The Impact of Post-Acquisition Accounting Integration on Long-Term M&A Success

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ABSTRACT: Acquisitions involve a substantial amount of accounting work. We investigate whether accounting-related integration issues during the immediate post-acquisition period are associated with poorer internal information quality which, in turn, leads to poorer post-acquisition performance. We expect that firms with more issues surrounding integration, which includes purchase price allocation and the merging of accounting systems, have poorer internal information resulting in poorer managerial integration decisions. We first document that our measures of accounting-related integration issues, abnormal audit fees and report lags in acquisition years, are positively associated with post-acquisition management guidance error and internal control weakness. We then document that accounting-related integration issues are negatively associated with long-term acquirer performance and positively with investor uncertainty. Importantly, using a path analysis, we show that accounting integration issues affect post-acquisition performance *through* internal information quality. Lastly, we find that ex-post accounting-related integration issues are not predictable by investors in acquirer announcement returns.

JEL codes: G34, M42

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I. INTRODUCTION

The integration process after mergers and acquisitions is expected to be important in realizing the synergies from combining acquirer and target firms. Immediately after an acquisition is completed, the acquirer begins integrating accounting systems of the two entities, focusing on setting up common controls for various operational segments such as compliance, reporting, or procurement, in order to operate as one company. Internal information produced from the merged accounting system provides feedback to management about the progress of the integration, thus affecting integration decision-making (Bruner 2004; Galpin 2014).

In this study, we examine whether ex-post accounting-related integration issues are associated with acquirers' post-acquisition internal information quality and their acquisition outcomes. Accounting-related integration issues are complications in the integration of a target into its acquirer that affect the combined entity's accounting system. These issues can include operational integration issues that affect financial reporting or issues directly stemming from the combining of accounting systems and applying acquisition accounting under Accounting Standard Codification (ASC) 805 and 350.[1] We posit that the quality of information produced from the accounting system is important during the integration period as this is a critical time for setting the stage for the combined entity's operation (e.g., Angwin 2004; Bruner 2004; Galpin 2014). In line with this notion, accounting practitioners argue that the first 100 days is when critical actions are launched and integration success is largely determined by actions during this period (PwC 2017). We expect accounting-related integration issues to adversely affect firms'

[1] The accounting standards effective during our sample period are SFAS 141, *Business Combinations* (included in ASC 805 *Business Combinations*), and SFAS 142, *Goodwill and Other Intangible Assets* (included in ASC 350 *Intangibles)*. (FASB 2001a, 2001b). Therefore, acquisitions in our sample are accounted for using the acquisition (purchase) method and goodwill is not amortized. SFAS 141 is revised and replaced by SFAS 141R after 2009 (FASB 2007).

internal information environment. We further expect accounting-related integration issues are associated with less successful acquisitions for two reasons. First, we expect poorer internal information quality in the early integration period results in worse managerial integration decision-making. Second, underlying operational integration issues that affect accounting systems can cause acquirers not to realize expected synergies. We differentiate between these explanations in our analysis by using path analysis to test whether accounting-related integration issues are associated with post-acquisition performance through internal information quality.

We extend prior literature that examines the association between *pre*-acquisition acquirer and target accounting characteristics and acquisition performance based on acquirer announcement returns and post-acquisition performance (e.g., Biddle and Hilary 2006; McNichols and Stubben 2008; Biddle, Hilary, and Verdi 2009; Francis and Martin 2010; Raman, Shivakumar, and Tamayo 2013; Skaife and Wangerin 2013; Marquardt and Zur 2015; McNichols and Stubben 2015; Chen, Collins, Kravet, and Mergenthaler 2018). These studies generally find that acquirers' and targets' pre-acquisition accounting quality is positively associated with acquisition performance. However, these studies generally are based on the argument that pre-acquisition accounting transparency reduces agency costs by facilitating monitoring since acquisitions are settings where managers' incentives can diverge from shareholders.[2] We focus on the *ex-post* integration process to develop more specific insight into how accounting issues are associated with post-acquisition performance. In contrast to prior studies, our arguments relate specifically to the importance of successful integration of accounting systems in the combining of businesses and whether the effect on internal information quality is the mechanism by which accounting-related issues are associated with

[2] Another argument is that acquirers with ex-ante high accounting quality are better informed and make better investment decisions in terms of target selection, valuing targets, and post-acquisition divestment.

post-acquisition performance. While accounting-related integration issues can result from agency problems they can also occur because of the nature of corporate acquisitions and the difficulty in predicting how easily two firms can integrate. In a related study, Wangerin (2019) finds that lengthier pre-acquisition due-diligence is positively associated with post-acquisition performance suggesting that firms can avoid costly integration issues through greater planning. In examining realized integration issues we are testing the effect of issues that due diligence did not remediate.

We use three measures of accounting-related integration issues based on abnormal audit fees and abnormal audit report lags in the fiscal year the acquisition is completed. These measures are based on prior audit research (Bamber, Bamber, and Schoderbek 1993; Knechel and Payne 2001; Ashbaugh, LaFond, and Mayhew 2003; Krishnan and Yang 2009) and capture instances where, during the accounting integration period, either (1) the acquirer paid higher than expected audit fees or (2) the acquirer's auditor took longer than expected to sign its audit opinion. We argue that higher than expected fees and/or longer than expected audit report lags in the deal completion year capture difficulties experienced by the acquirer in integrating the target company's financial reporting and internal control systems into its own. These two measures have a positive but modest correlation indicating they capture different aspects of accounting-related integration issues. Our third measure is a summary measure of the first two measures. Importantly, these measures capture ex-post realized integration issues that allow us to test a mechanism whereby accounting systems and financial reporting are related to acquisitions.

We first test our argument that accounting-related integration issues decrease the quality of internal accounting information produced from the newly integrated financial reporting and internal control systems. We proxy for the quality of internal accounting information using post-acquisition management guidance error (Rogers and Stocken 2005; Feng, Li, and McVay 2009)

and post-acquisition internal control material weakness (ICMW) (Harp and Barns 2018). Consistent with our predictions, we find a positive association between our proxies of accounting-related integration issues and both post-acquisition management guidance error and ICMW.

We next test whether greater accounting-related integration issues are associated with both lower acquisition profitability and increased post-acquisition uncertainty. Consistent with our above arguments, we find that accounting-related integration issues are negatively associated with post-acquisition performance, as reflected in changes in operating cash flows, goodwill impairments, and post-acquisition abnormal stock returns. The positive association between integration issues and goodwill impairments suggests that acquiring managers are not able to foresee these integration issues or do not consider them because otherwise they would have offered a lower purchase price and avoided an impairment. These associations are also economically significant. For example, the marginal effect for our integration issues measure indicates that, as integration issues increase from the bottom to top decile, goodwill impairment likelihood increases 8.1 percentage points. We also find that integration issues are positively associated with uncertainty about acquirers' performance, as reflected in acquirers' post-acquisition stock return volatility and change in bid-ask spread.

Next, we use a path analysis to test whether accounting integration issues are associated with post-acquisition performance *through* a decrease in internal information quality. Consistent with our expectation we find that accounting integration issues affect long-term post-acquisition outcomes through the quality of information produced within the newly merged firm. Overall, our empirical results are consistent with accounting-related integration issues affecting both the quality of information produced from the newly integrated firm's accounting system and as a

result its long-term outcomes. Overall, we provide evidence that accounting integration and its impact of information quality is a mechanism by which accounting is associated with acquisition profitability.

To ensure our results are related specifically to the acquisitions rather than ex-ante acquirer characteristics we perform three additional tests. First, our results are robust to controlling for accounting-related integration issues of prior deals to test whether our results are incremental to firm-specific characteristics that persist in all of the acquirers' deals. We find our results are robust to including this control variable. Second, we test whether acquirer announcement returns can predict integration issues because if investors are aware of the impact of firm-specific characteristics on integration issues then this should be reflected in acquirer announcement returns. We do not find that announcement returns are associated with ex-post integration issues suggesting that investors are not able to foresee integration issues based on firm characteristics. Overall, our results are consistent with both managers and investors being unable to foresee ex-post integration issues. Third, in order to validate our integration issues measure, we develop a determinants model and find that firm- and deal-specific factors affect accounting-related integration in their expected direction.

This study makes several contributions. First, we contribute to the literature examining the role of accounting information in acquisitions (e.g., Biddle and Hilary 2006; McNichols and Stubben 2008; Biddle et al. 2009; Francis and Martin 2010; Raman et al. 2013; Skaife and Wangerin 2013; Marquardt and Zur 2015; McNichols and Stubben 2015; Chen et al. 2018). While prior research finds that ex-ante acquirer and target accounting characteristics (e.g., conservatism, accrual quality, and comparability) are associated with acquisition profitability, we focus on a mechanism by which accounting information can affect acquisitions that is not based

on financial accounting reducing agency costs through shareholder monitoring. We find that *ex-post* realized accounting-related integration issues are associated with the acquisition success through the impact on internal information quality. Furthermore, our finding that investors are not able to predict accounting-based integration issues at deal announcement suggests that it is difficult to foresee which business combinations will encounter integration difficulties. Also, factors other than acquirer and target characteristics are important in explaining the impact of accounting on post-acquisition performance.

Second, we extend the literature examining the importance of the integration process in acquisitions. Prior literature uses noisy measures of integration issues, such as diversifying and foreign acquisitions that are often measured ex-ante (e.g., Doukas and Travlos 1988; Morck, Schleifer, and Vishny 1990; Moeller and Schlingemann 2005; Hoberg and Phillips 2010), and it is not clear whether they capture integration quality or other synergistic factors.[4] We develop an alternative measure of realized integration issues based on accounting system integration measured in the acquisition completion year.

Lastly, we extend the literature investigating the role of audit fees and audit report lags. Prior research finds that abnormal audit fees and abnormal audit report lag reflect information about firms' financial reporting quality (Bamber et al. 1993; Knechel and Payne 2001; Hribar, Kravet, and Wilson 2014). We find that abnormal increases in these measures due to acquisitions are informative about the effect of the acquisitions on internal information quality. Therefore, in the context of acquisitions, our study finds that audit fees and audit report lags are informative predictors for the future long-term operating performance of the combined entity.

[4] Graebner, Heimeriks, Huy, and Vaara (2017) present a review of the integration literature in the management area. Measure of integration in this area are generally developed using surveys and qualitative research methods or using archival measures such as diversification, firm age, managerial experience, and post-acquisition divestiture.

II. RELATED LITERATURE AND HYPOTHESES DEVELOPMENT

Accounting in Mergers and Acquisitions

Prior studies suggest that accounting plays an important role in the process of selecting, evaluating, valuing, and completing acquisitions (e.g., Lajoux and Elson 2000; Shalev, Zhang, and Zhang 2013; Marquardt and Zur 2015; Wangerin 2019). When the acquisition process begins, the acquirer analyzes the target's valuation to determine an offer price and conducts preliminary due diligence. During due diligence, the review of financial statements is considered the "single most important aspect of due diligence" (Lajoux and Elson 2000). After the acquisition agreement is signed, the deal in publicly disclosed and transactional due diligence is performed. The due diligence process is expected to identify potential integration issues that can be adjusted for in the purchase price or that acquirers can incorporate into their integration plan (Wangerin 2019). After deal completion, acquirers must allocate the purchase price to all separately identifiable classes of assets acquired and liabilities assumed based on estimated fair values as of the acquisition date according to ASC 805 (SFAS 141, *Business Combinations)*. Also, under ASC 350 (SFAS 142, *Goodwill and Other Intangible Assets*), any amount of the purchase price not allocated to identifiable net assets is recorded as goodwill to reflect expected synergies and other future economic benefits resulting from the acquisition. Moreover, after deal completion the acquirer integrates the accounting systems of the target, setting up a centralized information flow for various business segments that are used in such areas as compliance, planning and analysis, and reporting (Cai, Kim, Park, and White 2016). Our focus is on the integration of accounting systems and examining ex-post integration issues that arise despite acquirers' efforts to minimize integration issues through due diligence and deal negotiation.

The Impact of Firm-Level Accounting Characteristics

Prior research linking accounting quality to investment efficiency examines acquirer's pre-acquisition accounting quality (Biddle and Hilary 2006; McNichols and Stubben 2008; Biddle et al. 2009; Francis and Martin 2010; Goodman, Neamtiu, Shroff, and White 2014; Kravet 2014; Harp and Barnes 2018). These studies are generally based on the argument that accounting quality is a persistent firm characteristic and acquirers with higher accounting quality will make better investment decisions because their investment decisions will be reported more accurately and transparently, which facilitates better monitoring and decision-making. For example, McNichols and Stubben (2008) find that firms that manipulated earnings tend to overinvest during the misreporting period and Francis and Martin (2010) find that firms with more conservative accounting make more profitable acquisitions. Harp and Barnes (2018) find that acquirer's pre-acquisition ICMW have negative operational implications for acquisition performance. In general, these findings suggest that acquirers' ex-ante accounting quality improves investment efficiency by reducing information asymmetry and increasing monitoring of managers.[5] Our study is specifically related to the importance of the ex-post accounting integration of the combined businesses, which is not necessarily due to or related to agency problems between managers and other stakeholders because inefficient monitoring can unfavorably affect acquisition outcomes without being related to the integration. Furthermore, our study differs from this literature to the extent that integration issues do not arise because of acquirer characteristics but from idiosyncratic factors related to the specific deal.

[5] Related to this literature, Goodman, Neamtiu, Shroff, and White (2014) find that managerial ability, measured by pre-acquisition guidance accuracy, is associated with more profitable acquisitions and capital expenditure decisions. Our study examines post-acquisition guidance accuracy as a measure of post-acquisition information quality.

Another stream of literature focuses on target firms' pre-acquisition accounting characteristics and both acquirer and target shareholders' returns, as well as other aspects of the acquisition process (Raman et al. 2013; Skaife and Wangerin 2013; Marquardt and Zur 2015; McNichols and Stubben 2015; Chen et al. 2018; Chen 2019). These studies are generally limited to acquisitions where the target is a public firm and publicly available data is available.[6] For example, McNichols and Stubben (2015) examine the relation between target firm accounting quality and acquirer (target) profit from an acquisition and document a positive (negative) relation between these two components. Marquardt and Zur (2015) find that high-quality accounting information at the target firm reduces the costs of the information acquisition process, increases the likelihood of deal completion, and predict that target accounting quality is negatively (positively) associated with the likelihood of an auction (negotiation). Overall, prior research suggests that target firms' accounting quality affects deal structures in mitigating adverse selection risk and influences shareholder values for both the target and acquirer.

We extend the above literature by examining whether and how *ex-post* realized accounting-related integration issues are associated with post-acquisition internal information quality and long-term outcomes. By focusing on the ex-post integration period our study captures a critical period for the combined entity's future performance and allows us to test whether investors can predict integration issues from information about acquirers and targets available before acquisition announcements. We specifically focus on long-term post-acquisition performance measures in comparison announcement returns, because it is not clear if integration issues are foreseeable and synergies expected from the deal can only be fully realized if the integration is completed as planned.

[6] An exception is Chen (2019) who finds that when public acquirers are required to disclose financial statements of private targets the acquisition outcomes are more favorable because there is greater monitoring by capital providers.

Few studies examine accounting in the immediate post-acquisition period (e.g., Bens, Goodman, and Neamtiu 2012; Shalev et al. 2013; Paugam, Astolfi, and Ramond 2015). Bens, Goodman, and Neamtiu (2012) find that acquirers are more likely to misstate post-acquisition earnings for acquisitions with lower announcement returns. Shalev et al. (2013) find that CEOs whose compensation packages rely more on earnings-based bonuses are more likely to over-allocate the purchase price to goodwill, the largest asset recorded in acquisitions. Despite the importance of accounting integration, this line of literature often focuses on purchase price allocation and ignores the overall integration of accounting systems.

Accounting Integration and Post-Acquisition Internal Information Quality

The integration process is a critical time where acquirers face significant challenges that can have important implications for their internal information quality. Allocating the purchase price to the acquired identifiable net assets and goodwill is complex and requires significant managerial judgment (Zhang and Zhang 2017). Managers often make mistakes; acquisition-related restatements comprise 8-17 percent of all financial restatements (Scholz 2008, 2014). Moreover, an acquirer must integrate the target's accounting and internal control systems into its own. Recognizing these complexities, GAAP provides a one-year grace period, the measurement period, during which the acquirer can make adjustments to acquisition-related accounting estimates in the purchase price allocation (ASC 805-10-25-17 through 25-19). Relatedly, the SEC allows a one-year exemption of acquired businesses from the scope of management's and auditor's assessment of internal controls. Deloitte (2018) states that an often overlooked but a vitally important part of post-acquisition integration is integrating the acquirer's and target's accounting and internal control systems.

We expect that greater issues in accounting-related integration are more likely to result in lower quality information produced by the newly integrated systems. Information produced from these systems is used by managers to make operational decisions, prepare financial statements, and to make both mandatory and voluntary disclosures (Feng et al. 2009; Galpin 2014). Consistent with this argument, prior literature finds that ICMWs are associated with lower quality internal information (Feng et al. 2009).

Thus, we posit that if there are greater (fewer) accounting-related integration issues the firm's systems will produce lower (higher) quality information. Our first hypothesis, in an alternative form, is as follows:

> **H1:** Accounting-related integration issues are negatively associated with the quality of information produced from a firm's post-acquisition accounting system.

Accounting Integration and Acquisition Outcomes

We posit that greater accounting-related integration issues during the immediate post-acquisition period contribute to poorer acquisition outcomes because those integration issues produce less accurate and less useful accounting information that is used in integration decision-making. Poor internal accounting information increases information asymmetry among the acquirer, the acquired, and markets during a critical period for the combined firm (Haspeslagh and Jemison 1991; Angwin 2004). Prior research finds that ICMWs are associated with poorer operating and investment decisions (e.g., Cheng, Dhaliwal, and Zhang 2013; Feng, Li, McVay, and Skaife 2015; Cheng et al. 2018). These studies are based on the argument that ICMWs cause low-quality internal information that unfavorably affects managerial decision-making. Feng et al. (2009) find that ICMWs are associated with lower quality internal information consistent with this argument. Kravet, McVay, and Weber (2018) find that firms exempting acquired businesses from internal control audit requirements under Section 404 of the Sarbanes-Oxley Act for one

year are associated with more profitable acquisitions. This result is consistent with Section 404 compliance identifying internal control issues in targets early so that acquisitions are more efficient. Overall, prior literature suggests that managers with higher quality information are likely to make more efficient decisions. We expect that poor internal information quality resulting from acquisition integration issues is particularly important because critical integration decisions are based on this internal information. Successfully integrating the target firm, particularly in the period immediately following acquisition completion (e.g., the first 100 days), is often argued to be paramount for long-term acquisition success (Feldman and Spratt 1998; Homburg and Bucerius 2006).

Prior related literature also investigates the association between information technology integration and acquisition success (e.g., Tanriverdi and Uysal 2011; Toppenberg and Henningsson 2014; Benitez, Ray, and Henseler 2018). The general finding of this literature is that better integration of information technology leads to better outcomes, however, these empirical studies generally rely on survey data and use small samples. We extend this literature by developing a proxy for accounting-related integration using a large sample analysis.

It is also possible that accounting-related integration issues can stem from broader integration issues related to combining operations. If operational integration issues lead to lower than expected synergies, then we also expect these types of integration issues to lead to worse acquisition outcomes. Overall, we expect greater accounting-related integration issues to be associated with worse acquisition outcomes. However, if managers can anticipate integration issues then they can either not pursue the deal or adjust the purchase price they offer to reflect the expected integration costs. If managers forgo deals with high integration costs or pay a lower

premium then we would not expect an association between accounting-related integration issues and acquisition outcomes.

Given these arguments, we expect greater accounting-related integration issues to be associated with worse long-term post-acquisition performance. As such our second hypothesis is as follows (alternative form):

> **H2:** Accounting-related integration issues are negatively associated with post-acquisition performance.

We also expect poorer internal information quality resulting from accounting-based integration issues to be associated with higher investor uncertainty about future performance. Accounting-related integration issues that cause poorer internal information will flow through to lower quality financial reporting. Beneish, Billings, and Hodder (2008) find that certain ICMWs are associated with higher information uncertainty. Acquisitions are particularly associated with overall higher information uncertainty and the integration process is expected to be important in attenuating or accentuating the uncertainty. Therefore, we expect greater accounting-related integration issues to be associated with greater uncertainty about future performance. As such our third hypothesis is as follows (alternative form):

> **H3:** Accounting-related integration issues are positively associated with uncertainty about post-acquisition performance.

III. RESEARCH DESIGN

Accounting-related Integration Issues Measures

We develop three ex-post measures of realized accounting-related integration issues that we expect to capture difficulty in acquisition accounting and in combining of accounting systems. These inverse measures are based on abnormal audit fees and abnormal audit report

lags, which we expect to reflect financial reporting issues stemming from integration difficulties in the year the acquisition is completed. Our third measure aggregates the above two measures.

We expect accounting-related integration issues to directly affect auditors in their audit of the combined firm's financial reporting. Difficulty in acquisition accounting or combining accounting systems results in increased effort and audit risk for auditors as it is more difficult to provide assurance that the combined financial statements are consistent with GAAP. Prior literature finds that increased auditor effort and risk results in higher audit fees and longer audits (Bamber et al. 1993; Knechel and Payne 2001; Ashbaugh et al. 2003; Krishnan and Yang 2009; Hribar et al. 2014). We use abnormal audits fees in the fiscal year the acquisition is completed to capture instances where, during the accounting integration period, the acquirer paid higher than expected audit fees. Abnormal audit fees, *ABN_AFEE*, is the residual from a regression of the natural logarithm of the audit fee in the acquisition completion year on a set of variables measured during the acquisition completion year (i.e., reported for the combined firm) expected to explain audit fees. We estimate our audit fee model using all observations with available data for both acquiring and non-acquiring firms and include an indicator variable for whether there is a merger. Balance sheet variables and acquirer market value are measured as of the end of the acquisition completion year, so they reflect the values of the combined firm. Importantly, we include prior year audit fees in our audit fee model to isolate the innovation in audit fees in the acquisition year. Therefore, acquirer characteristics present in prior years that affect the audit fee are not reflected in *ABN_AFEE*. Appendix B presents the results from estimating our audit fee model and the estimated coefficients are consistent with our expectations.

We use abnormal audit report lag in the fiscal year the acquisition is completed to capture instances where, during the integration period, the acquirer's auditor took longer than expected

to sign its audit opinion. We measure audit report lag, *ABN_AUDRPT_LAG*, as the number of days between the fiscal year-end and the audit opinion signature date for the acquisition completion year less the average audit report lag in the three years preceding the acquisition (Bamber Bamber, and Schoderbek 1993; Knechel and Payne 2001; Krishnan and Yang 2009).[7] We argue that higher than expected fees and/or longer than expected audit report lags capture difficulties experienced by the acquirer in acquisition accounting and integrating the target company's financial reporting and internal control systems into its own. Our third measure, *INTEGRATION_ISSUES*, aggregates *ABN_AFEE* and *ABN_AUDRPT_LAG* by transforming each into decile ranks (0 to 9) and dividing by 9. The two transformed values (each ranging in value from 0 to 1) are then added, resulting in an aggregate measure of integration issues (ranging in value from 0 to 2). In additional analyses, we validate our measures by testing their association with expected determinants of accounting-related integration issues.

Accounting-Related Integrated Issues and Post-Acquisition Internal Information Quality

Our measures of post-acquisition internal information quality are post-acquisition earnings guidance error and ICMW. Managers often voluntarily disclose earnings forecasts to manage expectations, reduce information asymmetry between the firm and its stakeholders, and to reduce litigation risk (Rogers and Stocken 2005; Hirst, Koonce, and Venkataraman 2008; Feng et al. 2009). Many attributes of management guidance have been studied, including its determinants, its characteristics, and its consequences (Hirst et al. 2008). However, the attribute most relevant to our prediction is guidance error. The accuracy of management forecasts depends largely upon the inputs to the forecasts (Feng et al. 2009). Also, the quality of those inputs is reflected in firms' internal control evaluations (Harp and Barns 2018).

[7] Results, presented later in the paper, are robust to measuring audit report lags using both raw audit report lag days (i.e., not *abnormal* audit report lag days) and the natural log of audit report lag days.

To test the association between accounting-related integration issues and the quality of post-acquisition accounting we estimate the following model using OLS or a logistic model with indicator dependent variables:

$$\textit{GUIDANCE\_ERROR} \text{ or } \textit{POST\_ICW} = \alpha_0 + \alpha_1 \textit{Integration Issue Measure} + \alpha_i \text{Control}_i + \text{Industry \& Year Fixed Effects} + \varepsilon \quad (1)$$

where the dependent variable, *GUIDANCE_ERROR*, is the absolute difference between management EPS guidance and actual EPS for management's final post-acquisition guidance for the first fiscal year that begins after deal completion, scaled by share price one month prior to fiscal year-end (Rogers and Stocken 2005; Feng et al. 2009).[8] When there are multiple management forecasts we use the final guidance before the earnings announcement. In the second specification the dependent variable, *HIGH_GUIDANCE_ERROR*, is an indicator variable equal to one for high guidance error, and zero otherwise.[9] The second dependent variable, *POST_ICW*, is an indicator variable equal to one if the acquirer reported an ICMW in the first fiscal year that begins after deal completion, and zero otherwise. Higher guidance error and ICMWs reflect lower post-acquisition internal information quality. *Integration Issue Measure* represents our three test variables that capture the level of accounting-related integration issues, *ABN_AFEE*, *ABN_AUDRPT_LAG*, and *INTEGRATION_ISSUES*. We expect positive coefficients for our three variables of interest indicating that greater accounting-related integration issues are positively associated with both post-acquisition management guidance error and ICMWs.

[8] For example, if an acquirer with a December 31 fiscal year end completes a deal on July 1, 2010 then we calculate guidance error using the year ending December 31, 2011. We also require that guidance is announced after the effective date of the acquisition to ensure the guidance issued includes the newly acquired target.
[9] High and low amounts of guidance error are determined using sample median of *GUIDANCE_ERROR*.

We include control variables based on prior research related to determinants of guidance error, ICMWs, and acquisition outcomes. These variables include pre-acquisition measures of acquirer size (Moeller, Schlingemann, and Stulz 2004; *ACQ_SIZE*), profitability (Dechow, Ge, Larson, and Sloan 2011; *ACQ_ROA*), leverage (Maloney, McCormick, and Mitchell 1993; *ACQ_LEV*), book-to-market ratio (Dong, Hirshleifer, Richardson, and Teoh 2006; Tuch and O'Sullivan, 2007; *ACQ_BTM*), and stock return volatility (Dechow et al. 2011; *ACQ_STD_RET*). We also include controls capturing acquirer pre-acquisition ICMWs (Darrough, Huang, and Zur 2018; *ACQ_ICW*) and financial reporting quality (Kothari, Leone, and Wasley 2005; Krishnan, Wen, and Zhao 2011; *ABS_PADACC*), as well as the acquirer's use of a Big 4 audit firm (*BIG4*).[11] Controlling for pre-acquisition ICMW is particularly important because we are testing the existence of new ICMWs that result from the merger and want to rule out that pre-acquisition acquirer ICMW can explain our results. We next include deal specific controls for the target company's public status (*PUBLIC_MA*), acquirer announcement period returns (*ACQ_ANNOUNCE_RET*), relative deal size (*DL_REL_SIZE*), payment form (Ghosh 2001; Gu and Lev 2011; *DL_STOCK*), deal diversification (Morck et al. 1990; *DL_DIVER*), and length of time to deal completion (Wangerin 2019; *TIME_TO_COMPLETION*). For the specifications with management guidance error as a dependent variable, we also include the number of days between fiscal year end and the date of management guidance (*HORIZON*), standard deviation in quarterly earnings for the first full fiscal year following the deal (*EARNVOL*), and sell-side analyst forecast dispersion measured for the first full fiscal year following the deal (*DISPFOR*) (Feng et al. 2009).

[11] We measure our control variables at the fiscal year end prior to acquisition announcement. All control variables are defined in detail in Appendix A.

Accounting-Related Integration Issues and Long-Term Post-Acquisition Outcomes

The post-acquisition performance measures we use are changes in acquirer cash flow from operations between the pre- and post-acquisition periods (*CHG_OCF*), post-acquisition goodwill impairments (*GW_IMPAIRMENT*), and long-term post-acquisition buy-and-hold abnormal stock returns (*BHAR_3YEAR*). The measures of post-acquisition investor uncertainty are post-acquisition acquirer stock return volatility (*RETURN_VOLATILITY*) and changes in acquirer bid-ask spreads between the pre- and post-acquisition periods (*CHG_BIDASK*).

To test hypothesis two and three we estimate the following model:

$$ACQUISITION\ OUTCOME = \gamma_0 + \gamma_1 Integration\ Issue\ Measure + \gamma_i Control_i + Industry\ \&\ Year\ Fixed\ Effects + \theta \quad (2)$$

where the dependent variable in Equation (2) represents the acquisition outcome variables. *CHG_OCF* is the difference between the average cash flow from operations (OCF) for the post-acquisition periods, *t+1* through *t+3*, and the pre-acquisition periods, *t-3* through *t-1*, where period *t* is the year in which the acquisition is completed. If OCF data are unavailable for periods *t+3* or *t-3*, average OCF is calculated using two (instead of three) years of data in the pre- and post-acquisition periods. *GW_IMPAIRMENT* is an indicator variable equal to one if the acquirer recorded a goodwill impairment in the year of the acquisition (period *t*) or in the post-acquisition period (periods *t+1* through *t+3*), and zero otherwise (Chen et al. 2018). Goodwill captures expected synergies and future economic benefits generated in a business combination that do not meet the criteria for asset recognition (Johnson and Petrone 1998). Therefore, goodwill impairments in the years following acquisitions provide evidence that synergies were not achieved or future economic benefits were not realized. *BHAR_3YEAR* is the abnormal buy-and-hold stock returns on acquirer's stock over a 36 month-period beginning with the acquisition completion month. We calculate abnormal returns as the acquirer's buy-and-hold return less the

average return over the same period for non-acquiring firms in the same industry and size quintile as the acquirer. Based on H2 we expect to find a negative association between our measures of accounting-related integration issues and post-acquisition performance.

RETURN_VOLATILITY is the standard deviation of daily stock returns computed over the one-year period beginning with the acquisition completion date, multiplied by 100. *CHG_BIDASK* is the change in the daily average of the bid-ask spread between the pre-acquisition period (one-year, 250 trading-day, period ending at the acquisition announcement date) and post-acquisition period (one-year, 250 trading-day, period beginning at the acquisition completion date), multiplied by 100. Based on H3, we expect a positive association between our measures of accounting-related integration issues and both *RETURN_VOLATILITY* and *CHG_BIDASK*. Control variables are based on prior literature examining acquisition outcomes and are defined in detail in Appendix A.

IV. SAMPLE SELECTION AND RESULTS

Sample and Data

Table 1 details our sample selection procedures. We identify completed acquisitions using the Securities Data Corporation (SDC) M&A database. We require acquisitions to be classified as acquisition of assets (AA), acquisitions of majority interest (AM), or merger (M) and to involve a U.S. public acquirer and a U.S. target. Our sample begins in 2002 because we require audit fee data and internal control data required by Section 404 of the Sarbanes-Oxley act. The sample ends with M&A deals completed in 2013 so that we have sufficient data up until 2016 to measure our acquisition outcome variables. We also require the ratio of transaction value to acquirer pre-acquisition market value (i.e., relative deal size) to be five percent or greater.[12]

Our initial sample obtained from the SDC database includes 5,725 acquisition observations with identifying information used to merge with other datasets. Our final sample size varies for each test based on the available data to calculate our dependent variables. After requiring data necessary for the construction of our variables, our final sample for (1) the management guidance error, (2) ICMW, (3) changes in operating cash flows, (4) goodwill impairment, (5) long-term buy-and-hold returns, (6) return volatilities, and (7) change in bid-ask spreads analyses includes (1) 1,098, (2) 3,760, (3) 2,538, (4) 3,760, (5) 3,438, (6) 3,645 and (7) 3,755 observations, respectively.

Post-Acquisition Management Guidance Error and Internal Control Weakness

We begin our analyses by examining the association between accounting-related integration issues, measured in the acquisition completion year, and both acquirers' post-acquisition management guidance error and ICMW, measured in the first fiscal year after the acquisition completion year. Panel A of Table 2 presents descriptive statistics for the variables used in equation (1) based on whether guidance error is high or low relative to the median. We find that both mean abnormal audit fees and the aggregate integration issues measure are significantly higher for acquisitions with a high post-acquisition guidance error than with a low guidance error.

Next, among our control variables, we find acquisitions associated with higher guidance errors are less likely to be of public targets relative to private and subsidiary targets. Non-public firms in general have worse financial reporting (Hope, Thomas, and Vyas 2013). Therefore acquiring non-public target firms can negatively affect the acquirer's post-acquisition guidance accuracy. Acquirers with high post-acquisition guidance errors have higher book-to-market

[12] One of our control variables, *ACQ_ICW*, requires internal control data which is available only in periods 2002 and later (Darrough et al. 2018)

ratios, higher return volatilities, lower market values, and lower profit prior to acquisition announcements, suggesting that these acquirers have fewer resources or less committed to management guidance. For example, firm size is expected to be associated with management forecast accuracy (e.g., Kasznik and Lev 1995), as larger firms tend to have more experienced and knowledgeable staff. These acquirers are also less likely to use Big 4 auditors before acquisition announcements, consistent with the notion that weaker external monitoring systems are associated with less precise management guidance (Ajinkya, Bhojraj, and Sengupta 2005). Also, high guidance errors are associated with a longer horizon from the guidance date to the earnings announcement date. Despite acquirers with high guidance errors having higher pre-acquisition return volatility we find that earnings volatility is lower. However, in our multivariate analysis we find that earnings volatility and guidance error are positively associated.[13]

In Table 2, Panel B, we partition our sample into two groups with respect to whether the acquisition is associated with a subsequent ICMW. We find that acquisitions with subsequent ICMWs have higher abnormal audit fees and abnormal audit report lags in the acquisition completion year than acquisitions without subsequent ICMWs. The same is true for our aggregate integration issues measure. We also find generally similar results as in Panel A among our control variables.

In Table 3, we present a Pearson correlation matrix where the upper diagonal is based on the sample examining post-acquisition ICMW and the lower diagonal is based on the sample examining post-acquisition managerial guidance. We find positive correlations between

[13] The univariate comparisons in Table 2 omit important control variables that are included in the multivariate analysis in Table 4. In particular, when guidance error is regressed on earnings volatility in a univariate model its sign is negative, but insignificant at conventional levels (untabulated). However, when acquirer size is added as an additional variable in a multivariate regression model, the sign on earnings volatility is significantly positive (untabulated). Thus, after controlling for acquirer size, there is a positive association between guidance error and earnings volatility.

POST_ICW and our three test variables, *ABN_AFEE*, *ABN_AUDRPT_LAG*, and *INTEGRATION_ISSUES* (the upper diagonal), although the correlations between *GUIDANCE_ERROR* and the three test variables are not significant (the lower diagonal). The two proxies for accounting-related integration issues, *ABN_AFEE* and *ABN_AUDRPT_LAG*, have a significantly positive correlation of 0.15 and 0.16 for the management guidance error sample and the post-acquisition ICMW sample, respectively, which indicates that these proxies have overlap in capturing the theoretical construct but also reflect different aspects of integration issues.

Table 4 presents results from our multivariate tests of H1. With *GUIDANCE_ERROR* as a dependent variable, in columns 1-3, we find as expected a positive association with *ABN_AUDRPT_LAG* in column 2. However, when we use the indicator variable *HIGH_GUIDANCE_ERROR* in columns 4-6, we find significantly positive associations for two out of three test variables, *ABN_AFEE* and *INTEGRATION_ISSUES*. Moreover, in columns 7-9 where *POST_ICW* is the dependent variable, we find significantly positive associations for all three integration issues measures. We control for pre-acquisition ICMWs so that the association between integration issues and post-acquisition ICMWs is due to new ICMWs that coincide with the acquisitions. Overall, the results in columns 1-9 are consistent with the level of accounting-related integration issues negatively affecting the quality of information produced from the acquirer's post-acquisition accounting and internal control systems.

Among our deal characteristic control variables, we find evidence that guidance error is negatively associated with acquirer announcement returns (*ACQ_ANNOUNCE_RET*, columns 1-3) and stock deals (*DL_STOCK*, columns 1-6) and positively associated with relative deal size (*DL_REL_SIZE*, columns 1-3) and diversifying acquisitions (*DL_DIVER*, columns 1-3). Also,

post-acquisition ICMWs are positively associated with diversifying M&A deals (*DL_DIVER*, columns 7-9). Among our acquirer characteristic control variables, we find evidence that volatility, as reflected in *ACQ_STD_RET* (columns 4-6) and *EARNVOL* (columns 1-3), is positively associated with guidance error (Feng et al. 2009). Forecast horizon (*HORIZON*, columns 1-6) is positively associated with guidance error because forecasts closer to the earnings announcements are more accurate (Rogers and Stocken 2005; Feng et al. 2009). We also find that post-acquisition guidance error is negatively associated with larger firms (*ACQ_SIZE*, columns 1-6), discretionary accruals (*ABS_PADACC*, columns 1-3), the use of a Big 4 auditor (*BIG4*, columns 1-3), and acquirer profitability (*ACQ_ROA*, columns 4-6) and negatively associated with book-to-market ratio (*ACQ_BTM*, columns 4-6). Also, *POST_ICW* is negatively associated with acquirer size (*ACQ_SIZE*, columns 7-9) and positively associated with pre-acquisition ICMW (*ACQ_ICW*, columns 7-9).

Accounting Integration Issues and Post-Acquisition Outcomes: Univariate Comparisons

In Table 5, we independently sort the sample into quintiles based on each accounting-related integration issues measure and present mean values for our five post-acquisition outcome variables. Panels A, B, and C present results for *ABN_AFEE*, *ABN_AUDRPT_LAG*, and *INTEGRATION_ISSUES*, respectively. For our post-acquisition performance variables, we find a general trend that higher accounting-related integration issues are associated with poorer post-acquisition performance in all three panels. Focusing on our aggregate integration issues measure in Panel C we find the acquisitions with the higher integration issues in quintile five have a mean value of *CHG_OCF* that is -2.2 percent and significantly lower by 1.3 percentage points than quintile one. For *GW_IMPAIRMENT* quintile five has 38.6 percent of acquisitions with a goodwill impairment while quintile one has 31.0 percent and this difference is significant.

Similarly, the mean value for *BHAR_3YEAR* in quintile five is -18.0 percent and significantly lower than quintile one by 19.4 percentage points. Focusing on the post-acquisition uncertainty variables, there is not a significant difference between quintile one and five. However, there appears to be more of a u-shaped relation between our integration issues measure and both *RETURN_VOLATILITY* and *CHG_BIDASK*. Next, we examine these relations in our multivariate analysis.

Post-acquisition Performance

Table 6 presents the results from our multivariate tests of H2. Consistent with our expectations we find that higher accounting-related integration issues are associated with lower post-acquisition performance. In columns 1 through 3, we find a negative association between the change in operating cash flows and both *ABN_AUDRPT_LAG* and *INTEGRATION_ISSUES*. This result is consistent with greater accounting-related integration issues resulting in poorer operating decisions that result in lower post-acquisition cash flows. In columns 4 through 6, we find a positive association between goodwill impairments and all three of our accounting-related integration issues measures. This result connects the integration issues with post-acquisition decreases in firm value due to acquisitions. Furthermore, this result suggests that acquiring managers cannot foresee these integration issues because otherwise they would forgo the acquisition or lower the purchase price to avoid subsequent impairment. In columns 7 through 9, we find a negative association between accounting-related integration issues and post-acquisition three-year buy-and-hold abnormal returns.

The results are also economically significant, consistent with the univariate evidence. *INTEGRATION_ISSUES* is calculated using ranked deciles of *ABN_AFEE* and *ABN_AUDRPT_LAG*, each of which varies between zero and one. The aggregate

INTEGRATION_ISSUES measure sums the ranked deciles for each of these variables and, therefore, varies between zero and two. We consider a change of one in *INTEGRATION_ISSUES* to interpret economic magnitude. The results indicate that acquisitions with higher *INTEGRATION_ISSUES* by a value of one are associated with operating cash flows scaled by total assets that are lower by 0.009 and buy-and-hold abnormal returns that are lower by 10.0 percent. For the model using *GW_IMPAIRMENT* we calculate the marginal effect for *INTEGRATION_ISSUES* which indicates that an increase from zero to one is associated with an increase in goodwill impairment likelihood of 8.1 percent. Overall, our results are consistent with greater accounting integration issues leading to poorer quality internal accounting information that is used in integration decisions resulting in poorer post-acquisition performance.

Focusing on our control variables we find evidence overall consistent with prior literature. For example, we find that when bidders acquire larger targets (*DL_REL_SIZE*, columns 4-9), they are likely to experience lower post-acquisition performance, consistent with the notion that firms acquiring relatively larger firms have a more difficult time digesting those firms and in effectively integrating them into the company's operations (Ramaswamy and Waegelein 2003). We also find that deals with at least 50 percent stock (*DL_STOCK*, columns 1-3 and 7-9), diversifying deals (*DL_DIVER*, columns 4-6), and acquirer pre-acquisition internal control weaknesses (*ACQ_ICW*, columns 4-9) negatively affecting post-acquisition performance (Morck et al. 1990; Ghosh 2001; Linn and Switzer 2001; Harp and Barns 2018; Darrough et al. 2018). Negative coefficients on *TIME_TO_COMPLETION* (Columns 1-3 and 7-9) indicating that acquirers taking more time to complete the deal are negatively associated with acquisition outcomes are not consistent with Wangerin (2019). But this may be because *TIME_TO_COMPLETION* does not capture the entire due diligence period. Acquirer pre-

acquisition size (*ACQ_SIZE*) and profitability (*ACQ_ROA*) show somewhat mixed effects on our test variables.

Post-acquisition Uncertainty

Table 7 presents results from our multivariate tests of H3. Consistent with our expectations we find that higher accounting-related integration issues are associated with higher post-acquisition uncertainty about firms' market value. In columns 1 through 3, we find a positive association between post-acquisition stock return volatility and all three measures of integration issues, *ABN_AFEE*, *ABN_AUDRPT_LAG*, and *INTEGRATION_ISSUES*. In columns 4 through 6, we find a positive association between the change in average bid-ask spread and all three measures of integration issues, *ABN_AFEE*, *ABN_AUDRPT_LAG*, and *INTEGRATION_ISSUES*. The results are also economically significant indicating that acquisitions with higher *INTEGRATION_ISSUES* by a value of one are associated with standard deviation of stock returns that are 0.123 higher and changes in average bid-ask spread that are 0.141 higher. Overall, our results are consistent with greater accounting integration issues leading to poorer quality internal accounting information that results in investors having higher uncertainty about acquirers' post-acquisition market value.

Focusing on our control variables we find evidence consistent with acquirer pre-acquisition size negatively affecting return volatilities (*ACQ_SIZE*, columns 1-3) and acquirer pre-acquisition leverage negatively affecting changes in bid-ask spreads (*ACQ_LEV*, columns 4-6). In addition, acquirers that are more profitable pre-acquisition (*ACQ_ROA*, columns 1-6), and who take longer to complete the acquisition after deal announcement (*TIME_TO_COMPLETION*, column 2-6) experience smaller post-acquisition return volatilities and changes in bid-ask spreads between the pre- and post-acquisition periods.

V. PATH ANALYSES

We argue that accounting-related integration issues affect long-term post-acquisition outcomes *through* the quality of information produced within the newly merged firm. Therefore, we next test whether information quality is the path or mechanism through which accounting-related integration issues affect long-term post-acquisition outcomes.

Table 8 presents the results of a path analysis testing the link between accounting-related integration issues and post-acquisition outcomes. As indicated in the diagrams in Panel A, we model the post-acquisition internal information quality as a mediator in the relationship between accounting-related integration issues and long-term post-acquisition outcomes. A mediator variable is an intervening variable through which an antecedent variable is proposed to influence an outcome variable (Hayes 2018, 78). In our case, *HIGH_GUIDANCE_ERROR* in Panel B and *POST_ICW* in Panel C are the mediator variables, *INTEGRATION_ISSUES* is the antecedent variable. The outcome variables are *CHG_OCF*, *GW_IMPAIRMENT*, *BHAR_3YEAR*, *RETURN_VOLATILITY*, and *CHG_BIDASK*. The antecedent variable can affect the outcome variable through two paths. One path leads directly from the antecedent to the outcome and is called the direct effect. A second path leads from antecedent to the outcome through the mediator and is called the indirect effect (Hayes 2018, 79). Therefore, based on the arguments above, for post-acquisition performance variables, we expect to find a negative (positive) indirect effect in the relation between *INTEGRATION_ISSUES* and both *CHG_OCF* and *BHAR_3YEAR* (*GW_IMPAIRMENT*). For post-acquisition uncertainty variables, we expect to find a positive indirect effect in the relationship between *INTEGRATION_ISSUES* and both *RETURN_VOLATILITY* and *CHG_BIDASK*.

In Panel B, we present results of the path analysis using *HIGH_GUIDANCE_ERROR* as the mediating variable. We find a significant positive association between *HIGH_GUIDANCE_ERROR* and *INTEGRATION_ISSUES* for all five dependent variables consistent with the results in Table 4. We also find *HIGH_GUIDANCE_ERROR* is negatively associated with post-acquisition performance (negatively associated with *BHAR_3YEAR* and positively associated with *GW_IMPAIRMENT*) and positively associated with uncertainty as reflected in *RETURN_VOLATILITY*. Most importantly, we are interested in whether *INTEGRATION_ ISSUES* has an indirect effect on the outcome variables (i.e., whether integration issues are associated with the outcome variables *through* high guidance error). Specifically, we find a statistically significant indirect effect for two out of the three post-acquisition performance variables and one of the two post-acquisition uncertainty variables in the expected direction (path coefficient of 0.01035 for *GW_IMPAIRMENT*, -0.02023 for *BHAR_3YEAR*, and 0.00013 for *RETURN_VOLATILITY*).[14] These results suggest that accounting-related integration issues impact post-acquisition outcomes through internal information quality. The direct effect for the five outcome variables is statistically insignificant, at conventional levels, suggesting the effect of integration issues on post-acquisition outcomes is fully mediated by internal information quality.

In Panel C, we use *POST_ICW* as the mediator variable and find evidence of an indirect effect similar to above. Specifically, we find a statistically significant indirect effect for all three post-acquisition performance variables and one of the two post-acquisition uncertainty variables in the expected direction. *INTEGRATION_ ISSUES* have a significantly positive indirect effect on *GW_IMPAIRMENT* (path coefficient of 0.01028) and a significantly negative indirect effect

[14] Technical details regarding the estimation of our path models are provided in the note to Table 8.

on both *CHG_OCF* (path coefficient of -0.00164) and *BHAR_3YEAR* (path coefficient of -0.01442). *INTEGRATION_ ISSUES* have a significantly positive indirect effect on *RETURN_VOLATILITY* (path coefficient of 0.00017). But, unlike Panel B, when *POST_ICW* is used as the mediator variable, we find significant direct effects as well suggesting that internal information quality does not fully mediate the association between integration issues and post-acquisition outcomes. Nevertheless, the results are consistent with accounting-related integration issues affecting long-term post-acquisition outcomes *through* internal information quality.

V. ADDITIONAL ANALYSES

Acquirers' Prior Integration Experience

We next consider the possibility that some acquirers have more experience in performing post-acquisition integration and whether our results are driven by a firm characteristic reflected in acquirers' prior integration experience. As such, we include in models (1) and (2) the variables *Prior Deals ABN_AFEE* and *Prior Deals ABN_AUDRPT_LAG*, which measure average abnormal audit fees and average abnormal audit report lags for all deals completed by the acquirer in the three years preceding the current deal.[15] These variables are meant to capture an acquirer's prior integration successes (or failures). It is possible that these past integration experiences affect the quality of the current integration. We also include *ACQUISITION_INTENSITY*, which is the natural log of the number of acquisitions completed by the acquirer in the three years preceding the current deal. This variable measures any recent acquisition integration experience, successful or not.

[15] As in our main analysis, we include only acquisitions where the relative deal size exceeds five percent when calculating *Prior Deals ABN_AFEE* and *Prior Deals ABN_AUDRPT_LAG*.

Table 9 presents results for our internal information quality tests (Panel A), post-acquisition performance tests (Panel B), and post-acquisition uncertainty tests (Panel C). For brevity, we do not present results for the control variables. In Panel A, for our *HIGH_GUIDANCE_ERROR* and *POST_ICW* tests, we continue to find accounting-related integration issues are negatively associated with internal information quality when controlling for prior integration experience. The coefficients on *Prior Deals ABN_AFEE, Prior Deals ABN_AUDRPT_LAG, Prior Deals INTEGRATION_ISSUES*, and *ACQUISITION_INTENSITY* are not significant at conventional levels, suggesting that post-acquisition guidance errors and ICMWs are driven by integration issues related to current acquisitions rather than prior integration expertise.

In Panel B, we continue to find similar results that accounting-related integration issues are negatively associated with all three post-acquisition performance variables when controlling for prior acquisition integration experience. For our *GW_IMPAIRMENT* tests (columns 4-6), we also find significantly positive coefficients on *ACQUISITION_INTENSITY*, which is consistent with Hayn and Hughes (2006) finding that firms that go on an acquisition "spree" are more likely to experience goodwill impairments. Also consistent with this notion, we find that *ACQUISITON_INTENSITY* is significantly negatively associated with *BHAR_3YEAR*. In Panel C, we continue to find similar results that accounting-related integration issues are negatively associated with both post-acquisition uncertainty variables when controlling for prior acquisition integration experience.[16] We also find that *ACQUISITION_INTENSITY* is significantly negatively associated with *CHG_BIGASK* in columns 4 through 6 suggesting that acquisitive

[16] In column 5, we find a significantly positive association between *Prior Deals ABN_AUDRPT_LAG* and *CHG_BIGASK* but this is limited evidence that prior accounting-related experience is associated with uncertainty of current acquisitions.

firms are associated with decreased uncertainty presumably due to their prior acquisition experience. Overall, our main findings are not due to acquirers' ability to successfully integrate.

Can Investors Predict Integration Issues?

Prior research finds that investors expect that acquirer accounting quality is negatively associated with acquisition profitability by finding a positive association between acquirer pre-acquisition accounting quality and acquirer announcement returns (e.g., McNichols and Stubben 2008; Biddle et al. 2009; Francis and Martin 2010). We test whether investors can predict ex-post accounting-related integration issues at the deal announcement. In Table 10, we present results from regressing our accounting-related integration issues variables on acquirer announcement returns. We do not find that acquirer abnormal announcement returns are associated with our accounting-related integration issues variables at conventional levels. In untabulated tests, we also partition the sample into acquisitions of public and private targets to examine whether investors can better anticipate integration issues if the target is public. As before, we do not find significant associations in any sample partition. While most of the literature examining the association between pre-acquisition accounting quality and acquisition performance find evidence that investors incorporate the impact of pre-acquisition accounting quality at the acquisition announcement we do not find evidence that ex-post integration issues are foreseeable by investors. Overall, this result suggests that ex-post integration issues are difficult for investors to foresee and are not just a function of acquirer or target pre-acquisition characteristics that are known to investors at announcement.

Validation Test of Integration Issue Measure

Lastly, to validate our measure of accounting-related integration issues, we test whether *INTEGRATION_ISSUES* is associated with firm and deal characteristics we expect to affect the

accounting integration process.[17] We present the results in Table 11. As expected, *INTEGRATION_ISSUES* is significantly associated with many factors related to the specific deal. There is a significantly positive coefficient on relative deal size (*DL_REL_SIZE*), which is consistent with relatively larger deals resulting in greater integration issues as there are likely to be more material accounting issues and more complex accounting integration. The time from the announcement date to the completion date (*TIME_TO_COMPLETION*) is significantly positively associated with integration issues, which is consistent with issues that cause longer negotiations and due diligence resulting in greater integration issues. This finding is inconsistent with Wangerin's (2019) finding that increased due diligence improves acquisitions, however, the time to completion variable does not capture the entire due diligence period because negotiations likely begin before the announcement date.

We include indicator variables for private targets (*PRIV_TGT*) and private targets acquired with stock consideration (*PRIV_STK_DEAL*) and find that acquisitions of private targets without stock consideration are associated with fewer integration issues. We conjecture that private firms' lack of bureaucracy and the use of cash consideration avoiding target shareholders involvement in the integration facilitate a more successful integration. We also find that acquirers electing to exempt the target from Section 404 internal control requirements in the first year of the acquisition, *MA_EXEMPTION*, is associated with greater integration issues. This result is consistent with Kravet et al.'s (2018) finding that deferring internal control auditing of a target is associated with more profitable acquisitions and less post-acquisition accounting

[17] Since the purpose of this test is to validate our *INTEGRATION_ISSUES* measure, we do not require all variables that we use in our main tests and the number of observations differs.

misstatements.[18] Consistent with prior research that uses diversifying acquisitions as a proxy for integration difficulty we find a significantly positive association with integration issues. Larger acquirers (*ACQ_SIZE*) are significantly negatively associated with integration issues which is consistent with larger firms having greater resources for integrating target firms (Seth 1990). We also find that acquirers with higher leverage (*ACQ_LEV*) are associated with fewer integration issues, consistent with lenders monitoring acquirers' acquisition decisions (Maloney, McCormick, and Mitchell 1993). Consistent with the above results we do not find a significant association at conventional levels between acquirer announcement returns (*ACQ_ANNOUNCE_RET*) and integration issues. Finally, we also find that more acquisitive firms (*ACQUISITION_INTENSITY*) are associated with fewer integration issues which is consistent with these firms developing expertise in integrating targets (Haleblian and Finkelstein 1999). Overall, these results indicate that our measure of accounting-related integration issues reflects factors specific to the acquisitions completed that are expected to affect the integration of accounting systems.

VII. CONCLUSION

This study examines the association between accounting-related integration issues and both post-acquisition internal accounting information quality and post-acquisition outcomes. We measure accounting-related integration issues using abnormal audit fees and abnormal audit report lags in the fiscal year the acquisition is completed. We first hypothesize that greater accounting-related integration issues in the immediate post-acquisition period will result in an accounting system that produces lower quality internal information. We expect lower quality

[18] We do not include *MA_EXEMPTION* as a control variable in our main analyses because we expect exemption to cause accounting-related integration issues and as a result it is an alternative measure of accounting-related integration issues. Nevertheless, our findings do not change when including *MA_EXEMPTION* as a control variable.

internal information to be reflected in more management guidance error and post-acquisition ICMWs and find results consistent with this prediction. We next hypothesize that greater accounting-related integration issues result in poorer long-term, post-acquisition performance for acquirers. We find results consistent with this hypothesis based on changes in acquirer cash flows between the pre- and post-acquisition periods, long-term buy-and-hold returns, and goodwill impairments. Lastly, we hypothesize that greater accounting-related integration issues are associated with greater uncertainty about firms' market value. Consistent with this hypothesis, we find a positive association with both post-acquisition return volatility and change in the average bid-ask spread. Importantly, we find evidence that internal information quality is a mediator through which accounting-related integration issues are associated with acquisition outcomes.

Our study makes several contributions. First, we contribute to the literature examining the role of accounting in acquisition profitability. We find a specific mechanism by which accounting affects acquisition outcomes through internal information quality and find that accounting integration is an important determinant of post-acquisition outcomes. We also contribute to the literature examining acquisition integration by developing an archival measure of accounting-related integration issues that is related to post-acquisition performance. Finally, we contribute to the literature examining the informativeness of abnormal audit fees and abnormal audit report lag. We find that abnormal audit fees and reporting lag can contain information about material acquisition transactions that occur during the fiscal year.

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Appendix A
Variable Definitions

Variable	Definition
GUIDANCE_ERROR	The absolute difference between management EPS guidance and actual EPS (measured in the first full fiscal year following the deal), scaled by share price one month prior to fiscal year-end (Rogers and Stocken 2005; Feng, Li, and McVay 2009).
HIGH_GUIDANCE_ERROR	An indicator variable coded 1 if *GUIDANCE_ERROR* is ≥ sample median *GUIDANCE_ERROR*; coded 0 otherwise.
POST_ICW	Indicator variable coded 1 if the acquirer reported ICWs in the first full fiscal year following the deal; coded 0 otherwise (Darrough, Huang, and Zur 2018).
CHG_OCF	Change in industry-adjusted acquirer cash flows (*OCF*) between pre- and post-deal periods, where *OCF* is calculated as cash flow from operations divided by average total assets. *CHG_OCF* is the difference between the average *OCF* for the post-deal periods, t+1 through t+3, and the pre-deal periods, t-3 through t-1, where period t is a year in which the acquisition was completed. If *OCF* data are unavailable for periods t+3 or t-3, average *OCF* is calculated using two (instead of three) years of data in the pre- and post-deal periods.
GW_IMPAIRMENT	An n indicator variable coded 1 if the acquirer recorded a goodwill impairment in the year of the deal (period t) or in the post-deal period (periods t+1 through t+3); coded zero otherwise.
BHAR_3YEAR	Acquirer's 36 month buy-and-hold return beginning in the month the acquisition is completed, less the average return over the same period for a benchmark portfolio of non-acquisition firms in the same two-digit SIC industry and size-quintile as the acquirer. Non-acquisition firms are firms that do not make an acquisition within three years before and after the beginning of the return holding period. Size quintiles are computed at the beginning of the holding period using all firms in CRSP with available dfata. If there are no non-acquisition firms in the same industry and size quintile as an acquirer we use the average return for the industry. For firms that delist, we use the delisting return for the delisting period and assume the delisting proceeds are reinvested in the benchmark portfolio for the remainder of the holding period.
RETURN_VOLATILITY	Standard deviation of daily returns computed over the one-year period beginning with the acquisition completion date (one-year period is deemed to have 250 trading days). Multiplied by 100 for presentation purposes.
CHG_BIDASK	Change in bid-ask spread between the pre- (one year period ending at the acquisition announcement date) and post- (one year period beginning at the acquisition completion date) acquisition periods. Multiplied by 100 for presentation purposes.
ABN_AFEE	*ABN_AFEE* is the acquirer's abnormal audit fees, measured in the year of the deal (Ashbaugh, LaFond, and Mayhew 2003; Hribar, Kravet, and Wilson 2014; Larcker and Richardson 2004; Simunic 1980). Results from this estimation are presented in Appendix B.
ABN_AUDRPT_LAG	Audit report lag measured for the year of the deal less average audit report lag in the three years preceding the deal, where audit report lag is defined as the number days between fiscal year-end and the audit opinion signature date (Bamber Bamber, and Schoderbek 1993; Knechel and Payne 2001; Krishnan and Yang 2009).
INTEGRATION_ISSUES	This variable aggregates *ABN_AFEE* and *ABN_AUDRPT_LAG* by transforming each into decile ranks (0 to 9) and dividing by 9. The two transformed values for *ABN_AFEE* and *ABN_AUDRPT_LAG* (each ranging in value from 0 to 1) are then added, resulting in an aggregate measure of integration issues (ranging in value from 0 to 2).

Appendix A continues on next page.

Appendix A (continued)
Variable Definitions

Variable	Definition
PUBLIC_MA	An indicator variable coded 1 if the target company was a publicly traded company prior to the M&A; coded 0 otherwise.
ACQ_ANNOUNCE_RET	Announcement returns measured as three-day market model adjusted returns.
DL_REL_SIZE	Relative deal size. Measured as the ratio of the transaction value to the market value of the acquirer.
DL_STOCK	Indicator variable equal to one if at least 50 percent of the consideration paid for the target consists of stock, and zero otherwise.
DL_DIVER	Indicator variable equal to one for a diversifying acquisition (i.e., an acquisition where the acquirer and target operate in different two-digit SIC codes), and zero otherwise.
TIME_TO_COMPLETION	Proxy for managerial effort in M&A. The number of weekdays between the signing of the acquisition agreement and the effective date of the deal. Divided by 100 for presentation purposes.
ACQ_ICW	Indicator variable coded 1 if the acquirer reported ICWs in the fiscal year prior to the deal announcement; coded 0 otherwise.
ABS_PADACC	Absolute performance-adjusted discretionary accruals.
BIG4	An indicator variable coded 1 if the acquirer used a Big 4 auditor (PwC, KPMG, Deloitte, or E&Y); coded 0 otherwise.
ACQ_SIZE	Acquirer size. Measured as the natural logarithm of acquirer's market value fifty trading days prior to an acquisition announcement.
ACQ_ROA	Acquirer's pre-acquisition ROA. Measured as operating income after depreciation scaled by average total assets (Compustat variables: oiadp / ((at +lag_at)/2)) at the fiscal year end prior to acquisition announcement. Industry-adjusted.
ACQ_LEV	Acquirer's pre-acquisition leverage. Measured as the sum of short-term debt and long-term debt scaled by total assets (Compustat variables: (dlc+dltt)/at) at the fiscal year end prior to acquisition announcement.
ACQ_BTM	Acquirer's pre-acquisition book-to-market ratio. Measured as book value of equity divided by market value of equity (Compustat variables: ceq/(prcc_f *csho)) at the fiscal year end prior to acquisition announcement.
ACQ_STD_RET	Acquirer's standard deviation of daily returns computed over the one-year period ending one month before an acquisition announcement (one-year period is deemed to have 250 trading days).
HORIZON	The number of days between fiscal-year end and the date of management guidance. Divided by 100 for presentation purposes.
EARNVOL	Standard deviation in quarterly earnings (Compustat variable OIADPQ, operating income after depreciation – quarterly) for the first full fiscal year following the deal. Divided by 100 for presentation purposes.
DISPFOR	Sell-side analyst forecast dispersion measured for the first full fiscal year following the deal.
PRIV_TGT	Indicator variable equal to 1 if the target was a private company or the target's ultimate parent was a private company prior to the M&A; coded 0 otherwise.
PRIV_STK_DEAL	Indicator variable equal to 1 if both *DL_STOCK* and *PRIV_TGT* = 1, coded 0 otherwise.

Appendix A continues on next page.

Appendix A (continued)
Variable Definitions

Variable	Definition
ACQUISITION_INTENSITY	The natural log of the number of acquisitions executed by the acquirer in the three years preceding the current deal.
MA_EXEMPTION	Indicator variable equal to 1 if the acquirer filed an exemption for not issuing an opinion on internal controls in the acquisition year; coded 0 otherwise.
Audit Fee Model (Appendix B)	
lnAUDIT_FEE	The natural log of the audit fee in millions of dollars.
BIG4	An indicator variable coded 1 if the firm used a Big 4 auditor (PwC, KPMG, Deloitte, or E&Y); coded 0 otherwise.
lnMVE	The natural log of the firm's market value of equity defined as the firm's price per share at fiscal year-end multiplied by the number of shares outstanding measured in millions of dollars.
MERGER	An indicator variable coded 1 if the firm engaged in an M&A (identified by Compustat variable AQC); coded 0 otherwise.
FINANCING	An indicator variable coded 1 if the number of shares outstanding increased by at least 10 percent or long-term debt increased by at least 20 percent; coded 0 otherwise.
MB	The firm's market to book ratio defined as its market value of equity divided by book value.
LEVERAGE	The firm's total liabilities divided by total assets.
ROA	The firm's return-on-asset ratio calculated as income before extraordinary items divided by average total assets.
AR_IN	The sum of the firm's receivables and inventory divided by its total assets.
NEGATIVE_ROA	An indicator variable coded 1 if the firm's ROA was negative; coded 0 otherwise.
SPECIAL_ITEM	An indicator variable coded 1 if the firm reports special items (Compustat variable SPI).
Lagged lnAUDIT_FEE	The natural log of prior year's audit fee in millions of dollars.

Appendix B
Audit Fee Model

	Dependent Variable = *lnAUDIT_FEE*	
	Coefficient	**t-statistic**
BIG4	0.089***	15.38
lnMVE	0.130***	59.69
MERGER	0.091***	20.57
FINANCING	0.059***	14.02
MB	-0.007***	-11.99
LEVERAGE	0.162***	19.47
ROA	0.022	1.36
AR_IN	-0.029***	-2.94
NEGATIVE_ROA	0.087***	14.32
SPECIAL_ITEM	0.073***	16.98
Lagged lnAUDIT_FEE	0.735***	185.99
Industry Fixed Effects	Included	
Year Fixed Effects	Included	
Adjusted-R^2	0.895	
N	61,088	

This appendix presents the results from estimating the audit fee model (Ashbaugh, LaFond, and Mayhew 2003; Hribar, Kravet, and Wilson 2014; Larcker and Richardson 2004; Simunic 1980) for the period 2002-2013 and for the full population of firms with data available in the Audit Analytics and Compustat databases. In addition to including control variables suggested by prior literature, we include lagged audit fees as a control for firm-specific factors that could affect current year audit fees. The residual values obtained from estimating the model represent our abnormal audit fee measure, *ABN_AFEE*. The dependent variable, *lnAUDIT_FEE*, is the natural logarithm of audit fees. All variables are defined in detail in Appendix A. All continuous variables have been winsorized at the 1st and 99th percentiles.

TABLE 1
Sample Selection

	N for dependent variable:						
	GUIDANCE_ ERROR	***POST_ICW***	***CHG_OCF***	***GW_ IMPAIRMENT***	***BHAR_ 3YEAR***	***RETURN_ VOLATILITY***	***CHG_ BIDASK***
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**
M&A data from SDC: completed deals involving US public acquirers and US targets (both public and private), between 2002 and 2013[a], with non-missing acquirer identifiers (necessary for merger with Compustat and Audit Analytics databases), and where relative deal size exceeds 5%.	5,725	5,725	5,725	5,725	5,725	5,725	5,725
Less:							
M&A transactions with missing dependent variable data	-3,988	-0	-2,426	-0	-526	-253	-33
M&A transactions with missing experimental variable data	-316	-1,177	-501	-1,177	-1,055	-1,104	-1,153
M&A transactions with missing control variable data	-323	-788	-260	-788	-706	-723	-784
Total	**1,098**	**3,760**	**2,538**	**3,760**	**3,438**	**3,645**	**3,755**

This table summarizes our sample selection process. One column is presented for each dependent variable used in our analyses. *GUIDANCE_ERROR* is the absolute difference between management EPS guidance and actual EPS (measured in the first full fiscal year following the deal), scaled by share price one month prior to fiscal year-end (Rogers and Stocken 2005; Feng, Li, and McVay 2009). *POST_ICW* is an indicator variable coded 1 if the acquirer reported ICWs in the first full fiscal year following the deal; coded 0 otherwise (Darrough, Huang, and Zur 2018). *CHG_OCF* measures change in industry-adjusted acquirer cash flows (*OCF*) between pre- and post-deal periods, where *OCF* is calculated as cash flow from operations divided by average total assets. *CHG_OCF* is the difference between the average *OCF* for the post-deal periods, t+1 through t+3, and the pre-deal periods, t-3 through t-1, where period t is a year in which the acquisition was completed. If *OCF* data are unavailable for periods t+3 or t-3, average *OCF* is calculated using two (instead of three) years of data in the pre- and post-deal periods. *GW_IMPAIRMENT* is an indicator variable coded 1 if the acquirer recorded a goodwill impairment in the year of the deal (period t) or in the post-deal period (periods t+1 through t+3); coded zero otherwise. *BHAR_3YEAR* is the buy-and-hold return on acquirer's stock over a three year period beginning with the acquisition completion date. *RETURN_VOLATILITY* is the standard deviation of daily returns computed over the one-year period beginning with the acquisition completion date (one-year period is deemed to have 250 trading days). *CHG_BIDASK* is the change in bid-ask spread between the pre- (one year period ending at the acquisition announcement date) and post- (one year period beginning at the acquisition completion date) acquisition periods. Finally, we use three test variables in our analyses: *ABN_AFEE* and *ABN_AUDRPT_LAG*. *ABN_AFEE* is the acquirer's abnormal audit fees, measured in the year of the deal (Ashbaugh, LaFond, and Mayhew 2003; Hribar, Kravet, and Wilson 2014; Larcker and Richardson 2004; Simunic 1980). Details of abnormal audit fee estimation are presented in Appendix B. Second, *ABN_AUDRPT_LAG* (abnormal audit report lag) is audit report lag measured for the year of the deal less average audit report lag in the three years preceding the deal, where audit report lag is defined as the number days between fiscal year-end and the audit opinion signature date (Bamber Bamber, and Schoderbek 1993; Knechel and Payne 2001; Krishnan and Yang 2009). Third, *INTEGRATION_ISSUES*, aggregates *ABN_AFEE* and *ABN_AUDRPT_LAG* by transforming each into decile ranks (0 to 9) and dividing by 9. The two transformed values for *ABN_AFEE* and *ABN_AUDRPT_LAG* (each ranging in value from 0 to 1) are then added, resulting in an aggregate measure of integration issues (ranging in value from 0 to 2). All variables, including control variables, are defined in detail in Appendix A.

[a] Our analyses cover the years 2002 to 2016. However, we restrict our sample to M&A deals completed between 2002 and 2013 so that we have sufficient data to measure our dependent variables in the post-deal period (i.e., after 2013).

TABLE 2
Management guidance error and acquirer post-acquisition internal control issues: Descriptive statistics and t-tests

Panel A: Management guidance error sample (*N* = 1,098)

	HIGH_GUIDANCE_ERROR				
	= 1		**= 0**		**t-statistic**
	Mean	**Median**	**Mean**	**Median**	**(1) vs. (3)**
	(1)	**(2)**	**(3)**	**(4)**	**(5)**
ABN_AFEE	0.079	0.050	0.020	0.006	2.83***
ABN_AUDRPT_LAG	0.038	0.017	0.030	0.010	0.74
INTEGRATION_ISSUES	1.026	1.000	0.976	1.000	1.73*
PUBLIC_MA	0.204	0.000	0.271	0.000	-2.63***
ACQ_ANNOUNCE_RET	0.018	0.010	0.013	0.008	1.34
DL_REL_SIZE	0.259	0.142	0.230	0.120	1.58
DL_STOCK	0.117	0.000	0.126	0.000	-0.46
DL_DIVER	0.393	0.000	0.372	0.000	0.74
TIME_TO_COMPLETION	0.664	0.390	0.726	0.460	-1.01
ACQ_ICW	0.060	0.000	0.046	0.000	1.08
ABS_PADACC	0.620	0.091	0.554	0.063	0.60
BIG4	0.878	1.000	0.934	1.000	-3.22***
ACQ_SIZE	6.724	6.663	7.454	7.336	-8.85***
ACQ_ROA	0.126	0.127	0.147	0.143	-4.92***
ACQ_LEV	0.198	0.173	0.215	0.200	-1.54
ACQ_BTM	0.555	0.490	0.437	0.379	6.60***
ACQ_STD_RET	0.029	0.026	0.023	0.022	8.44***
HORIZON	0.831	0.640	0.541	0.600	8.43***
EARNVOL	0.216	0.071	0.346	0.084	-3.32***
DISPFOR	0.031	0.024	0.022	0.013	1.30
N	549		549		

Table 2 continues on next page.

TABLE 2 (continued)
Management guidance error and acquirer post-acquisition internal control issues: Descriptive statistics and t-tests

Panel B: post-acquisition internal control issues (*N* = 3,760)

	POST_ ICW				
	= 1		**= 0**		**t-statistic**
	Mean	**Median**	**Mean**	**Median**	**(1) vs. (3)**
	(1)	**(2)**	**(3)**	**(4)**	**(5)**
ABN_AFEE	0.196	0.169	0.040	0.004	6.94***
ABN_AUDRPT_LAG	0.253	0.075	0.032	0.010	13.39***
INTEGRATION_ISSUES	1.249	1.222	0.978	1.000	9.65***
PUBLIC_MA	0.145	0.000	0.219	0.000	-3.04***
ACQ_ANNOUNCE_RET	0.018	0.005	0.014	0.006	0.72
DL_REL_SIZE	0.344	0.171	0.296	0.151	1.98**
DL_STOCK	0.168	0.000	0.187	0.000	-0.84
DL_DIVER	0.428	0.000	0.355	0.000	2.53**
TIME_TO_COMPLETION	0.603	0.325	0.725	0.460	-2.24**
ACQ_ICW	0.109	0.000	0.072	0.000	2.30**
ABS_PADACC	0.779	0.115	0.592	0.081	1.88*
BIG4	0.697	1.000	0.782	1.000	-3.41***
ACQ_SIZE	5.512	5.555	6.365	6.354	-8.38***
ACQ_ROA	0.072	0.088	0.098	0.110	-3.58***
ACQ_LEV	0.185	0.142	0.215	0.171	-2.38**
ACQ_BTM	0.610	0.514	0.569	0.494	1.66*
ACQ_STD_RET	0.033	0.030	0.030	0.026	4.03***
N	304		3,456		

***, **, * indicate significance at the 0.01, 0.05, 0.10 levels, respectively (two-tail). In Panel A (B), we present mean and median statistics, as well t-tests for differences in means, for the *HIGH_GUIDANCE_ERROR* (*POST_ICW*) sample. *GUIDANCE_ERROR* is the absolute difference between management EPS guidance and actual EPS (measured in the first full fiscal year following the deal), scaled by share price one month prior to fiscal year-end (Rogers and Stocken 2005; Feng, Li, and McVay 2009). *HIGH_GUIDANCE_ERROR* is an indicator variable coded 1 if *GUIDANCE_ERROR* is ≥ sample median *GUIDANCE_ERROR* and coded 0 otherwise. *POST_ICW* is an indicator variable coded 1 if the acquirer reported ICWs in the first full fiscal year following the deal; coded 0 otherwise. We use three test variables in our analyses. First, *ABN_AFEE* is the acquirer's abnormal audit fees, measured in the year of the deal. Details of abnormal audit fee estimation are presented in Appendix B. Second, *ABN_AUDRPT_LAG* (abnormal audit report lag) is audit report lag measured for the year of the deal less average audit report lag in the three years preceding the deal, where audit report lag is defined as the number days between fiscal year-end and the audit opinion signature date. Third, *INTEGRATION_ISSUES*, aggregates *ABN_AFEE* and *ABN_AUDRPT_LAG* by transforming each into decile ranks (0 to 9) and dividing by 9. The two transformed values for *ABN_AFEE* and *ABN_AUDRPT_LAG* (each ranging in value from 0 to 1) are then added, resulting in an aggregate measure of integration issues (ranging in value from 0 to 2). All variables, including control variables, are defined in detail in Appendix A. All continuous variables have been winsorized at the 1st and 99th percentiles.

TABLE 3
Management guidance error and acquirer post-acquisition internal control issues: correlation matrix

		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)
(1)	*GUIDANCE_ ERROR*		--[a]	--[a]	--[a]	--[a]	--[a]	--[a]	--[a]	--[a]	--[a]	--[a]	--[a]	--[a]	--[a]	--[a]	--[a]	--[a]	--[a]	--[a]	--[a]	--[a]
(2)	*POST_ICW*	0.00		**0.11**	**0.21**	**0.16**	**-0.05**	0.01	**0.03**	-0.01	**0.04**	**-0.04**	**0.04**	**0.03**	**-0.06**	**-0.14**	**-0.06**	**-0.04**	**0.03**	**0.07**	--[a]	--[a]
(3)	*ABN_AFEE*	-0.01	0.04		**0.16**	**0.69**	**0.03**	0.02	**0.16**	0.00	0.02	0.00	-0.01	**0.03**	**0.07**	**-0.03**	0.03	-0.02	0.01	**0.08**	--[a]	--[a]
(4)	*ABN_AUDRPT_ LAG*	0.02	0.04	**0.15**		**0.52**	0.00	-0.01	0.02	0.02	0.02	0.00	**-0.03**	0.02	**-0.03**	**-0.11**	**-0.04**	**-0.05**	-0.01	0.00	--[a]	--[a]
(5)	*INTEGRATION_ ISSUES*	0.01	**0.07**	**0.71**	**0.65**		**0.05**	0.01	**0.15**	**0.03**	0.02	**0.04**	**-0.06**	0.01	0.00	**-0.12**	**-0.03**	**-0.09**	0.01	**0.05**	--[a]	--[a]
(6)	*PUBLIC_MA*	0.01	-0.04	**0.11**	0.00	**0.10**		**-0.16**	**0.14**	**0.40**	**-0.07**	**0.39**	**-0.06**	0.02	0.01	**0.25**	**-0.03**	**-0.06**	**-0.03**	**-0.10**	--[a]	--[a]
(7)	*ACQ_ANNOUN CE_RET*	**-0.06**	0.01	-0.03	0.02	-0.01	**-0.12**		**0.12**	**-0.10**	0.00	**-0.07**	0.02	0.00	0.02	**-0.14**	0.00	**0.05**	0.01	**0.09**	--[a]	--[a]
(8)	*DL_REL_SIZE*	**0.10**	0.01	**0.16**	0.03	**0.16**	**0.25**	**0.13**		**0.11**	**-0.04**	**0.21**	0.01	0.04	0.02	**-0.07**	-0.04	**0.13**	**0.06**	0.02	--[a]	--[a]
(9)	*DL_STOCK*	0.00	-0.04	**0.06**	0.02	**0.06**	**0.34**	**-0.11**	**0.18**		**-0.08**	**0.30**	0.01	0.03	0.02	**0.06**	**-0.19**	**-0.06**	**-0.06**	**0.11**	--[a]	--[a]
(10)	*DL_DIVER*	**0.10**	-0.01	0.02	0.01	0.02	**-0.06**	-0.04	**-0.08**	**-0.08**		**-0.13**	**-0.05**	-0.04	**-0.08**	-0.02	**0.07**	**0.06**	0.00	-0.03	--[a]	--[a]
(11)	*TIME_TO_COM PLETION*	0.02	-0.03	0.04	0.03	**0.07**	**0.36**	-0.05	**0.25**	**0.30**	**-0.12**		-0.04	0.00	0.05	**0.27**	**-0.05**	**0.11**	**-0.07**	**-0.11**	--[a]	--[a]
(12)	*ACQ_ICW*	0.04	0.00	-0.01	**-0.15**	**-0.13**	**-0.06**	0.01	0.01	0.02	0.01	**-0.03**		**0.06**	**-0.13**	**-0.10**	**-0.08**	0.01	**-0.04**	**0.04**	--[a]	--[a]
(13)	*ABS_PADACC*	-0.03	0.04	0.01	-0.03	-0.01	**-0.03**	0.00	0.01	-0.01	-0.01	**-0.06**	**0.09**		**-0.06**	**-0.05**	0.01	0.01	**-0.07**	**0.08**	--[a]	--[a]
(14)	*BIG4*	**-0.16**	0.02	0.05	0.04	**0.08**	0.04	-0.02	**-0.05**	**-0.10**	-0.01	0.00	**-0.13**	**-0.07**		**0.43**	**0.13**	**0.08**	**-0.08**	**-0.16**	--[a]	--[a]
(15)	*ACQ_SIZE*	**-0.13**	**-0.10**	0.01	**-0.05**	0.00	**0.34**	**-0.18**	**-0.19**	-0.02	-0.02	**0.19**	**-0.09**	-0.02	**0.24**		**0.34**	**0.14**	**-0.26**	**-0.49**	--[a]	--[a]
(16)	*ACQ_ROA*	**-0.06**	**-0.06**	0.02	0.03	0.03	0.01	-0.03	**-0.08**	**-0.26**	0.01	**-0.07**	**-0.08**	0.02	0.00	**0.19**		**0.07**	**-0.17**	**-0.37**	--[a]	--[a]
(17)	*ACQ_LEV*	-0.01	-0.03	**-0.05**	-0.02	**-0.06**	**-0.06**	0.04	**0.14**	**-0.09**	**-0.03**	**0.08**	0.02	-0.01	0.00	**0.15**	0.04		**-0.18**	**-0.06**	--[a]	--[a]
(18)	*ACQ_BTM*	0.02	-0.01	0.02	0.00	0.01	**-0.07**	**0.05**	**0.08**	**-0.05**	**0.03**	-0.02	-0.02	**-0.12**	-0.03	**-0.29**	**-0.36**	-0.04		**0.12**	--[a]	--[a]
(19)	*ACQ_STD_RET*	0.04	**0.11**	**0.07**	**-0.07**	-0.02	**-0.12**	**0.09**	**0.12**	**0.11**	0.00	**-0.13**	**0.10**	**0.10**	**-0.13**	**-0.47**	**-0.13**	**-0.15**	**0.18**		--[a]	--[a]
(20)	*HORIZON*	**0.18**	0.00	**0.05**	0.04	**0.07**	0.01	0.00	-0.04	**0.10**	-0.04	**0.06**	-0.02	-0.01	0.02	**-0.05**	**-0.09**	**-0.07**	-0.01	**0.08**		--[a]
(21)	*EARNVOL*	-0.02	**-0.05**	**0.06**	0.01	**0.08**	**0.27**	**-0.10**	0.04	**0.11**	**-0.05**	**0.31**	**-0.06**	-0.04	**0.09**	**0.56**	**0.08**	**0.06**	**-0.05**	**-0.21**	-0.03	
(22)	*DISPFOR*	**-0.09**	0.04	-0.01	0.04	0.01	**-0.05**	0.05	-0.03	-0.01	**-0.07**	0.00	**-0.09**	-0.01	**0.08**	0.01	0.03	-0.02	-0.01	0.02	0.05	0.02

This table presents a Pearson correlation matrix. The upper diagonal is for the post-acquisition internal controls issues sample (N = 3,760) and the lower diagonal is for the management guidance error sample (N = 1,098). Correlations where p-value ≤ 0.10 are listed in **bold** font. All dependent and experimental variables are defined in Tables 1 and 2, as well as in Appendix A. All control variables are defined in Appendix A.

[a] The *GUIDANCE_ERROR*, *HORIZON*, *EARNVOL*, and *DISPFOR* variables are only used in management guidance error analyses and, therefore, their correlations are omitted in the upper diagonal since this portion of the matrix applies to the post-acquisition internal controls issues sample.

TABLE 4
The association between accounting-related integration issues and post-M&A internal information quality

	Dependent Variable =								
	GUIDANCE_ERROR			***HIGH_GUIDANCE_ERROR***			***POST_ICW***		
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**	**(9)**
	Coefficient (t-statistic)								
ABN_AFEE	**-0.004** **(-0.54)**			**0.488**** **(2.21)**			**0.853***** **(5.66)**		
ABN_AUDRPT_LAG		**0.036*** **(1.72)**			**0.778** **(1.58)**			**1.460***** **(7.16)**	
INTEGRATION_ ISSUES			**0.008** **(1.49)**			**0.365**** **(2.14)**			**0.964***** **(6.94)**
PUBLIC_MA	0.000 (0.03)	0.000 (0.00)	-0.001 (-0.10)	-0.089 (-0.44)	-0.063 (-0.31)	-0.086 (-0.42)	-0.253 (-1.26)	-0.231 (-1.14)	-0.258 (-1.28)
ACQ_ANNOUNCE_RET	-0.090* (-1.87)	-0.088* (-1.85)	-0.087* (-1.83)	0.559 (0.53)	0.436 (0.41)	0.534 (0.50)	-0.619 (-0.83)	-0.536 (-0.70)	-0.647 (-0.86)
DL_REL_SIZE	0.031** (2.38)	0.030** (2.41)	0.028** (2.22)	0.109 (0.43)	0.195 (0.77)	0.108 (0.42)	0.063 (0.41)	0.167 (1.08)	0.049 (0.32)
DL_STOCK	-0.016* (-1.76)	-0.017* (-1.84)	-0.016* (-1.78)	-0.525** (-2.07)	-0.548** (-2.16)	-0.531** (-2.09)	-0.239 (-1.24)	-0.229 (-1.19)	-0.233 (-1.21)
DL_DIVER	0.014** (2.52)	0.013** (2.50)	0.013** (2.45)	0.187 (1.23)	0.202 (1.33)	0.182 (1.20)	0.255** (1.97)	0.260** (1.99)	0.251* (1.93)
TIME_TO_COMPLETION	0.002 (1.03)	0.002 (0.98)	0.002 (1.08)	0.033 (0.43)	0.026 (0.33)	0.029 (0.38)	-0.001 (-0.01)	0.001 (0.01)	-0.027 (-0.29)
ACQ_ICW	0.006 (0.37)	0.009 (0.60)	0.007 (0.46)	-0.268 (-0.81)	-0.193 (-0.57)	-0.191 (-0.57)	0.455** (2.14)	0.457** (2.05)	0.536** (2.50)
ABS_PADACC	-0.001* (-1.88)	-0.001* (-1.87)	-0.001** (-1.98)	0.042 (1.05)	0.043 (1.09)	0.042 (1.05)	0.040 (1.20)	0.042 (1.25)	0.043 (1.31)

Table 4 continues on the next page.

TABLE 4 (continued)
The association between accounting-related integration issues and post-M&A internal information quality

	Dependent Variable =								
	GUIDANCE_ERROR			***HIGH_GUIDANCE_ERROR***			***POST_ICW***		
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**	**(9)**
	Coefficient (t-statistic)								
BIG4	-0.028**	-0.028**	-0.028**	-0.158	-0.141	-0.158	-0.203	-0.153	-0.180
	(-2.04)	(-2.06)	(-2.09)	(-0.60)	(-0.53)	(-0.60)	(-1.24)	(-0.92)	(-1.09)
ACQ_SIZE	-0.009***	-0.009***	-0.009***	-0.255***	-0.237***	-0.246***	-0.250***	-0.225***	-0.226***
	(-3.73)	(-3.78)	(-3.77)	(-3.14)	(-2.91)	(-3.02)	(-4.41)	(-3.93)	(-3.97)
ACQ_ROA	-0.030	-0.035	-0.034	-1.917*	-1.952*	-1.990*	-0.588	-0.170	-0.398
	(-0.81)	(-0.95)	(-0.90)	(-1.68)	(-1.71)	(-1.74)	(-1.09)	(-0.31)	(-0.73)
ACQ_LEV	0.011	0.012	0.014	0.570	0.513	0.595	-0.572*	-0.440	-0.445
	(0.67)	(0.77)	(0.83)	(1.29)	(1.17)	(1.35)	(-1.65)	(-1.26)	(-1.28)
ACQ_BTM	-0.004	-0.005	-0.005	1.400***	1.414***	1.396***	-0.124	-0.111	-0.113
	(-0.42)	(-0.53)	(-0.52)	(4.50)	(4.55)	(4.49)	(-0.79)	(-0.70)	(-0.72)
ACQ_STD_RET	0.051	0.082	0.035	46.650***	49.590***	48.072***	-4.021	-0.391	-2.111
	(0.18)	(0.30)	(0.13)	(4.79)	(5.08)	(4.95)	(-0.79)	(-0.08)	(-0.42)
HORIZON	0.026***	0.025***	0.025***	1.083***	1.095***	1.080***	--[a]	--[a]	--[a]
	(4.21)	(4.19)	(4.20)	(7.55)	(7.69)	(7.55)			
EARNVOL	0.010***	0.010***	0.010***	0.137	0.134	0.124	--[a]	--[a]	--[a]
	(2.97)	(2.95)	(2.87)	(0.96)	(0.92)	(0.86)			
DISPFOR	-0.044	-0.046	-0.045	0.591	0.573	0.579	--[a]	--[a]	--[a]
	(-1.37)	(-1.43)	(-1.41)	(0.88)	(0.86)	(0.87)			
Industry Fixed Effects	Included	Included	Included	Included	Included	Included	Included	Included	Included
Year Fixed Effects	Included	Included	Included	Included	Included	Included	Included	Included	Included
Adjusted/Pseudo-R^2	0.138	0.142	0.140	0.328	0.326	0.328	0.124	0.145	0.135
N	1,098	1,098	1,098	1,098	1,098	1,098	3,760	3,760	3,760

Table 4 continues on the next page.

TABLE 4 (continued)
The association between accounting-related integration issues and post-M&A internal information quality

This table presents the results from estimating the following model:

$$GUIDANCE\_ERROR \text{ or } POST\_ICW = \alpha_0 + \alpha_1 Integration\ Issue\ Measure + \alpha_i Control_i + \text{Industry \& Year Fixed Effects} + \varepsilon \quad (1)$$

Results presented in columns 1-3 were obtained using *GUIDANCE_ERROR* as the dependent variable in OLS regressions (heteroscedasticity robust standard errors). Results presented in columns 3-6 (7-9) were obtained, using *HIGH_GUIDANCE_ERROR* (*POST_ICW*) as the dependent variable in logistic regressions. The samples used are summarized in Table 1. The dependent variable *GUIDANCE_ERROR* is the absolute difference between management EPS guidance and actual EPS (measured in the first full fiscal year following the deal), scaled by share price one month prior to fiscal year-end (Rogers and Stocken 2005; Feng, Li, and McVay 2009). Alternatively, in columns 3 and 4 we use the variable *HIGH_GUIDANCE_ERROR*, which is an indicator variable coded 1 if *GUIDANCE_ERROR* is ≥ sample median *GUIDANCE_ERROR* and coded 0 otherwise. *POST_ICW* is an indicator variable coded 1 if the acquirer reported ICWs in the first full fiscal year following the deal; coded 0 otherwise (Darrough, Huang, and Zur 2018). We include three, alternative *Integration Issue Measures*. First, *ABN_AFEE* is the acquirer's abnormal audit fees, measured in the year of the deal (Ashbaugh, LaFond, and Mayhew 2003; Hribar, Kravet, and Wilson 2014; Larcker and Richardson 2004; Simunic 1980). Details of abnormal audit fee estimation are presented in Appendix B. Second, *ABN_AUDRPT_LAG* (abnormal audit report lag) is audit report lag measured for the year of the deal less average audit report lag in the three years preceding the deal, where audit report lag is defined as the number days between fiscal year-end and the audit opinion signature date (Bamber Bamber, and Schoderbek 1993; Knechel and Payne 2001; Krishnan and Yang 2009). Third, *INTEGRATION_ISSUES*, aggregates *ABN_AFEE* and *ABN_AUDRPT_LAG* by transforming each into decile ranks (0 to 9) and dividing by 9. The two transformed values for *ABN_AFEE* and *ABN_AUDRPT_LAG* (each ranging in value from 0 to 1) are then added, resulting in an aggregate measure of integration issues (ranging in value from 0 to 2). All variables, including control variables, are defined in detail in Appendix A. All continuous variables have been winsorized at the 1st and 99th percentiles. ***, **, and * indicate significance at the 0.01, 0.05, and 0.10 levels, respectively (two-tail).

[a] The *HORIZON*, *EARNVOL*, and *DISPFOR* variables are only used in management guidance error analyses and, therefore, there are no coefficient estimates for these variables in the post-acquisition internal controls issues analyses presented in columns 7-9.

TABLE 5
Post-M&A outcomes: Univariate comparisons

Panel A: Abnormal audit fees

	Variable of interest									
	CHG_OCF		***GW_IMPAIRMENT***		***BHAR_3YEAR***		***RETURN_VOLATILITY***		***CHG_BIDASK***	
Quintile	**N**	**Mean**	**N**	**Mean**	**N**	**Mean**	**N**	**Mean**	**N**	**Mean**
ABN_AFEE	**(1)**	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**	**(9)**	**(10)**
1	507	-0.007	752	0.299	687	-0.035	729	2.976	751	-0.246
2	508	-0.012	752	0.364	688	-0.007	729	2.831	751	-0.095
3	508	-0.013	752	0.332	689	0.057	730	2.860	751	-0.075
4	508	-0.013	752	0.376	687	-0.057	729	3.000	751	-0.076
5	507	-0.022	752	0.380	687	-0.165	728	3.164	751	-0.203
Total	2,538	-0.013	3,760	0.351	3,438	-0.041	3,645	2.965	3,755	-0.139
t-test: Q5 vs. Q1		-2.79***		3.33***		-2.85***		2.15**		0.99

Panel B: Abnormal audit report lags

	Variable of interest									
	CHG_OCF		***GW_IMPAIRMENT***		***BHAR_3YEAR***		***RETURN_VOLATILITY***		***CHG_BIDASK***	
Quintile *ABN_*	**N**	**Mean**	**N**	**Mean**	**N**	**Mean**	**N**	**Mean**	**N**	**Mean**
AUDRPT_LAG	**(1)**	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**	**(9)**	**(10)**
1	511	-0.013	746	0.346	694	-0.081	723	3.190	744	-0.183
2	505	-0.008	753	0.313	679	0.076	737	2.923	752	-0.095
3	510	-0.011	747	0.324	697	0.060	729	2.710	747	-0.097
4	505	-0.014	760	0.389	686	-0.071	730	3.024	760	-0.146
5	507	-0.020	754	0.379	682	-0.192	726	2.981	752	-0.174
Total	2,538	-0.013	3,760	0.351	3,438	-0.041	3,645	2.965	3,755	-0.139
t-test: Q5 vs. Q1		-1.26		1.35		-2.50**		-2.45**		0.22

Table 5 continues on the next page.

TABLE 5 (continued)
Post-M&A outcomes: Univariate comparisons

Panel C: Aggregate integration issues measure

	Variable of interest									
	CHG_OCF		***GW_IMPAIRMENT***		***BHAR_3YEAR***		***RETURN_VOLATILITY***		***CHG_BIDASK***	
Quintile INTEGRATION_ISSUES	**N**	**Mean**	**N**	**Mean**	**N**	**Mean**	**N**	**Mean**	**N**	**Mean**
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**	**(9)**	**(10)**
1	544	-0.009	820	0.310	754	0.014	794	3.042	818	-0.178
2	391	-0.013	587	0.312	530	0.060	571	2.880	586	-0.140
3	532	-0.011	764	0.372	694	-0.083	740	2.868	764	-0.087
4	538	-0.011	783	0.365	727	0.007	759	2.915	781	-0.128
5	533	-0.022	806	0.386	733	-0.180	781	3.091	806	-0.159
Total	2,538	-0.013	3,760	0.351	3,438	-0.041	3,645	2.965	3,755	-0.139
t-test: Q5 vs. Q1		-2.57**		3.23***		-4.32***		0.60		0.49

This table provides univariate analyses of our post-M&A outcome variables across different points in the distribution of our integration issues test variables. Specifically, panels A, B, and C provides univariate comparisons of the dependent variables, *CHG_OCF*, *GW_IMPAIRMENT*, *RETURN_VOLATILITY*, *BHAR_3YEAR*, and *CHG_BIDASK*, across quintiles of our independent test variables, *ABN_AFEE* and *ABN_AUDRPT_LAG*, and at key points in the distribution of our *INTEGRATION_ISSUES* test variable, which ranges in value from 0 to 1 and moves in increments of 1/9. The dependent variable *CHG_OCF* measures change in industry-adjusted acquirer cash flows (*OCF*) between pre- and post-deal periods, where *OCF* is calculated as cash flow from operations divided by average total assets. *CHG_OCF* is the difference between the average *OCF* for the post-deal periods, t+1 through t+3, and the pre-deal periods, t-3 through t-1, where period t is a year in which the acquisition was completed. If *OCF* data are unavailable for periods t+3 or t-3, average *OCF* is calculated using two (instead of three) years of data in the pre- and post-deal periods. *GW_IMPAIRMENT* is an indicator variable coded 1 if the acquirer recorded a goodwill impairment in the year of the deal (period t) or in the post-deal period (periods t+1 through t+3); coded zero otherwise. *BHAR_3YEAR* is the buy-and-hold return on acquirer's stock over a three year period beginning with the acquisition completion date. *RETURN_VOLATILITY* is the standard deviation of daily returns computed over the one-year period beginning with the acquisition completion date (one-year period is deemed to have 250 trading days). *CHG_BIDASK* is the change in bid-ask spread between the pre- (one year period ending at the acquisition announcement date) and post- (one year period beginning at the acquisition completion date) acquisition periods. We use three test variables in our analyses. *ABN_AFEE* is the acquirer's abnormal audit fees, measured in the year of the deal. Details of abnormal audit fee estimation are presented in Appendix B. Second, *ABN_AUDRPT_LAG* (abnormal audit report lag) is audit report lag measured for the year of the deal less average audit report lag in the three years preceding the deal, where audit report lag is defined as the number days between fiscal year-end and the audit opinion signature date. Third, *INTEGRATION_ ISSUES*, aggregates *ABN_AFEE* and *ABN_AUDRPT_LAG* by transforming each into decile ranks (0 to 9) and dividing by 9. The two transformed values for *ABN_AFEE* and *ABN_AUDRPT_LAG* (each ranging in value from 0 to 1) are then added, resulting in an aggregate measure of integration issues (ranging in value from 0 to 2). All variables, including control variables, are defined in detail in Appendix A. All continuous variables have been winsorized at the 1st and 99th percentiles.

TABLE 6
Accounting-related integration issues and post-acquisition performance

	Dependent Variable =								
	CHG_OCF			***GW_IMPAIRMENT***			***BHAR_3YEAR***		
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**	**(9)**
	Coefficient (t-statistic)								
ABN_AFEE	**-0.006** **(-1.30)**			**0.311***** **(3.18)**			**-0.080*** **(-1.94)**		
ABN_AUDRPT_LAG		**-0.022****** **(-2.85)**			**0.409****** **(2.99)**			**-0.002****** **(-2.76)**	
INTEGRATION_ ISSUES			**-0.009**** **(-2.46)**			**0.359****** **(4.36)**			**-0.100****** **(-2.94)**
PUBLIC_MA	0.005 (1.13)	0.005 (1.16)	0.006 (1.24)	-0.055 (-0.52)	-0.046 (-0.44)	-0.063 (-0.59)	0.017 (0.45)	0.014 (0.37)	0.020 (0.52)
ACQ_ANNOUNCE_RET	-0.025 (-0.98)	-0.027 (-1.08)	-0.025 (-0.99)	-0.959** (-2.03)	-0.931** (-1.97)	-0.955** (-2.02)	-0.154 (-0.70)	-0.162 (-0.74)	-0.156 (-0.71)
DL_REL_SIZE	-0.005 (-1.18)	-0.006 (-1.45)	-0.005 (-1.08)	0.260*** (2.72)	0.307*** (3.24)	0.254*** (2.65)	-0.095** (-2.47)	-0.107*** (-2.89)	-0.091** (-2.40)
DL_STOCK	-0.013** (-2.47)	-0.013** (-2.53)	-0.013** (-2.50)	0.057 (0.53)	0.051 (0.48)	0.060 (0.55)	-0.071* (-1.74)	-0.069* (-1.69)	-0.073* (-1.78)
DL_DIVER	-0.004 (-1.30)	-0.004 (-1.24)	-0.004 (-1.25)	0.212*** (2.81)	0.220*** (2.92)	0.213*** (2.82)	-0.038 (-1.27)	-0.040 (-1.33)	-0.037 (-1.25)
TIME_TO_COMPLETION	-0.003* (-1.76)	-0.002* (-1.68)	-0.002* (-1.65)	-0.036 (-0.72)	-0.041 (-0.82)	-0.047 (-0.94)	-0.0003** (-2.09)	-0.0003** (-1.97)	-0.0003* (-1.91)
ACQ_ICW	-0.006 (-0.87)	-0.007 (-1.01)	-0.007 (-0.98)	0.254* (1.90)	0.280** (2.09)	0.293** (2.19)	-0.135*** (-2.83)	-0.146*** (-3.06)	-0.144*** (-3.04)
ABS_PADACC	0.001 (1.26)	0.001 (1.19)	0.001 (1.23)	0.022 (1.03)	0.024 (1.10)	0.023 (1.08)	-0.018** (-2.15)	-0.018** (-2.17)	-0.019** (-2.19)
BIG4	-0.001 (-0.14)	-0.002 (-0.35)	-0.001 (-0.19)	-0.312*** (-3.15)	-0.287*** (-2.91)	-0.303*** (-3.06)	0.192*** (4.63)	0.185*** (4.48)	0.189*** (4.58)
ACQ_SIZE	0.004*** (2.97)	0.003*** (2.69)	0.003*** (2.81)	0.104*** (3.37)	0.111*** (3.59)	0.114*** (3.69)	-0.036*** (-2.93)	-0.038*** (-3.10)	-0.038*** (-3.12)

Table 6 continues on next page.

TABLE 6 (continued)
Accounting-related integration issues and post-acquisition performance

	Dependent Variable =								
	CHG_OCF			*GW_IMPAIRMENT*			*BHAR_3YEAR*		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Coefficient (t-statistic)								
ACQ_ROA	-0.284***	-0.287***	-0.284***	-0.599*	-0.506	-0.558	0.376**	0.347**	0.364**
	(-11.65)	(-11.88)	(-11.73)	(-1.71)	(-1.45)	(-1.60)	(2.27)	(2.11)	(2.22)
ACQ_LEV	0.040***	0.040***	0.039***	0.100	0.088	0.140	0.182**	0.185**	0.172**
	(4.13)	(4.14)	(4.02)	(0.51)	(0.44)	(0.70)	(2.13)	(2.16)	(2.01)
ACQ_BTM	-0.001	-0.001	0.000	0.686***	0.693***	0.689***	0.004	0.003	0.005
	(-0.16)	(-0.19)	(-0.11)	(7.07)	(7.14)	(7.09)	(0.07)	(0.05)	(0.09)
ACQ_STD_RET	-0.151	-0.174	-0.160	5.384*	6.410**	5.848*	-2.367	-2.622*	-2.471*
	(-0.85)	(-1.00)	(-0.91)	(1.68)	(2.01)	(1.83)	(-1.57)	(-1.75)	(-1.65)
Industry Fixed Effects	Included	Included	Included	Included	Included	Included	Included	Included	Included
Year Fixed Effects	Included	Included	Included	Included	Included	Included	Included	Included	Included
Adjusted/Pseudo-R^2	0.140	0.144	0.142	0.096	0.096	0.099	0.043	0.044	0.045
N	2,538	2,538	2,538	3,760	3,760	3,760	3,438	3,438	3,438

This table presents the results from estimating the following model:

$$ACQUSITION\ OUTCOME = \gamma_0 + \gamma_1 Integration\ Issue\ Measure + \gamma_i Control_i + \text{Industry \& Year Fixed Effects} + \theta \quad (2)$$

The results presented in columns 1-3, 7-9 (4-6) were obtained using the post-M&A outcome variable *CHG_OCF*, *BHAR_3YEAR*, (*GW_IMPAIRMENT*) as the dependent variable in an OLS regression model with heteroscedasticity robust standard errors (logistic regression model). All models were estimated using OLS (heteroscedasticity robust standard errors). The samples used are summarized in Table 1. The dependent variable *CHG_OCF* measures change in industry-adjusted acquirer cash flows (*OCF*) between pre- and post-deal periods, where *OCF* is calculated as cash flow from operations divided by average total assets. *CHG_OCF* is the difference between the average *OCF* for the post-deal periods, t+1 through t+3, and the pre-deal periods, t-3 through t-1, where period t is a year in which the acquisition was completed. If *OCF* data are unavailable for periods t+3 or t-3, average *OCF* is calculated using two (instead of three) years of data in the pre- and post-deal periods. *GW_IMPAIRMENT* is an indicator variable coded 1 if the acquirer recorded a goodwill impairment in the year of the deal (period t) or in the post-deal period (periods t+1 through t+3); coded zero otherwise. *BHAR_3YEAR* is the buy-and-hold return on acquirer's stock over a three year period beginning with the acquisition completion date. We include three, alternative *Integration Issue Measures*. First, *ABN_AFEE* is the acquirer's abnormal audit fees, measured in the year of the deal (Ashbaugh, LaFond, and Mayhew 2003; Hribar, Kravet, and Wilson 2014; Larcker and Richardson 2004; Simunic 1980). Details of abnormal audit fee estimation are presented in Appendix B. Second, *ABN_AUDRPT_LAG* (abnormal audit report lag) is audit report

lag measured for the year of the deal less average audit report lag in the three years preceding the deal, where audit report lag is defined as the number days between fiscal year-end and the audit opinion signature date (Bamber Bamber, and Schoderbek 1993; Knechel and Payne 2001; Krishnan and Yang 2009). Third, *INTEGRATION_ISSUES*, aggregates *ABN_AFEE* and *ABN_AUDRPT_LAG* by transforming each into decile ranks (0 to 9) and dividing by 9. The two transformed values for *ABN_AFEE* and *ABN_AUDRPT_LAG* (each ranging in value from 0 to 1) are then added, resulting in an aggregate measure of integration issues (ranging in value from 0 to 2). All variables, including control variables, are defined in detail in Appendix A. All continuous variables have been winsorized at the 1st and 99th percentiles. ***, **, and * indicate significance at the 0.01, 0.05, and 0.10 levels, respectively (two-tail).

TABLE 7
Accounting-related integration issues and post-acquisition uncertainty

	Dependent Variable =					
	RETURN_VOLATILITY			***CHG_BIDASK***		
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**
	Coefficient (t-statistic)					
ABN_AFEE	**0.147*** (2.78)**			**0.091** (2.57)**		
ABN_AUDRPT_LAG		**0.202*** (2.70)**			**0.163*** (3.46)**	
INTEGRATION_ ISSUES			**0.123*** (3.02)**			**0.141*** (5.04)**
PUBLIC_MA	-0.071 (-1.42)	-0.066 (-1.32)	-0.071 (-1.43)	-0.049* (-1.67)	-0.046 (-1.59)	-0.053* (-1.79)
ACQ_ANNOUNCE_RET	0.050 (0.20)	0.068 (0.28)	0.053 (0.22)	-0.432** (-2.16)	-0.420** (-2.11)	-0.429** (-2.15)
DL_REL_SIZE	0.070 (1.18)	0.092 (1.56)	0.072 (1.22)	0.075 (1.61)	0.088* (1.95)	0.066 (1.44)
DL_STOCK	-0.018 (-0.32)	-0.021 (-0.38)	-0.018 (-0.33)	-0.026 (-0.74)	-0.028 (-0.80)	-0.025 (-0.71)
DL_DIVER	0.043 (1.25)	0.046 (1.34)	0.044 (1.29)	-0.013 (-0.55)	-0.011 (-0.49)	-0.013 (-0.59)
TIME_TO_COMPLETION	-0.038 (-1.62)	-0.041* (-1.72)	-0.042* (-1.75)	-0.041*** (-2.63)	-0.042*** (-2.71)	-0.044*** (-2.79)
ACQ_ICW	0.000 (0.00)	0.013 (0.17)	0.014 (0.18)	0.090* (1.69)	0.099* (1.87)	0.104** (1.96)
ABS_PADACC	-0.001 (-0.05)	0.000 (0.02)	0.000 (0.03)	-0.001 (-0.11)	0.000 (-0.07)	0.000 (-0.07)
BIG4	0.012 (0.25)	0.024 (0.49)	0.019 (0.38)	-0.023 (-0.68)	-0.016 (-0.46)	-0.021 (-0.62)
ACQ_SIZE	-0.154*** (-10.14)	-0.151*** (-9.90)	-0.151*** (-9.98)	0.004 (0.41)	0.007 (0.66)	0.008 (0.73)
ACQ_ROA	-1.391*** (-6.92)	-1.346*** (-6.72)	-1.369*** (-6.84)	-0.563*** (-4.23)	-0.532*** (-4.03)	-0.554*** (-4.20)
ACQ_LEV	-0.057 (-0.63)	-0.063 (-0.70)	-0.049 (-0.54)	-0.169*** (-2.81)	-0.171*** (-2.87)	-0.152** (-2.54)
ACQ_BTM	-0.106** (-1.98)	-0.104* (-1.95)	-0.107** (-1.99)	-0.073* (-1.67)	-0.071 (-1.63)	-0.074* (-1.69)
ACQ_STD_RET	43.841*** (24.04)	44.334*** (24.33)	44.109*** (24.27)	-15.869*** (-10.47)	-15.573*** (-10.37)	-15.772*** (-10.49)
Industry Fixed Effects	Included	Included	Included	Included	Included	Included
Year Fixed Effects	Included	Included	Included	Included	Included	Included
Adjusted/Pseudo-R^2	0.618	0.617	0.618	0.250	0.251	0.255
N	3,645	3,645	3,645	3,755	3,755	3,755

Table 7 continues on next page.

TABLE 7 (continued)
Accounting-related integration issues and post-acquisition uncertainty

This table presents the results from estimating the following model:

$$ACQUSITION\ OUTCOME = \gamma_0 + \gamma_1 Integration\ Issue\ Measure + \gamma_i Control_i + \text{Industry \& Year Fixed Effects} + \theta \quad (2)$$

The results presented in columns 1-3 and 4-6 were obtained using the post-M&A outcome variables *RETURN_VOLATILITY* and *CHG_BIDASK* as the dependent variable, respectively. All models were estimated using OLS (heteroscedasticity robust standard errors). The samples used are summarized in Table 1. *RETURN_VOLATILITY* is the standard deviation of daily returns computed over the one-year period beginning with the acquisition completion date (one-year period is deemed to have 250 trading days). *CHG_BIDASK* is the change in bid-ask spread between the pre- (one year period ending at the acquisition announcement date) and post- (one year period beginning at the acquisition completion date) acquisition periods. We include three, alternative *Integration Issue Measures*. First, *ABN_AFEE* is the acquirer's abnormal audit fees, measured in the year of the deal (Ashbaugh, LaFond, and Mayhew 2003; Hribar, Kravet, and Wilson 2014; Larcker and Richardson 2004; Simunic 1980). Details of abnormal audit fee estimation are presented in Appendix B. Second, *ABN_AUDRPT_LAG* (abnormal audit report lag) is audit report lag measured for the year of the deal less average audit report lag in the three years preceding the deal, where audit report lag is defined as the number days between fiscal year-end and the audit opinion signature date (Bamber Bamber, and Schoderbek 1993; Knechel and Payne 2001; Krishnan and Yang 2009). Third, *INTEGRATION_ISSUES*, aggregates *ABN_AFEE* and *ABN_AUDRPT_LAG* by transforming each into decile ranks (0 to 9) and dividing by 9. The two transformed values for *ABN_AFEE* and *ABN_AUDRPT_LAG* (each ranging in value from 0 to 1) are then added, resulting in an aggregate measure of integration issues (ranging in value from 0 to 2). All variables, including control variables, are defined in detail in Appendix A. All continuous variables have been winsorized at the 1st and 99th percentiles. ***, **, and * indicate significance at the 0.01, 0.05, and 0.10 levels, respectively (two-tail).

TABLE 8
Path analysis: The impact of integration issues on post-M&A outcomes through internal information problems

Panel A: Path model diagram

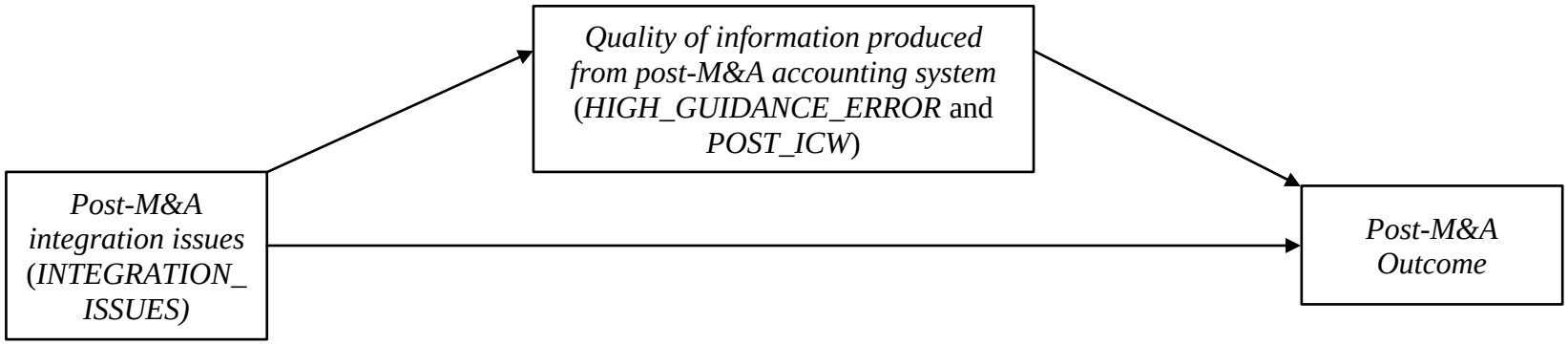

Table 8 continues on next page.

TABLE 8 (continued)
Path Analysis: The impact of integration issues on post-M&A outcomes through internal information problems

Panel B: *HIGH_GUIDANCE_ERROR* as the mediator variable

	CHG_OCF	***GW_IMPAIRMENT***	***BHAR_3YEAR***	***RETURN_VOLATILITY***	***CHG_BIDASK***
	(1)	**(2)**	**(3)**	**(4)**	**(5)**
Direct Path					
p(*INTEGRATION_ISSUES*,	-0.00734	0.02711	-0.08884	0.00032	0.00007
Outcome Variable)	(-1.50)	(0.82)	(-1.58)	(0.69)	(0.37)
Mediated Path					
p(*INTEGRATION_ISSUES*,	0.07531*	0.07333**	0.08207**	0.07400**	0.07322**
HIGH_GUIDANCE_ERROR)	(1.94)	(2.27)	(2.44)	(2.28)	(2.27)
p(*HIGH_GUIDANCE_ERROR*,	-0.00498	0.14119***	-0.24649***	0.00170***	-0.00012
Outcome Variable)	(-1.13)	(4.72)	(-4.83)	(4.03)	(-0.76)
Total Mediated Path for	-0.00037	0.01035**	-0.02023**	0.00013**	-0.00001
HIGH_GUIDANCE_ERROR	(-0.98)	(2.04)	(2.18)	(1.98)	(-0.72)
Controls	Included	Included	Included	Included	Included
Industry Fixed Effects	Included	Included	Included	Included	Included
Year Fixed Effects	Included	Included	Included	Included	Included
N	788	1,098	1,021	1,090	1,097

Table 8 continues on next page.

TABLE 8 (continued)
Path Analysis: The impact of integration issues on post-M&A outcomes through internal information problems

Panel C: *POST_ICW* as the mediator variable

	Dependent Variable =				
	CHG_OCF	***GW_IMPAIRMENT***	***BHAR_3YEAR***	***RETURN_VOLATILITY***	***CHG_BIDASK***
	(1)	**(2)**	**(3)**	**(5)**	**(4)**
Direct Path p(*INTEGRATION_ISSUES*, Outcome Variable)	-0.00784** (-2.25)	0.06540*** (3.79)	-0.08555*** (-2.66)	0.00106*** (2.86)	0.00144*** (6.01)
Mediated Path p(*INTEGRATION_ISSUES*, *POST_ICW*)	0.06451*** (5.45)	0.07422*** (7.51)	0.06365*** (6.34)	0.07394*** (7.38)	0.07414*** (7.50)
p(*POST_ICW*, Outcome Variable)	-0.02541*** (-4.38)	0.13850*** (4.90)	-0.22661*** (-4.18)	0.00233*** (3.83)	-0.00047 (-1.21)
Total Mediated Path for *POST_ICW*	-0.00164*** (-3.42)	0.01028*** (4.10)	-0.01442*** (3.49)	0.00017*** (3.40)	-0.00004 (-1.19)
Controls	Included	Included	Included	Included	Included
Industry Fixed Effects	Included	Included	Included	Included	Included
Year Fixed Effects	Included	Included	Included	Included	Included
N	2,538	3,760	3,438	3,645	3,755

This table presents the results of our path analyses. Panel A provides a summary diagram of our path model, while panel B (panel C) presents the results of the path model estimation when *HIGH_GUIDANCE_ERROR* (*POST_ICW*) is used as the mediator variable. In these analyses we are interested in testing whether post-acquisition accounting integration issues affect post-acquisition outcomes *through* the quality of information produced from the newly merged firm's accounting system. In other words, we are testing whether *HIGH_GUIDANCE_ERROR* and *POST_ICW* are mediator variables in the relationship between *INTEGRATION_ISSUES* and our post-acquisition outcome variables, *CHG_OCF*, *GW_IMPAIRMENT*, *RETURN_VOLATILITY*, *BHAR_3YEAR*, and *CHG_BIDASK*. Using Stata ("SEM" command), we ran path analyses in which the following models were estimated:

Mediator variable = f(*INTEGRATION_ISSUES*, Controls, Industry & Year Fixed Effects)
Post-M&A Outcome = f(*Mediator Variable*, *INTEGRATION_ISSUES*, Controls, Industry & Year Fixed Effects)

The path model estimates both the direct and indirect effects of post-acquisition accounting integration issues on post-acquisition outcomes and tests each for significance. All variables are defined in Appendix A and in prior tables. All continuous variables have been winsorized at the 1st and 99th percentiles. ***, **, and * indicate significance at the 0.01, 0.05, and 0.10 levels, respectively (two-tail).

TABLE 9
Additional analyses: Acquirers' prior integration experience

Panel A: The impact of accounting integration issues on post-acquisition management guidance error and internal control issues

	Dependent variable =								
	GUIDANCE_ERROR			***HIGH_GUIDANCE_ERROR***			***POST_ICW***		
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**	**(9)**
	Coefficient (t-statistic)								
ABN_AFEE	-0.003 (-0.45)			0.499** (2.25)			0.862*** (5.68)		
Prior Deals ABN_AFEE	-0.016 (-1.17)			-0.237 (-0.63)			0.441 (1.54)		
ABN_AUDRPT_LAG		0.039* (1.87)			0.826* (1.67)			1.430*** (6.99)	
Prior Deals ABN_AUDRPT_LAG		-0.022 (-0.82)			-0.809 (-1.37)			0.465 (1.06)	
INTEGRATION_ISSUES			0.009 (1.64)			0.393** (2.28)			0.964*** (6.94)
Prior Deals INTEGRATION_ ISSUES			0.002 (0.37)			-0.275 (-1.52)			0.263 (1.58)
ACQUISITION_INTENSITY	0.008 (1.28)	0.008 (1.29)	0.008 (1.27)	0.098 (0.61)	0.099 (0.62)	0.124 (0.77)	0.061 (0.44)	0.093 (0.66)	0.068 (0.48)
Controls	Included	Included	Included	Included	Included	Included	Included	Included	Included
Industry Fixed Effects	Included	Included	Included	Included	Included	Included	Included	Included	Included
Year Fixed Effects	Included	Included	Included	Included	Included	Included	Included	Included	Included
Adjusted/Pseudo-R^2	0.139	0.143	0.140	0.329	0.328	0.330	0.125	0.146	0.137
N	1,098	1,098	1,098	1,098	1,098	1,098	3,760	3,760	3,760

Table 9 continues on the next page.

TABLE 9 (continued)
Additional analyses: Acquirers' prior integration experience

Panel B: Accounting-related integration issues and post-acquisition performance

	Dependent variable =								
	CHG_OCF			***GW_IMPAIRMENT***			***BHAR_3YEAR***		
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**	**(9)**
	Coefficient (t-statistic)								
ABN_AFEE	-0.006 (-1.31)			0.309*** (3.15)			-0.079* (-1.94)		
Prior Deals ABN_AFEE	-0.011 (-1.59)			0.071 (0.42)			-0.048 (-0.71)		
ABN_AUDRPT_LAG		-0.022*** (-2.86)			0.418*** (3.00)			-0.159*** (-2.88)	
Prior Deals ABN_AUDRPT_LAG		0.009 (0.94)			-0.003 (-0.01)			0.131 (1.54)	
INTEGRATION_ISSUES			-0.010** (-2.47)			0.380*** (4.58)			-0.103*** (-3.02)
Prior Deals INTEGRATION_ ISSUES			-0.004 (-1.16)			0.099 (1.10)			-0.024 (-0.70)
ACQUISITION_INTENSITY	-0.001 (-0.25)	-0.001 (-0.44)	-0.001 (-0.32)	0.370*** (4.85)	0.375*** (4.94)	0.377*** (4.87)	-0.060** (-2.04)	-0.063** (-2.14)	-0.063** (-2.11)
Controls	Included	Included	Included	Included	Included	Included	Included	Included	Included
Industry Fixed Effects	Included	Included	Included	Included	Included	Included	Included	Included	Included
Year Fixed Effects	Included	Included	Included	Included	Included	Included	Included	Included	Included
Adjusted/Pseudo-R^2	0.140	0.143	0.141	0.105	0.104	0.109	0.044	0.045	0.046
N	2,538	2,538	2,538	3,760	3,760	3,760	3,438	3,438	3,438

Table 9 continues on the next page.

TABLE 9 (continued)
Additional analyses: Acquirers' prior integration experience

Panel C: Accounting-related integration issues and post-acquisition uncertainty

	Dependent variable =					
	RETURN_VOLATILITY			***CHG_BIDASK***		
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**
	Coefficient (t-statistic)					
ABN_AFEE	0.146*** (2.77)			0.092*** (2.60)		
Prior Deals ABN_AFEE	-0.040 (-0.51)			0.018 (0.34)		
ABN_AUDRPT_LAG		0.198*** (2.68)			0.154*** (3.25)	
Prior Deals ABN_AUDRPT_LAG		0.102 (0.73)			0.240*** (2.67)	
INTEGRATION_ISSUES			0.126*** (3.08)			0.138*** (4.94)
Prior Deals INTEGRATION_ ISSUES			-0.019 (-0.48)			0.018 (0.70)
ACQUISITION_INTENSITY	0.024 (0.70)	0.025 (0.72)	0.033 (0.95)	-0.047** (-2.15)	-0.046** (-2.13)	-0.041* (-1.93)
Controls	Included	Included	Included	Included	Included	Included
Industry Fixed Effects	Included	Included	Included	Included	Included	Included
Year Fixed Effects	Included	Included	Included	Included	Included	Included
Adjusted/Pseudo-R^2	0.617	0.617	0.617	0.250	0.254	0.255
N	3,645	3,645	3,645	3,755	3,755	3,755

Table 9 continues on the next page.

TABLE 9 (continued)
Additional Analyses: Acquirers' Prior Integration Experience

This table tests whether an acquirer's (a) prior integration experience, or (b) recent acquisition intensity are associated with post-acquisition management guidance error and internal control issues (Panel A), financial statement based measures of post-M&A outcomes (Panel B), and market based measures of post-M&A outcomes (Panel C). In Panel A, model (1) was modified to incorporate measures of prior integration experience and recent acquisition intensity:

$$\textit{GUIDANCE\_ERROR} \text{ or } \textit{POST\_ICW} = \alpha_0 + \alpha_1 \textit{Integration Issue Measure} + \alpha_2 \textit{Prior Deals Integration Issue Measure} + \alpha_i \text{Control}_i + \text{Industry \& Year Fixed Effects} + \varepsilon$$

Results presented in columns 1-3 were obtained from OLS regressions (heteroscedasticity robust standard errors), while results presented in columns 4-6 were obtained from logistic regressions.

In Panels B and C, model (2) was modified to incorporate measures of prior integration experience and recent acquisition intensity:

$$\textit{ACQUSITION OUTCOME} = \gamma_0 + \gamma_1 \textit{Integration Issue Measure} + \gamma_2 \textit{Prior Deals Integration Issue Measure} + \gamma_i \text{Control}_i + \text{Industry \& Year Fixed Effects} + \theta$$

In all panels, we include three *Prior Deals Integration Issue Measures*. First, *Prior Deals ABN_AFEE* is the average of the acquirer's abnormal audit fees for all deals executed in the three-year period preceding the current acquisition. Second, *Prior Deals ABN_AUDRPT_LAG* is the average of the acquirer's abnormal audit report lags for all deals executed in the three-year period preceding the current acquisition. Finally, *Prior Deals INTEGRATION_ISSUES* is the average of the acquirer's aggregate integration issues measure for all deals executed in the three-year period preceding the current acquisition. All control variables are included in the estimation of models (1) and (2) but are not presented here in the interest of brevity. All variables are defined in Appendix A and in previous tables. All continuous variables have been winsorized at the 1st and 99th percentiles. ***, **, and * indicate significance at the 0.01, 0.05, and 0.10 levels, respectively (two-tail).

TABLE 10
Additional analyses: Do announcement period returns predict integration issues?

	Dependent variable =		
	ABN_AFEE	***ABN_AUDRPT_LAG***	***INTEGRATION_ISSUES***
	(1)	**(3)**	**(5)**
	Coefficient (t-statistic)		
Intercept	0.048***	0.051***	0.999***
	(6.71)	(10.73)	(127.91)
ACQ_ANNOUNCE_RET	0.049	-0.035	0.061
	(0.77)	(-0.88)	(0.96)
Adjusted-R^2	0.00	0.00	0.00
N	3,760	3,760	3,760

This table tests whether announcement period returns (*ACQ_ANNOUNCE_RET*) can predict integration issues as measured by *ABN_AFEE*, *ABN_AUDRPT_LAG*, and *INTEGRATION_ISSUES*, the last of which is an aggregate measure of *ABN_AFEE* and *ABN_AUDRPT_LAG*. Results in all columns were obtained by estimating OLS models with heteroscedasticity robust standard errors. Consistent with our main sample, samples here were restricted to observations (a) falling in the years 2002 and later, (b) with relative deal sizes ≥ 5%, and (c) non-missing dependent and independent variables. The results above suggest that announcement period returns have little explanatory power in predicting post-acquisition integration issues. All variables are defined, in detail, in previous tables and in the Appendix. All continuous variables have been winsorized at the 1st and 99th percentiles. ***, **, and * indicate significance at the 0.01, 0.05, and 0.10 levels, respectively (two-tail).

TABLE 11
Validation Test: *INTEGRATION_ISSUES* Measure

	Dependent Variable = *INTEGRATION_ISSUES*
	Coefficient (t-statistic)
DL_REL_SIZE	0.141***
	(8.20)
TIME_TO_COMPLETION	0.019**
	(2.25)
DL_STOCK	-0.024
	(-1.00)
PRIV_TGT	-0.047***
	(-2.87)
PRIV_STK_DEAL	0.023
	(0.67)
MA_EXEMPTION	0.105***
	(7.03)
DL_DIVER	0.024*
	(1.74)
ACQ_SIZE	-0.020***
	(-4.49)
ACQ_LEV	-0.163***
	(-4.86)
ACQ_ANNOUNCE_RET	-0.053
	(-0.59)
ACQUISITION_INTENSITY	-0.053***
	(-4.02)
Industry Fixed Effects	Included
Year Fixed Effects	Included
Adjusted-R^2	0.154
N	4,511

This table presents the result of the validation test in which the dependent variable is *INTEGRATION_ISSUES*. The purpose of this table is to show that *INTEGRATION_ISSUES* captures the idiosyncratic factors related to the specific deal that affect difficulties in accounting integration process. All variables are defined, in detail, in previous tables and in the Appendix A. All continuous variables have been winsorized at the 1st and 99th percentiles. ***, **, and * indicate significance at the 0.01, 0.05, and 0.10 levels, respectively (two-tail).