results reported in column (5) for cash flow surprises (*C_ΔCFO/CBV)* are inconsistent with the second prediction. None of the inverted difference measures in the first four quarters are smaller than the average for the next four quarters.

In sum, our evidence is only weakly supportive of P2. While evidence inconsistent with that prediction is observed for earnings in the first post-acquisition quarter and for cash flows in all four quarters, our evidence regarding earnings in quarters +2, +3, and +4 is consistent with acquirers boosting post-acquisition earnings, though not all comparisons are statistically significant.

4.2.2 Relating target understatement to acquirer overstatement: test of P3

We turn next to the third prediction, which links the first two predictions: greater target understatement during the quiet period should result in greater acquirer overstatement after the acquisition. The results reported Table 6 describe regressions of acquirer performance based on the variables analyzed on Table 5—forecast errors and inverted differences in acquirer's earnings and cash flows—on target underperformance during the quiet quarter and control variables. Panels A and B relate to the first and second post-acquisition quarters.[18] Target performance understatement (*T_ΔEU/CBV* and *T_ΔCFOU/CBV*) is measured as quiet-quarter seasonally-differenced earnings and operating cash flows minus corresponding seasonal differences in the quarter before. The scaling variable for target performance, end-of-quarter equity book value per share for the combined entity (*CBV*), is the same as that for the dependent variables measuring acquirer performance. This approach allows us to interpret the coefficients on target

[18] Results for the third and fourth post-acquisition quarters are similar, but not statistically significant.

understatement as the fraction of that understatement that appears as overstated post-acquisition acquirer performance.

The control variables we consider include the fraction of the deal value paid as stock (*PctStock)*, whether the acquisition was accounted for as a pooling of interests (*POOLING*), the logarithm of deal value [*Log(DEAL)*], deal value relative to that of the acquirer (*RELSIZE*), the book-to-market ratio of the acquirer (*A_BM*), and abnormal annual accruals made by the acquirer over the three years before the acquisition (*PRE_ACC*).[19]

According to P3, the coefficient estimates on target earnings understatement should be positive in columns (1), (2), and (3), for both Panels in Table 6. More negative values of target performance during the quiet quarter should be associated with higher post-acquisition acquired performance, as captured by less positive inverted differences. The coefficient estimates on target cash flow understatement in column (5) should also be positive. The coefficient estimate on analyst forecast error in column (4) should be negative, because more negative values of target performance during the quiet quarter should be associated with less negative (or more positive) forecast errors if earnings overstatements by the acquirer are not anticipated by analysts.

The results in Panel A, relating to the first post-acquisition quarter, are consistent with P3. Whereas inverted seasonal differences in GAAP earnings for acquirers is only weakly positively related to target earnings understatement during the quiet period, indicated by the coefficient on *T_ΔEU/CBV* in column (1), the two core earnings surprise measures exhibit a significant positive relation, indicated by the corresponding coefficients in columns (2) and (3). The weaker result observed for GAAP earnings is likely due to acquisition-related charges,

[19] The results are robust to calculating abnormal accruals over one year or two years before the acquisition. In each case, the coefficients on abnormal accruals are statistically insignificant.

which bias against observing post-acquisition overstatement. The corresponding relation for cash flows, reported in column (5), is also positive and highly significant. The significant negative coefficient on *T_ΔEU/CBV* in column (4) suggests that the performance overstatement documented in column (3) that was not fully anticipated by analysts is also cross-sectionally related to target earnings understatement. It increases our confidence in the measures of overstatement used in columns (1), (2), and (3).

The results in Panel B, relating to the second post-acquisition quarter, are also consistent with P3. The significant positive coefficient on target understatement in column (1) suggests that acquisition-related charges, which created considerable noise in the first post-acquisition quarter, are less important after that. The estimates in columns (2), (3), and (5) are also all positive, though it is not significant in column (2). The coefficient relating to analyst forecast error in column (4) is positive, though insignificant.[20]

The coefficient magnitudes allow us to provide an alternative indication of the economic significance of performance overstatement undertaken by acquirers. The sum of the coefficients on quiet quarter target understatement across Panels A and B—for all columns except column (4)—reflect the fraction of that understatement that appears as acquirer performance overstatement in the first and second post-acquisition quarters. That sum is 16.4 percent and 32.8 percent for GAAP earnings and operating cash flows in columns (1) and (5), respectively, and 11.5 percent and 7.7 percent for the two core earnings measures in columns (2) and (3). As mentioned earlier, these estimates are biased down for a variety of reasons (e.g., our measures of target performance understatement are noisy and measures of acquirer performance overstatement are biased down). Another source of downward bias is that we did not consider the

[20] While the results for P2 (column 5 of Table 5) suggest that analysts do not fully anticipate the extent of post-acquisition earnings overstatement, these results for P3 suggest that the extent to which analysts are surprised is not related to understatement of quiet period target earnings.

overstatement associated with quarters +3 and +4. Despite those biases, we are able to show that a substantial portion of quiet quarter target performance understatement is transferred to acquirers. In untabulated analyses, we find that the coefficients on variables of interest are about 50% larger in magnitude and highly significantly, if we restrict our sample to 518 large deals where deal values are at least half the market value of acquirers.

The results in Table 6 not only support the third prediction, they also provide support for the first and second predictions. This additional support is more relevant for the two areas of performance that were not supported by the results in Table 5: earnings performance for the first post-acquisition quarter and cash flow performance for all four post-acquisition quarters. Whereas acquirers' *average* levels of earnings surprises in quarter +1 and cash flow surprises in quarters +1 through +4 are not higher than the benchmark quarters, from a *cross-sectional* perspective acquirers' post-acquisition earnings and cash flows are significantly associated with target quiet-period performance understatement. In combination, the evidence regarding P1, P2, and P3 is consistent with the thesis posited by the Fortune article: acquirers' post-acquisition performance is boosted by transferring reserves created by targets' performance understatement during the quiet period.

5 Conclusions

In this paper we investigate whether targets understate earnings and cash flows during the quiet period, when targets receive less scrutiny from market participants, with the intent to transfer that understatement to boost acquirer post-acquisition performance. The quiet period extends from announcement of the acquisition, when the deal terms are set, to formal completion of the deal. While there is anecdotal evidence suggesting that targets' quiet period income and

cash flow are understated and then transferred to acquirers, no empirical study has systematically examined this issue. We attempt to fill this void.

The costs of understating target performance are likely to be low during the quiet period. Market participants are less concerned about target performance as the terms of payments to target shareholders have already been set, and analysts following these stocks will soon discontinue coverage. The benefits to target managers from understating quiet period performance also seem low. However, acquiring firms can benefit from such earnings management if the lower target earnings translate into higher acquirer earnings once the acquisition is completed. We posit that these benefits to acquirers represent the driving force behind target earnings management and assume that acquiring firms are able to provide enough incentives for target managers to cooperate.

Our results, based on a sample of 2,128 acquisitions completed over a 26-year period from 1985-2010, suggest that targets understate their quiet period performance, and the magnitude of understatement of earnings and cash flows is statistically and economically significant. Earnings are depressed by higher expenses, rather than lower sales, and performance understatement appears to be driven by depressing operating cash flows, rather than negative accruals. More important, our results suggest that target performance understatement is designed to assist acquirers to boost their performance overstatement after the acquisition. While empirical challenges limit our ability to document clear evidence of overstated post-acquisition acquirer performance, we are able to document a strong cross-sectional relation between target performance understatement during the quiet period and overstatement of post-acquisition performance by the acquirer. Again, the magnitudes of such overstatement are economically

significant, relative to both the magnitude of target understatement as well as levels of quarterly earnings and cash flows.

Our results extend prior research on performance management around mergers and acquisitions in two ways. While that research has focused on transfers of earnings before the acquisition is announced, we consider performance management after the acquisition is announced, and consider both cash flows and earnings. A novel contribution of our study is that we document performance transfers *across* firms, whereas prior studies typically investigate transfers of earnings across years within the same firm.

Appendix: Variable definitions

(Quarterly COMPUSTAT variable names are provided in parentheses under Description)

Variables	Description
A_BM	Acquirer's book-to-market ratio at the end of the last fiscal quarter ending before the completion date.
*CBV**	Combined entity's book value of equity per share (CEQQ/CSHOQ*AJEXQ), where combined entity represents the acquirer after the deal is completed.
*C_FE/CBV**	Combined entity's EPS analyst forecast error (I/B/E/S actual minus median consensus forecast as of the last month of the fiscal quarter) scaled by CBV_q.
*C_ΔCFO/CBV**	The combined entity's inverted seasonal difference for cash flows, measured as $(CFO_{q+4} - CFO_q)/CBV_q$
*C_ΔE/CBV**	The combined entity's inverted seasonal difference for earnings, measured as $(E_{q+4} - E_q)/CBV_q$.
*C_ΔEB/CBV**	The combined entity's inverted seasonal difference for earnings before special items, measured as $(EB_{q+4} - EB_q)/CBV_q$.
*C_ΔIE/CBV**	The combined entity's inverted seasonal difference for I/B/E/S earnings, measured as $(IE_{q+4} - IE_q)/CBV_q$
CFO	Cash flow from operations per share (OANCFY/CSHOQ*AJEXQ)
DEAL	Deal size, value paid for target (in millions of dollars)
Deal/A_MV	Relative deal size measured as deal value scaled by acquirer's market value of equity at the end of fiscal quarter before deal announcement.
E	Earnings before extraordinary items per share (IBQ/CSHOQ*AJEXQ)
EB	Earnings before tax-adjusted special items per share [IBQ-SPIQ*(1-35%))/CSHOQ*AJEXQ]
IE	I/B/E/S actual earnings per share.
Ndays	number of days in the quiet period, between the acquisition announcement date and the completion date
PctCash	The percentage of cash to total consideration paid for target.
PctStock	The percentage of stock to total consideration paid for target.
POOLING	Indicator variable=1 if acquisition accounted for as pooling, and 0 otherwise
PRE_ACC	Abnormal accruals made by the acquirer during the 3 years prior to the acquisition, computed as average abnormal annual accruals, where abnormal accruals is the modified Jones model estimated for each 2-digit SIC industry.
RELSIZE	Size of deal relative to acquirer market value at the end of the last fiscal quarter before completion of the acquisition.
S	Sales per share (SALEQ/CSHOQ*AJEXQ)
TBV	Target's book value of equity per share (CEQQ/CSHOQ*AJEXQ)
T_BM	Target's book-to-market ratio at the end of the quarter before the acquisition announcement date.
T_FE1/TBV	Target's analyst forecast error (I/B/E/S actual minus forecast) scaled by book value of equity per share four quarters ago, where the forecast is the average of individual forecasts made in the last month of the fiscal quarter, obtained from I/B/E/S detail files.
T_MV	Target's market value of equity (in millions of dollars) at the end of the quarter before the acquisition announcement date. (CSHOQ*PRCCQ)

T_ΔACC/TBV	Seasonal difference in target's accruals per share, scaled by TBV_{q-4}, measured as the difference between *T_ΔE/TBV* and *T_ΔCFO/TBV*.
T_ΔCFO/TBV	Target's seasonal difference for cash flows, measured as $(CFO_q - CFO_{q-4})/TBV_{q-4}$
T_ΔCFOU/CBV	Measure of target cash flow understatement in quiet period, defined as the average target's cash flow surprise (*T_ΔCFO*) for quarters during the quiet period minus that for the quarter before the acquisition announcement date multiplied by the number of quarters in the quiet period, scaled by CBV_q.
T_ΔE/TBV	Target's seasonal difference for earnings, measured as $(E_q - E_{q-4})/TBV_{q-4}$
T_ΔEU/CBV	Measure of target's income understatement in quiet period, defined as the average target's surprise in earnings before extraordinary items (*T_ΔE*) for the quiet period minus that for the quarter before the acquisition announcement date multiplied by the number of quarters in the quiet period, scaled by CBV_q.
T_ΔIE/TBV	Target's seasonal difference for I/B/E/S earnings, measured as $(IE_q - IE_{q-4})/TBV_{q-4}$
T_ΔS/TBV	Target's seasonal difference for sales, measured as $(S_q - S_{q-4})/TBV_{q-4}$

***** The combined entity (C_) refers to the acquirer after the deal is completed. For the combined entity, the performance measures for cash flows (CFO) and different earnings proxies (E, EB, and IE) are inverted because we cannot use performance from four quarters ago as a benchmark for the first four post-acquisition quarters (as the acquirer is not comparable before and after the acquisition). In response, we compute seasonal difference (Δ) for quarter q by comparing quarter q with quarter q+4, rather than quarter q-4.

References

Anilowski, C.L., A. J. Macias, and J.M. Sanchez, 2009. Target firm earnings management and the method of sale: evidence from auctions and negotiations, Purdue University and University of Arkansas, working paper.

Bens, D. A., T. H. Goodman, and M. Neamtiu. 2012. Does investment-related pressure lead to misreporting? An analysis of reporting following M&A transactions. *The Accounting Review*. 87 (3) 839-865).

DeAngelo, L., 1986. Accounting numbers as market valuation substitutes: A study of management buyouts of public stockholders. *The Accounting Review* 67: 77-96.

Du, K. and F. Zhang. 2013. Orphans deserve attention: Financial reporting in the missing months when corporations change fiscal year. *The Accounting Review* (forthcoming).

Erickson, M., S. Wang. 1999. Earnings management by acquiring firms in stock for stock mergers. *Journal of Accounting & Economics* 27: 149-167.

Healy P.M. and J.M. Wahlen. 1999. A review of the earnings management literature and its implications for standard setting. *Accounting Horizons*, 365-383.

Johnson, D. C. 2011. Rigid or flexible accounting rules? Evidence from purchase price adjustments. Working paper, Sloan School of Management, MIT.

Lys, T., L. Vincent. 1995. An analysis of value destruction in AT&T's acquisition of NCR. *Journal of Financial Economics:* 39:353-378.

Marquardt, C., E. Zur. 2010. The role of accounting quality in the M&A market. Baruch College, CUNY, working paper.

Perry, S., T.H.Williams. 1994. Earnings management preceding management buyout offers. Journal of Accounting & Economics 18: 157-179.

Pourciau, S. 1991. Earnings management and nonroutine executive changes. *Journal of Accounting & Economics* 16: 317-336.

Raman, K., L. Shivakumar, and A. Tamayo, 2008. Targets' earnings quality and bidders' takeover decisions, Bentley College and London Business School, working paper.

Table 1 Description of acquisition transactions

Panel A: Descriptive statistics

	Mean	Std. dev.	Min.	Q1	Median	Q3	Max.
General data relating to the acquisition							
T_MV	1,738	5,411	1	145	352	1,079	93,073
T_BM	0.60	0.35	0.06	0.37	0.54	0.75	2.04
DEAL	2,380	7,427	100	209	488	1476	164,747
PctCash	38.63	43.12	0	0	13.50	100	100
PctStock	50.80	44.95	0	0	54.94	100	100
Ndays	174	106	31	116	151	200	1786
Benchmarks from the Compustat population							
MV	1,524	9443	0.00	19.61	88.32	439.7	604,415
BM	0.52	1.79	-51.45	0.25	0.51	0.86	10.83
Performance of the target in the quarter before the quiet period							
T_E/TBV_{q-1}	1.76%	7.13%	-34.2%	0.83%	2.71%	4.20%	26.5%
T_CFO/TBV_{q-1}	5.46%	15.5%	-65.4%	0.60%	4.38%	9.34%	75.8%
T_EB/TBV_{q-1}	2.12%	6.32%	-27.3%	1.05%	2.77%	4.24%	24.9%
Performance of the combined entity in the fifth quarter after the acquisition							
C_E/CBV_{q-1}	1.66%	7.72%	-48.6%	1.12%	3.00%	4.62%	14.2%
C_CFO/CBV_{q-1}	6.87%	20.2%	-70.2%	1.54%	5.07%	9.23%	100%
C_EB/CBV_{q-1}	2.32%	5.85%	-30.96%	1.39%	3.21%	4.80%	14.2%

Panel B: Distribution of the number of fiscal quarters ending during the quiet period

The number of quarters	Frequency	Percent
1	1,375	64.61%
2	515	24.20%
3	143	6.72%
4	53	2.49%
5 and more	42	1.93%

Table 1 Description of acquisition transactions (continued)

Panel C: Distribution of the number of acquisitions by year

Year	Frequency	Percent	Year	Frequency	Percent
1985	50	2.35%	1998	165	7.75%
1986	57	2.68%	1999	170	7.99%
1987	43	2.02%	2000	146	6.86%
1988	47	2.21%	2001	102	4.79%
1989	49	2.30%	2002	54	2.54%
1990	20	0.94%	2003	88	4.14%
1991	23	1.08%	2004	103	4.84%
1992	31	1.46%	2005	110	5.17%
1993	34	1.60%	2006	134	6.30%
1994	70	3.29%	2007	137	6.44%
1995	101	4.75%	2008	41	1.93%
1996	112	5.26%	2009	43	2.02%
1997	186	8.74%	2010	12	0.56%

The sample consists of 2,128 mergers and acquisitions completed between 1985 and 2010 covered by Security Data Corporation, that satisfy the following conditions: both the acquirer and target are U.S firms, transaction values exceed $100 million, the acquirer achieves complete control of the target, a fiscal quarter for the target ends during the quiet period and seasonally differenced target earnings are non-missing for both the quiet quarter and the quarter before. The Compustat data reported in Panel A are based on the same 1985 to 2010 period. The prefixes *T_* and *C_* in the variable names refer to the target before the acquisition and the combined entity (acquirer) after the acquisition. *MV* and *BM* refer to market value and book to market ratio. *PctCash* and *PctStock* refer to the percent of total consideration paid as cash and stock, and *Ndays* refers to the number of days between the acquisition announcement date and completion date. *CFO, E* and*, EB* refer to per share cash flows from operations, earnings before extraordinary items, and earnings before tax-adjusted special items, respectively. Additional details of variables are provided in the Appendix. All variables except for *MV*, *PctCash*, *PctStock* , and *Ndays* are Winsorized at 1 and 99 percent of the respective cross-sectional distributions.

Table 2 Target performance during the quiet quarter versus the quarter before

Panel A: Mean performance

Row	Variable	N	Quiet Quarter	Quarter Before	Difference	(t-statistic)
1	*T_ΔE/TBV*	2,128	-0.18%	0.81%	-0.99%***	(-3.45)
2	*T_ΔCFO/TBV*	1,547	-0.41%	0.84%	-1.25%**	(-2.29)
3	*T_ΔEB/TBV*	2,128	0.00%	0.50%	-0.50%***	(-2.59)
4	*T_ΔIE/TBV*	1,453	0.09%	0.60%	-0.51%***	(-3.17)
5	*T_ΔS/TBV*	2,110	3.63%	3.74%	-0.10%	(-0.16)
6	*T_ΔACC/TBV*	1,547	0.32%	-0.23%	0.55%	(0.91)
7	*T_FE1/TBV*	1,119	-0.39%	-0.17%	-0.22%**	(-2.19)

Panel B: Median performance

Row	Variable	N	Quiet Quarter	Quarter Before	Difference	(z-statistic)
1	*T_ΔE/TBV*	2,128	-0.02%	0.27%	-0.29%***	(-5.89)
2	*T_ΔCFO/TBV*	1,547	0.01%	0.37%	-0.36%**	(-2.12)
3	*T_ΔEB/TBV*	2,128	0.08%	0.28%	-0.20%***	(-4.06)
4	*T_ΔIE/TBV*	1,453	0.24%	0.34%	-0.10%**	(-2.08)
5	*T_ΔS/TBV*	2,110	1.78%	2.17%	-0.39%**	(-1.90)
6	*T_ΔACC/TBV*	1,547	-0.09%	-0.18%	0.09%	(0.53)
7	*T_FE1/TBV*	1,119	0.04%	0.07%	-0.03%**	(-1.69)

*, ** and *** indicate significant difference at the 10%, 5%, and 1% level, respectively, based on one-tailed tests.

This table compares performance measures for the quiet quarter with those for the quarter before, where the quiet quarter includes all quarters ending between the announcement and completion of the acquisition. For observations with more than one quiet quarter, we report averages across those quarters. "Difference" equals the quiet quarter value of the measure minus that for the quarter before with *t*-statistics and *z*-statistics reported in parentheses for means and medians, respectively. The sample consists of 2,128 mergers and acquisitions between 1985 and 2010. The prefix *T_* in the variable names refer to the target and the deflator *TBV* refers to target equity book value per share from four quarters ago. The symbol Δ refers to seasonal differences.. *E, CFO, EB, IE, S, ACC* refer to per share, earnings before extraordinary items, cash flows from operations, earnings before tax-adjusted special items, I/B/E/S actual earnings, sales, and accruals, respectively. *FE1* refers to analyst forecast error (I/B/E/S actual minus forecast), where the forecast is the average of individual forecasts made in the last month of the fiscal quarter from I/B/E/S detail files Additional details of variables are provided in the Appendix. All variables are Winsorized at 1 and 99 percent of the respective cross-sectional distributions.

Table 3 Target performance during the quiet quarter and six quarters before

Panel A: Seasonally-differenced earnings and cash flows for the target

		Earnings ($T\_\Delta E/BV$)		Cash flows ($T\_\Delta CFO/BV$)	
	N	Mean	Median	Mean	Median
6 quarters before	1,920	1.01%***	0.44%***	0.80%**	0.31%**
5 quarters before	1,965	1.32%***	0.38%***	1.64%***	0.64%***
4 quarters before	2,012	0.85%***	0.38%***	1.49%***	0.48%***
3 quarters before	2,059	0.59%***	0.28%***	1.31%***	0.47%***
2 quarters before	2,096	0.71%***	0.32%***	1.71%***	0.41%***
1 quarter before	2,128	0.81%***	0.27%***	0.84%**	0.37%**
Quiet quarter	2,128	-0.18%	-0.02%	-0.41%	0.01%

Panel B: Seasonally-differenced earnings and cash flow for the Compustat universe

	N	Mean	Median
Earnings ($\Delta E/BV$)	729,785	1.18%	0.28%
Operating cash flows ($\Delta CFO/BV$)	585,536	0.84%	0.37%

*, ** and *** indicate significant difference, relative to the bottom row in Panel A (quiet period) at the 10%, 5%, and 1% level, respectively, based on one-tailed tests.

Panel A compares seasonally differenced target earnings ($T\_\Delta E/BV$) and operating cash flows ($T\_\Delta CFO/BV$), scaled by equity book value from four quarters ago, for the quiet quarter with the prior six quarters. The quiet quarter includes all quarters ending between the announcement and completion of the acquisition. For observations with more than one quiet quarter, we report averages across those quarters. The sample consists of 2,128 mergers and acquisitions between 1985 and 2010 with non-missing seasonally differenced earnings data for both the quiet period and the quarter before. To provide a benchmark for the results in Panel A, Panel B reports the mean and median seasonally-differenced earnings and cash flows for the Compustat universe, scaled by book value, over the same 1985 to 2010 period. All variables are Winsorized at the 1st and 99th percentiles of the cross-sectional distribution each period. Additional details of variables are provided in the Appendix.

Table 4 Earnings and sales performance during the stub portion of the quiet period: a subsample analysis

Row		*T_ΔE/BV*			*T_ΔS/BV*		
		N	Mean	Median	N	Mean	Median
1	Quarter before	106	0.29%	0.20%	93	2.57%	1.58%
2	Quiet quarter	106	-0.02%	-0.12%	93	2.55%	1.58%
3	Stub portion	106	-4.67%	-3.39%	93	0.15%	-0.87%
4	Quarter before vs. Quiet quarter		0.32% (0.41)	0.32%* (1.66)		0.02% (0.01)	-0.00% (-0.15)
5	Quarter before vs. Stub portion		4.96%** (1.97)	3.59%*** (6.30)		2.42% (0.73)	2.45%*** (3.36)
6	Quiet quarter vs. Stub portion		4.65%** (1.76)	3.27%*** (5.48)		2.40% (0.76)	2.45%*** (3.65)

The t-statistics associated with differences reported in the bottom three rows are shown below in parentheses, and *, ** and *** indicate significant differences at the 10%, 5%, and 1% level, respectively, based on one-tailed tests.

The top three rows in this table report the mean and median values of seasonally-differenced earnings (*T_ΔE/BV*) and sales (*T_ΔS/BV*) for the quarter before, the quiet quarter, and the stub portion of the quiet period for a subsample of deals. The bottom three rows report means and medians and associated t-statistics and z-statistics for differences between pairs of the distributions in the top three rows. The quiet period, which extends from the beginning of the fiscal quarter that includes the announcement date to the completion date of the acquisition, can be divided into the quiet quarter and the stub portion. The quarter before is the last fiscal quarter prior to the acquisition announcement date. The quiet quarter includes all quarters ending between the announcement and completion of the acquisition. For observations with more than one quiet quarter, we report averages across those quarters. The stub portion is from the end of the last quiet quarter to the acquisition completion date. Because data for the stub portion are hand-collected and requires case-by-case analysis, we limit the subsample to the first 300 observations in our full sample (ranked by acquirer CUSIP). We are able to calculate stub portion earnings and sales for 106 and 93 observations, respectively.As no reports are filed by the target during the stub portion, we infer stub portion sales as acquirer_as_if_sales minus (acquirer_actual_sales + target_actual_sales), where acquirer_as_if_sales and acquirer_actual_sales are from the footnotes of acquirer's 10-Q after the acquisition completion date, and target_actual_sales are from target's 10-Q prior to the acquisition completion date. A similar approach is applied to obtain earnings during the stub portion. We get quarter-equivalent numbers by dividing stub portion earnings and sales by the number of calendar days in the stub portion and multiplying by 91. All variables are Winsorized at the 1st and 99th percentiles of the cross-sectional distribution each period. Additional details of variables are provided in the Appendix.

Table 5 Evidence of acquirer performance overstatement in the post-acquisition period Performance is measured as inverted seasonal difference

Panel A Full sample (1404 observations)

Post- acquisition	*C_ΔE/CBV*	*C_ΔEB/CBV*	*C_ΔIE/CBV*	*C_FE/CBV*	*C_ΔCFO/CBV*
Quarter	1	2	3	4	5
+1	2.07%***	0.74%	0.26%	-0.34%	1.42%**
+2	0.29%*	0.21%**	0.26%	-0.21%***	1.33%**
+3	0.38%	0.37%	0.28%	-0.25%**	0.97%
+4	0.08%**	0.16%**	0.18%	-0.35%	0.68%
Average +5 to +8	0.59%	0.52%	0.35%	-0.38%	0.61%

Panel B Large acquisitions, Deal value exceeds 50% of Acquirer market value (518 observations)

Post- acquisition	*C_ΔE/CBV*	*C_ΔEB/CBV*	*C_ΔIE/CBV*	*C_FE/CBV*	*C_ΔCFO/CBV*
Quarter	1	2	3	4	5
+1	3.84%***	1.41%	0.35%	-0.61%	2.17%**
+2	0.14%***	0.13%***	0.24%	-0.28%***	1.06%
+3	0.04%**	0.19%**	0.14%**	-0.29%**	1.08%
+4	-0.32%***	0.08%***	0.04%**	-0.27%**	0.08%
Average +5 to +8	1.23%	0.98%	0.50%	-0.49%	0.72%

*, ** and *** indicate significant difference at the 10%, 5%, and 1% level, respectively, based on one-tailed tests, for comparisons of performance measures in each of the first four quarters relative to the average of the corresponding measures for the next four quarters (5 to 8).

This table reports the time-series pattern of the combined entity's performance in the post-acquisition period. The sample consists of 1,404 mergers and acquisitions with non-missing *C_ΔE/CBV* (for quarter +1) and *T_ΔE/CBV* (for quarters 0 and -1) between 1985 and 2010. The prefix *C_* in the variable names refers to the combined entity (acquirer) after the acquisition. The symbol Δ refers to inverted seasonal difference, equal to the level of a variable in *q+4* minus the level in *q*. *CFO, E, EB*, and *IE* refer to per share cash flows from operations, earnings before extraordinary items, earnings before tax-adjusted special items, and actual earnings according to I/B/E/S, respectively. We invert seasonal differences for cash flows and earnings measures and compare quarter *q* with *q+4* rather than *q-4* because we cannot use performance from four quarters ago as a benchmark for the first four post-acquisition quarters (as the acquirer plus target from before the acquisition is not comparable to the post-acquisition acquirer). *FE* is analyst forecast error, equal to actual I/B/E/S earnings minus the consensus forecast made in the last month of fiscal quarter *q*. The deflator *CBV* refers to the acquirer's equity book value per share as of the end of quarter *q*. Assuming that post-acquisition overstatement is limited to the first four quarters, we expect the inverted differences in the first four quarters to be smaller than the average over quarters 5 to 8 (the benchmark quarters), reported in the bottom rows of each panel. For the analyst forecast errors in column 4, we expect overstatement of earnings in the first four quarters to be reflected in more positive (less negative) values of forecast error, relative to the average forecast error for quarters 5 to 8. Details of variables are provided in the Appendix. All variables are Winsorized at the 1st and 99th percent of the respective cross-sectional distributions.

Table 6 Transfer of target performance understatement on post-acquisition performance
Acquirer performance is measured as inverted seasonal difference

	Dependent variable & predicted sign of coefficient on target performance understatement					
	C_ΔE/CBV +	*C_ΔEB/CBV* +	*C_ΔIE/CBV* +	*C_FE/CBV* –		*C_ΔCFO/CBV* +
	(1)	(2)	(3)	(4)		(5)
Panel A	***The first quarter after acquisition (+1)***					
Intercept	0.021 (1.38)	0.007 (0.79)	0.009 (2.03)	-0.007 (-2.73)	Intercept	0.059 (2.90)
T_ΔEU/CBV	0.053 (0.93)	0.098*** (2.90)	0.043*** (2.42)	-0.021** (-2.23)	*T_ΔCFOU/CBV*	0.231*** (4.76)
PctStock	0.012 (1.61)	0.007 (1.47)	0.000 (0.15)	-0.002 (-1.89)	*PctStock*	-0.027 (-2.70)
POOLING	0.018 (2.42)	0.006 (1.37)	0.003 (1.35)	0.000 (0.25)	*POOLING*	0.023 (2.14)
Log(DEAL)	-0.002 (-1.16)	-0.002 (-1.40)	-0.001 (-2.30)	0.001 (3.53)	*Log(DEAL)*	-0.006 (-2.18)
REL_SIZE	0.024 (4.80)	0.010 (3.39)	0.003 (2.07)	-0.005 (-5.62)	*REL_SIZE*	0.027 (4.17)
A_BM	-0.021 (-1.81)	0.001 (0.11)	-0.001 (-0.42)	-0.001 (-0.56)	*A_BM*	-0.021 (-1.38)
PRE_ACC	0.043 (0.78)	-0.007 (-0.20)	-0.003 -(0.20)	-0.009 (-1.06)	*PRE_ACC*	0.134 (1.95)
Adj R^2	0.024	0.015	0.007	0.031	Adj R^2	0.049
Panel B	***The second quarter after acquisition (+2)***					
Intercept	0.008 (0.70)	0.003 (0.38)	0.016 (3.94)	0.001 (0.24)	Intercept	0.008 (0.44)
T_ΔEU/CBV	0.111** (2.21)	0.017 (0.51)	0.034** (1.87)	0.014 (1.36)	*T_ΔCFOU/CBV*	0.097*** (2.36)
PctStock	-0.009 (-1.48)	0.004 (1.10)	-0.004 (-1.92)	-0.000 (-0.24)	*PctStock*	0.003 (0.37)
POOLING	-0.007 (-1.17)	-0.004 (-1.04)	-0.001 (-0.49)	-0.001 (-1.27)	*POOLING*	0.004 (0.44)
Log(DEAL)	-0.001 (-0.30)	0.000 (0.23)	-0.001 (-1.64)	0.000 (1.34)	*Log(DEAL)*	0.000 (0.05)
REL_SIZE	-0.006 (-1.48)	-0.005 (-1.86)	0.003 (1.73)	0.001 (0.53)	*REL_SIZE*	-0.006 (-1.09)
A_BM	-0.009 (-1.16)	-0.005 (-0.92)	-0.011 (-3.96)	-0.010 (-6.75)	*A_BM*	0.009 (0.88)
PRE_ACC	-0.014 (-0.31)	-0.011 (-0.38)	0.009 (0.60)	-0.016 (-1.92)	*PRE_ACC*	0.074 (1.30)
Adj R^2	0.004	0.001	0.015	0.035	Adj R^2	0.003

Table 6 (continued)

*, ** and *** indicate significant difference at the 10%, 5%, and 1% level, respectively, based on one-tailed tests.

This table reports results from regressing acquirers' post-acquisition performance in quarters +1 and +2 on performance measure understatement by targets during the quiet quarter, and various control variables. The quiet quarter refers to all quarters ending between the announcement and completion of the acquisition, and values reported for the quiet quarter are means for all quarters included in the quiet period. The prefixes *C_* and *T_* in the variable names refer to the combined entity (acquirer) after the acquisition and the target before the acquisition. The symbol Δ followed by U for targets measures performance understatement during the quiet quarter and refers to seasonal differences during the quiet quarter minus seasonal differences in the quarter before. For acquirers, the symbol Δ refers to inverted seasonal difference. Inverted seasonal difference is equal to the level of a variable in *q+4* minus the level in *q*. *CFO, E, EB*, and *IE* refer to per share cash flows from operations, earnings before extraordinary items, earnings before tax-adjusted special items, and actual earnings according to I/B/E/S, respectively. We invert seasonal differences for cash flows and earnings measures for acquirers and compare quarter *q* with *q+4* rather than *q-4* because we cannot use performance from four quarters ago as a benchmark for the first four post-acquisition quarters (as the acquirer plus target from before the acquisition is not comparable to the post-acquisition acquirer). *FE* is analyst forecast error, equal to actual I/B/E/S earnings minus the consensus forecast made in the last month of fiscal quarter *q*. The deflator *CBV* refers to the acquirer's equity book value per share as of the end of quarter *q*.

The control variables we consider are as follows. *PctStock* is the fraction of the deal value paid as stock, *POOLING* is an indicator variable set to 1 when the acquisition is accounted for as a pooling of interests, *Log(DEAL)* is the logarithm of deal value, *RELSIZE* is deal value relative to that of the acquirer, *A_BM* is the book-to-market ratio of the acquirer, and *PRE_ACC* is abnormal annual accruals made by the acquirer over the three years before the acquisition.

Higher target performance understatement results in more negative values of the target variables and higher acquirer performance overstatement results in smaller values for cash flow and earnings measures and more positive (less negative) forecast errors. According to prediction P3, if target performance understatement explains acquirer performance overstatement, the coefficients on target performance understatement for the earnings measures (in columns 1, 2, and 3) and the cash flow measure (in column 5) should be positive, and the coefficient on analyst forecast error (in column 4) should be negative.

The sample consists of 1,404 mergers and acquisitions with non-missing *A_ΔE/CBV* and *T_ΔE/CBV* between 1985 and 2010. All variables are Winsorized at the 1st and 99th percentiles of the cross-sectional distribution. Additional details of variables are provided in the Appendix.

Figure 1
Illustration of Target and Acquirer performance (earnings or cash flows), before (U) and after (M) performance management.
(Quarter 0 includes fiscal quarters between the quarter containing the announcement date and the quarter before the completion date)