Are Merger Synergy Disclosures Credible?*

Atif Ellahie† Xuanheng Huang‡ İrem Tuna§ Roberto Vincenzi¶

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Abstract

We examine the credibility of synergy guidance in 12,176 U.S. mergers and acquisitions (M&A) announced between 2004 and 2021. Using press releases and conference call transcripts, we identify qualitative and quantitative synergy guidance and analyze its determinants, market reactions, and post-acquisition realizations. Synergy guidance is more common in larger, stock-financed deals, public-target acquisitions, related-industry transactions, and among acquirers with greater analyst coverage and prior guidance experience. Litigation risk deters disclosure, especially numeric guidance. Investors respond favorably to both textual and numeric guidance at announcement, with stronger reactions to more intensive discussion and higher numeric estimates. However, post-acquisition outcomes suggest that disclosed expectations are often not realized. Synergy disclosers experience more frequent and larger goodwill impairments and worse post-merger operating performance, and larger numeric estimates additionally predict downward revisions to synergy expectations and lower long-run stock returns. The impairment-disclosure association is attenuated when acquirers have greater forecasting experience and targets operate in richer information environments, consistent with learning and information quality constraining strategic bias and forecasting noise. Exploiting the 2013 U.K. Takeover Panel Rule 28 reform, we find that numeric guidance in U.K.-target deals predicts fewer subsequent goodwill impairments than comparable U.S.-target deals, consistent with mandated external verification improving disclosure credibility. Our findings inform ongoing policy debates by highlighting a disconnect between investors' favorable announcement reaction to synergy guidance and its limited long-run realization.

Keywords: disclosure; guidance; synergies; mergers and acquisitions

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†University of Utah, David Eccles School of Business - atif.ellahie@eccles.utah.edu

‡Bocconi University - xuanheng.huang@unibocconi.it

§London Business School - ituna@london.edu

¶Bocconi University - roberto.vincenzi@unibocconi.it

1 Introduction

A fundamental promise of mergers and acquisitions (M&As) is that combining two firms generates value exceeding their standalone values. These expected synergies, in the form of cost savings, revenue enhancements, or strategic benefits, justify the substantial premiums paid in public-target deals, averaging over 40% (Betton et al., 2009). Some acquirers convey these expectations to investors at deal announcement by providing *synergy guidance*, voluntary forward-looking statements that range from qualitative discussions of anticipated benefits to quantitative estimates of their magnitude and timing. Such guidance shapes investor expectations and reflects managers' private information about combined prospects, but is issued without the accountability mechanisms that discipline other forward-looking communications such as quarterly or annual earnings guidance. Synergy guidance is typically a one-time communication with no requirement to report on subsequent realizations, no standardized format, and a realization horizon that can span years.[1] This accountability gap has motivated the International Accounting Standards Board (IASB) and the U.K. Takeover Panel to introduce standardized disclosure and verification requirements, while no comparable requirements exist under U.S. GAAP.[2] Evaluating these initiatives requires first understanding how the current voluntary disclosure regime functions, including whether synergy guidance is ultimately realized.

Prior research has largely focused on whether and why firms disclose expected synergies and on the implications for announcement returns and deal completion (e.g., Dutordoir et al.,

[1] U.S. acquirers also typically issue these statements under the safe harbor provisions of the Private Securities Litigation Reform Act of 1995, which shield issuers from liability for forecasts accompanied by cautionary language, further reducing ex post accountability.

[2] In March 2024, the IASB issued an Exposure Draft proposing to amend IFRS 3 to require acquirers to disclose quantitative synergy information, including a breakdown by category and expected timing, motivated explicitly by investor concerns about insufficient information to assess post-acquisition performance (International Accounting Standards Board, 2024). The U.K. Takeover Panel similarly requires quantified financial benefits statements to be reported on by independent accountants and financial advisers under Rule 28 of the Takeover Code (effective September 2013) (The Takeover Panel, 2013).

2014; Amel-Zadeh and Meeks, 2019). Less attention has been paid to whether these expectations are borne out in post-acquisition outcomes. This omission matters because systematically overestimated synergies raise concerns about insufficient due diligence, managerial bias, and the limits of market discipline, particularly in the U.S. setting, where credibility rests entirely on market discipline rather than third-party verification or mandated reporting, and where managerial accountability is further limited by long realization horizons and relatively short CEO tenures. We address this issue using a large sample of U.S. M&As announced between 2004 and 2021, examining three related questions: (1) what determines whether and how acquirers provide synergy guidance, (2) how the market responds to this guidance at announcement, and (3) whether the expected synergies disclosed at announcement are reflected in post-acquisition outcomes.

M&A disclosure practice exhibits considerable variation in whether and how acquirers communicate synergy expectations to investors.[3] Voluntary disclosure theory characterizes the decision to disclose as a trade-off between the benefits and costs of disclosure. Managers are more likely to disclose synergy estimates when they expect a favorable market reaction, when disclosure reduces information asymmetry, or when it helps justify the deal economics (e.g., Verrecchia, 1983; Diamond, 1985; Diamond and Verrecchia, 1991; Graham et al., 2005; Balakrishnan et al., 2014). They may withhold synergy guidance when forecasting uncertainty makes credible disclosure difficult, when deal rationale reveals competitively sensitive information about cost structures or integration plans (e.g., Verrecchia, 1983; Dye, 1985; Wagenhofer, 1990), or when litigation or reputational risks are high (e.g., Rogers and Van Buskirk, 2009; Houston et al., 2019; Call et al., 2024). We expect this trade-off to

[3]For example, in announcing its 2017 acquisition of Aetna Inc., CVS Health Corp.'s chief financial officer stated: "This transaction has the potential to deliver $750 million in near-term synergies in the second full year after close..." yet the acquirer faces no formal obligation to report on whether the figure was realized (CVS Health Corp. Form 425, December 4, 2017, https://www.sec.gov/Archives/edgar/data/1122304/000095010317012079/dp83792_425-42.htm). Other acquirers provide only qualitative discussion of expected benefits, or remain silent on synergies altogether.

shape both the incidence and content of synergy guidance, and to vary systematically with deal, firm, and environmental characteristics affecting the expected costs and benefits of disclosure.

Disclosed synergy estimates rely on assumptions about post-merger integration, employee retention, and customer and competitive responses that are inherently difficult to verify at the time of announcement (e.g., Larsson and Finkelstein, 1999; Graebner et al., 2017). Realizing the promised benefits requires sustained execution and favorable external conditions, and the long lag between announcement and realization, combined with managerial overoptimism, may further contribute to overestimated synergies. There is therefore a fundamental tension between the informativeness of synergy guidance at announcement and its credibility over the long run. If managers disclose high-quality private information, the market response to announced expectations should correspond closely to realized outcomes (Verrecchia, 1983). If disclosure is driven primarily by deal-justification incentives or managerial miscalibration, markets may respond favorably while ex post outcomes disappoint (Ben-David et al., 2013). This gap between ex ante guidance and ex post outcomes makes synergy guidance a compelling setting for evaluating the credibility of voluntary forward-looking statements.

Our sample comprises 12,176 U.S. M&A announcements from 2004 to 2021 sourced from SDC Platinum and merged with Compustat and CRSP, with synergy disclosures extracted from conference call transcripts (Refinitiv, FactSet) and press releases filed on Form 8-K within a short window around each announcement.[4] The sample begins in 2004, the first year with consistent conference call coverage, and ends in 2021 to permit three-year post-deal outcome measurement.

We construct textual and numeric measures of synergy disclosure from press releases and conference call transcripts using natural language processing (NLP) tools, along with in-

[4]We exclude cross-border deals to maintain a consistent institutional setting and exclude investor presentations because they are not systematically archived and their content is largely redundant with our primary channels.

dicators for whether each measure is non-zero.[5] Deals lacking both a press release and a conference call transcript are coded as non-disclosers.[6]

We begin by describing disclosure practices, both overall and over time. We find that 28.0% of M&A announcements in our sample contain at least some narrative discussion of expected synergies, and 15.1% include a numeric estimate. The textual disclosure rate rises from 21.2% in 2004 to 34.7% in 2021, and the numeric rate from 10.9% to 18.3% over the same period. Among the 1,836 numeric disclosers, the average (median) expected synergy amount is $198 million ($26 million), or 1.5% (0.9%) when scaled by combined firm value. We further classify numeric synergy disclosures into cost and revenue components. Among numeric disclosers (untabulated), 95.6% provide an estimate of cost-saving synergies, 28.2% provide an estimate of revenue-enhancing synergies, and 24.9% provide both. This pattern is consistent with cost savings being easier to forecast and quantify, whereas revenue synergies are inherently more uncertain.

We then turn to our first research question, what determines whether and how acquirers provide synergy guidance. Using regression models with acquirer and target industry fixed effects, deal announcement year fixed effects, and standard errors clustered by acquirer industry, we find that both textual and numeric synergy guidance are more common in larger, stock-financed deals, public-target acquisitions, and related-industry transactions. Larger acquirers are more likely to discuss synergies, but conditional on disclosing a numeric estimate, they guide to lower synergies relative to combined firm value. Acquirers with higher analyst coverage and institutional ownership are more likely to disclose, consistent with ex-

[5]The textual measure is a document-level index of the share of synergy-related paragraphs identified by FinBERT and GPT-4o, averaged across the two models after standardization. The numeric measure is the disclosed dollar value of expected synergies extracted by GPT-4o, scaled by the sum of deal value and acquirer market value.

[6]Of the 12,176 deals in our sample, 36.5% have neither a press release nor a conference call transcript, 50.6% have a press release, 39.9% have a transcript, and 27.0% have both. The 4,446 deals with neither channel are not trivially small, with an average deal size of $300 million representing 19.7% of acquirer market value. Remaining silent is itself a disclosure choice, and Dasgupta et al. (2024) find that M&A conference calls hosted by the acquirer are associated with higher announcement returns than deals without conference calls.

ternal demand for information and signaling incentives, as are acquirers that regularly issue earnings guidance and those with prior synergy guidance experience. Higher litigation risk deters disclosure and does so more strongly for numeric estimates, consistent with quantitative claims being perceived as more legally sensitive than qualitative statements. Together, these patterns reveal systematic variation in synergy disclosure practices consistent with voluntary disclosure theory.

Turning to our second research question, we find that investors respond favorably to synergy guidance at announcement. Both textual and numeric disclosures predict approximately 73–77 basis points of additional cumulative abnormal return over the $[-3, +3]$ window relative to non-disclosers, with the intensive-margin effect stronger for numeric guidance (approximately 96 basis points per standard deviation increase) than for textual guidance (approximately 52 basis points). These results are consistent with prior evidence in smaller samples (Dutordoir et al., 2014; Amel-Zadeh and Meeks, 2019) and suggest that disclosers are motivated at least in part by signaling incentives.

Our third and central research question asks whether disclosed synergies are realized. We examine firm outcomes over the three fiscal years following deal completion, focusing on goodwill impairments as our cleanest measure. A goodwill write-off is an unambiguous accounting signal that the acquired assets delivered less value than expected, and prior literature interprets such write-offs as evidence that anticipated synergies proved unattainable (e.g., Gu and Lev, 2011; Ben-David et al., 2025; Ellahie et al., 2025). We find that both textual and numeric disclosure predict a 2.9 percentage-point higher impairment likelihood relative to a sample mean of 25.2%, and larger numeric estimates predict greater impairment magnitudes (approximately 42 basis points per standard deviation of disclosed synergy amount, or roughly 35% of the sample mean impairment of 1.2% of total assets). These findings suggest that, on average, disclosed synergies fail to materialize.

We corroborate the impairment evidence with three additional outcome measures. Man-

agers themselves subsequently revise disclosed estimates downward, with larger announcement-period numeric estimates predicting more frequent below-expectation realization commentary and more negative revisions on subsequent earnings calls. Post-acquisition ROA declines by approximately 1.3–1.4 percentage points more for disclosers than non-disclosers (relative to a sample mean change of -3.5 percentage points), and larger numeric synergy estimates predict significantly lower 24-month returns. Together, the evidence indicates that while synergy disclosures are viewed favorably by investors at announcement, disclosed expectations are, on average, not borne out in managers' own revisions, operating performance, or long-run returns.

To sharpen inferences, we exploit cross-sectional variation in factors that plausibly affect the credibility and precision of synergy guidance. We find that the association between goodwill impairment and synergy disclosure is significantly attenuated when acquirers have greater prior numeric synergy guidance experience (for both impairment likelihood and magnitude), when acquirer accounting quality is higher (for impairment likelihood), and when target accounting quality is higher (for impairment magnitude on the intensive margin). These patterns are consistent with disclosure credibility being shaped by acquirer forecasting experience and by the acquirer and target information environments, with learning and information quality constraining both forecasting noise and strategic optimism.

Finally, we address the endogeneity of voluntary disclosure by exploiting a plausibly exogenous shock to disclosure credibility. The U.K. Takeover Panel's 2013 implementation of Rule 28 required quantified financial benefits statements in U.K.-target deals to be reported on by independent accountants and financial advisers as to their proper compilation and underlying assumptions, providing external scrutiny absent in the U.S. setting. Because Rule 28 applies only to stock-financed offers, we compare such acquisitions of U.K. public targets (treated) and U.S. public targets (control) in a triple-difference design, with entropy balancing reweighting U.S. control deals to match U.K. treated deals on observable

characteristics. We find that, in the post-Rule 28 period, acquirers of U.K. targets that provide numeric synergy guidance are significantly less likely than comparable acquirers of U.S. targets to record goodwill impairments over the three and five fiscal years following completion.[7] This pattern is consistent with mandated external scrutiny attenuating overoptimism in quantified guidance and supporting the credibility of forward-looking synergy claims.

Taken together, our findings inform ongoing policy debates about M&A disclosure requirements and the case for standardization, verification, and ex post accountability of forward-looking synergy claims.

Our study makes three main contributions. First, we add to the M&A literature on whether acquisitions create value and when they fail (e.g., Healy et al., 1992; Kaplan and Weisbach, 1992; Moeller et al., 2005; Malmendier et al., 2018), which has focused on announcement returns, divestitures, long-run performance, and the determinants of deal outcomes such as overbidding (De Bodt et al., 2018), ex ante deal quality (Ellahie et al., 2025), due diligence effort (Wangerin, 2019), and managerial overconfidence (Malmendier and Tate, 2008). We connect realized post-acquisition performance to the pre-merger synergy expectations explicitly communicated to investors at deal announcement, and show that these expectations are, on average, not borne out in subsequent periods, based on our analyses of impairments, managers' own revisions, operating performance, and long-run returns. While our results do not suggest that firms should avoid acquisitions, they caution against overestimating the long-term payoffs from M&A activity, consistent with the broader pattern in Moeller et al. (2005) and Malmendier et al. (2018).

Second, we extend the voluntary disclosure literature (e.g., Hutton et al., 2003; Balakrishnan et al., 2014; Christensen et al., 2021; Call et al., 2024) by examining a setting in

[7] Although goodwill impairment tests under IAS 36 (IFRS, applied by U.K. acquirers) and ASC 350 (U.S. GAAP, applied by U.S. acquirers) differ in mechanics, including the threshold for impairment and the size of the testing unit, both regimes recognize an impairment when the acquired business is worth less than its carrying value, supporting comparability of impairment outcomes across the two settings.

which managers retain broad discretion over forward-looking communication and in which standardization, audit, and external verification are absent under U.S. GAAP. Prior work on synergy disclosure has relied on small samples drawn from press releases (e.g., Dutordoir et al., 2014) or inferred expected synergies from EPS accretion/dilution forecasts (Amel-Zadeh and Meeks, 2019), providing little evidence on ex post realization. We provide the first large-sample evidence linking publicly disclosed synergy expectations to subsequent impairments, management revisions, operating performance, and long-run returns, across both press releases and conference call transcripts, and complement Dasgupta et al. (2024) on the broader role of M&A conference calls. Our Rule 28 analysis further provides quasi-experimental evidence on how mandated external accountant and adviser review can attenuate the credibility problems that arise when forward-looking disclosures are issued without accountability mechanisms.

Third, we contribute to research on how accounting information and the firm's information environment shape M&A decisions and outcomes (e.g., Biddle et al., 2009; Raman et al., 2013; Skaife and Wangerin, 2013; McNichols and Stubben, 2015). Prior studies have focused on how the quality of backward-looking financial reporting affects acquisition outcomes. We shift attention to forward-looking synergy disclosures and show that the credibility of those disclosures is itself shaped by the information environment, with target accounting quality associated with lower post-acquisition impairments conditional on disclosure.

2 Related Literature and Conceptual Framework

Theoretical models of discretionary disclosure emphasize that managers choose whether and how much to disclose by weighing expected capital-market benefits against proprietary, competitive, and litigation costs (e.g., Verrecchia, 1983; Diamond, 1985; Dye, 1985; Verrecchia, 2001). In signal-plus-noise frameworks, voluntary disclosure conveys information about

an unobserved fundamental but also contains estimation error arising from uncertainty and strategic bias, so investors update their beliefs by conditioning on both the content of the disclosure and its perceived credibility (e.g., Fischer and Verrecchia, 2000). These ideas are well suited to merger synergy guidance, where managers communicate expected future benefits of a transaction at a time when outside investors have limited ability to independently verify integration plans, execution feasibility, or timing.

Synergy guidance differs from many other forward-looking disclosures in ways that amplify agency frictions. There is no formal U.S. GAAP framework for measuring or presenting expected synergies, no requirement to reconcile announced estimates to realized outcomes, and safe harbor protections, long realization horizons, and short CEO tenures further weaken ex post accountability.[8] These features amplify managerial discretion over both the decision to disclose and the specificity of the disclosure, making synergy guidance a setting in which informative signaling and strategic persuasion may coexist.

We formalize this intuition by modeling announced synergy guidance as a noisy and potentially biased signal of the transaction's true synergy value. Let S_i denote the true present value of post-merger cash flow improvements for deal i. Managers observe imperfect private information about S_i and choose how to communicate it to investors through D_i, the content of the announced synergy guidance (qualitative intensity, numeric amount, or both). We decompose the disclosure as

$$D_i = S_i + b_i + \eta_i, \tag{1}$$

where b_i captures strategic bias and η_i captures forecasting noise. We expect $b_i \geq 0$ on average, reflecting managerial overoptimism and incentives to justify the deal valuation (e.g., Malmendier and Tate, 2008; Ben-David et al., 2013). Forecasting noise η_i arises from information uncertainty at the time of announcement, including preliminary due diligence,

[8] Compared to non-GAAP disclosures or management forecasts (e.g., Hutton et al., 2003; Call et al., 2024), synergy guidance affords managers even greater discretion and is subject to more uncertainty.

integration complexity, and the uncertain responses of customers, employees, and competitors. This decomposition separates two conceptually distinct sources of disclosure error, with b_i driven by managerial incentives and η_i driven by information uncertainty.

Investors observe D_i and update beliefs about deal quality by forming $E[S_i \mid D_i, Z_i]$, where Z_i captures factors that affect the perceived precision or credibility of the disclosure, such as the acquirer's information environment and prior forecasting experience. The market reaction to synergy guidance thus depends not only on the magnitude or specificity of the disclosed claim, but also on how investors interpret the likely size of b_i and η_i given these contextual cues. When $|\eta_i|$ is small and b_i is low, D_i is a precise signal of S_i, and we expect stronger announcement returns for more specific or credible disclosures and a positive association between disclosed synergies and post-merger outcomes. When managers disclose despite high estimation uncertainty, or when deal-justification incentives are strong, D_i may be noisy or optimistically biased. Because investors cannot easily assess precision ex ante without standardized reporting or third-party verification, announcement returns may be positive on average even when b_i is large, while realized outcomes diverge, producing weak or negative associations with post-merger performance.

This conceptual framework motivates three sets of tests. First, we examine the *determinants* of synergy guidance. Firms disclose when expected capital-market benefits exceed proprietary, litigation, and reputational costs, and this trade-off shapes both the extensive margin (whether firms disclose) and the intensive margin (how detailed or quantified the disclosure is). Second, we examine *announcement returns*. These reflect the market's assessment of the informativeness of the guidance, with more detailed or credible disclosures expected to generate stronger reactions. Because investors cannot easily distinguish precision from optimistic bias at the time of announcement, however, market reactions may be systematically positive even when b_i is large, motivating a direct examination of whether disclosed synergies are ultimately realized.

Third, and most central to our motivation, we examine *post-acquisition outcomes* as a credibility test. If synergy guidance is primarily informative and sufficiently precise, disclosed expectations should be reflected in stronger post-merger operating performance and lower goodwill impairment likelihood. We argue that goodwill impairments are a particularly clean signal of how close the post-merger value is to S_i because a goodwill impairment is an unambiguous recognition that the acquired assets delivered less value than expected at the time of acquisition, and prior literature interprets impairments as evidence that anticipated synergies proved unattainable (e.g., Gu and Lev, 2011; Ben-David et al., 2025; Ellahie et al., 2025). By contrast, if strategic bias or forecasting noise is large, perhaps reflecting managerial miscalibration of forecast confidence (Ben-David et al., 2013), the market may respond favorably at announcement while post-merger operating gains fall short and goodwill impairment likelihood increases, generating an empirically important wedge between announcement-period pricing and long-run realization.

We also expect the association between D_i and realized outcomes to vary with factors that influence strategic bias (b_i) and forecasting noise (η_i). Prior synergy disclosure experience and a richer information environment may enhance perceived credibility and constrain strategic bias and forecasting noise, while target accounting quality may shape both the decision to disclose and the forecastability of anticipated synergies. Because discretionary disclosure is endogenous (Healy and Palepu, 2001; Beyer et al., 2010), we sharpen inferences in two ways. First, we exploit cross-sectional variation in proxies for b_i and η_i across acquirers and targets. Second, we exploit the U.K. Takeover Panel's 2013 implementation of Rule 28 as a plausibly exogenous shock to the credibility of numeric synergy guidance in U.K.-target deals, providing quasi-experimental evidence on the role of mandated third-party review.

3 Data and Sample

3.1 Data sources

We obtain M&A data from SDC Platinum (LSEG) and merge them with market and accounting data from CRSP and Compustat. SDC provides deal identifiers, announcement and effective dates, acquirer and target identifiers, deal value, consideration mix, and other key deal characteristics. Daily and monthly equity returns are from CRSP and are used to compute announcement-window abnormal returns and to construct market equity and return-volatility measures. Compustat provides balance-sheet and income-statement items used to construct firm-level controls such as leverage, book-to-market, R&D intensity, and post-acquisition operating outcomes (e.g., ROA and goodwill impairments).

To measure disclosure, we use two primary communication channels around the announcement date, the press release and the conference call transcript. Press releases are obtained from SEC EDGAR Form 8-K filings by extracting Exhibit 99 or 99.1 when they contain press release text. For deals with U.K. targets, we obtain press releases from FactSet. Conference call transcripts are sourced from Refinitiv and FactSet and include both standalone M&A-specific calls and earnings calls that discuss an M&A transaction.[9] For both channels, we focus on documents released in the event window $[t{-}2, t{+}7]$ days relative to the announcement date $t{=}0$, and link each document to the corresponding SDC deal.

Institutional ownership data are collected from LSEG Institutional (13F) holdings. Analyst following and management guidance are obtained from I/B/E/S. We compute vertical relatedness using the Bureau of Economic Analysis (BEA) Input–Output tables, following Harford et al. (2025).

[9]Some companies do not host a separate conference call to discuss an announced M&A transaction, instead choosing to bundle it with a scheduled earnings conference call. In the U.S. sample, 27.5% of conference calls are earnings calls, 66.9% are standalone M&A calls, and the remaining 5.6% are investor or analyst conference presentations.

3.2 Sample construction

We construct a large sample of domestic (U.S.-to-U.S.) M&A transactions using SDC Platinum (LSEG). Cross-border deals are excluded to maintain a consistent institutional setting. The sample comprises U.S. public acquirers and U.S. public or private targets. Following standard filters, we focus on control-oriented transactions classified by SDC as Acquisition of Assets, Merger, or Acquisition of Majority Interest. Acquirers are required to own less than 50% prior to announcement and to seek more than 50% upon completion. We require acquirers to match with CRSP and Compustat to enable collection of returns and financial data. We also require valid industry classifications and non-missing deal value and form of consideration. The final analysis sample comprises 12,176 announcements spanning from 2004 to 2021. Panel A of Table 1 reports the sample construction, while Panels B and C summarize the top 15 acquirer and target industries in the final sample. Panel B reports that acquirers are concentrated in Business Services (15.23%), Other Financials (12.93%), and Banking (11.91%), with additional representation in Pharmaceuticals, Electronic Components, Oil & Gas, and Computers (each approximately 4–5%). Panel C reports that targets are most prevalent in Business Services (22.34%), Banking (11.14%), and Real Estate (5.80%), followed by Oil & Gas, Pharmaceuticals, Electronic Components, Other Financials, and Healthcare (each approximately 3–5%).

3.3 Synergy disclosure variables

The main synergy variables are constructed from narrative disclosures and numeric estimates of expected synergies. To develop these measures, we use two complementary natural language processing (NLP) tools. FinBERT is a transformer adapted to financial language and widely used in finance and accounting applications to classify domain-specific content with high precision (Huang et al., 2023). ChatGPT (GPT-4o) is employed in a zero-shot

setting to identify synergy-related passages and to extract monetary amounts of disclosed synergies. We use both models to increase coverage and cross-validation.

Operationally, we fine-tune FinBERT to identify synergy-related paragraphs. For each document, we compute a FinBERT-based score equal to the ratio of synergy paragraphs to total paragraphs. In parallel, we use ChatGPT to identify synergy-related paragraphs and compute a similar score based on the proportion of total document text contained in those paragraphs. For the numeric measures, we prompt ChatGPT to extract numeric synergy estimates and their attributes (e.g., frequency and type) from synergy-labeled text. Press releases and conference call transcripts are processed in chunks to preserve speaker continuity. Further implementation details and examples are provided in Appendix A.

We develop four deal-level measures that capture the presence and intensity of synergy disclosure at the time of announcement using the press release and the conference call transcript collected around the event date. Textual disclosure on the extensive margin is captured by *I(Textual)*, which equals one if *Text Index* is non-missing, and zero otherwise. Textual disclosure on the intensive margin is summarized by the *Text Index*, a continuous measure constructed in two steps. First, we standardize the FinBERT and ChatGPT document-level scores separately using a z-score transformation (i.e., subtracting the cross-sectional mean and dividing by the cross-sectional standard deviation). Second, we compute the *Text Index* as the simple average of the two standardized scores, assigning equal weight to each component.

Numeric disclosure on the extensive margin is captured by *I(Numeric)*, which equals one if a numeric synergy estimate is disclosed in either the press release or the conference call transcript, and zero otherwise. The intensive numeric measure, *Amount*, reflects the extracted monetary estimate and captures the size of disclosed synergies. We focus on total synergy estimates, expressed as a percentage of the sum of deal value and acquirer market value, to enhance cross-deal comparability. When multiple figures are present, we prioritize

explicitly labeled totals. When no total amount is reported, but only detailed figures for specific cost or revenue components, we aggregate these figures to obtain a proxy for the total synergy.[10]

3.4 Data description

Figure 1 summarizes time-series patterns in M&A deal activity and synergy disclosure in our sample, and Figure 1a plots the annual number of U.S. M&A announcements. Deal activity peaks in the mid-2000s, declines sharply around the 2008 financial crisis, and, despite recovering thereafter, remains below early-sample highs for much of the period. The figure also shows a visible dip in 2019–2020 followed by a rebound in 2021. Figure 1b reports synergy disclosure rates. The proportion of deals with textual synergy disclosure and numeric estimates both trend upward over time, indicating that synergy guidance becomes more common over the sample window.

Descriptive statistics for the variables used in our analysis are reported in Table 2. All variables are defined in Appendix B. All continuous variables, except long-term returns, are winsorized at the 1st and 99th percentiles. Focusing first on the synergy disclosure measures, 28.0% of deal announcements contain textual discussion of expected synergies, while 15.1% include a numeric estimate. Among the 1,836 deals with numeric estimates, the average (median) expected synergy amount is $198 million ($26 million), or 1.5% (0.9%) when scaled by combined firm value.

The average acquirer earns a modestly positive cumulative abnormal return (CAR) of 0.87% over the $[-3, +3]$ deal announcement window.[11] However, average post-deal performance is mixed. From the 12,176 deals in our sample, 25.2% result in a goodwill impairment

[10] For further details and validation statistics for numeric parsing, see Appendix A

[11] The average acquirer CAR is positive because our sample includes both public and private targets. When we restrict the sample to public targets only (N = 2,386), the average acquirer CAR is −1.04%, consistent with the typical public-to-public samples studied in prior M&A literature.

by the acquirer over the three fiscal years following deal completion, with the average impairment amounting to 1.2% of total assets. Return on assets (ROA) declines by 3.5 percentage points on average over the three fiscal years following deal completion, and characteristics-adjusted log returns (Bessembinder et al., 2019) average −6.9% and −11.6% over the 12 and 24 months following completion, respectively.

We also track synergy discussions in earnings conference calls over the three years after deal completion for the 1,678 completed deals with announcement-period numeric synergy estimates. Of these 1,678 deals, 1,170 (69.7%) host subsequent narrative synergy discussion and 673 (40.1%) host subsequent numeric estimates. We exploit these two subsamples to construct four variables capturing disclosed synergy realizations relative to the synergy guidance at announcement. Among the deals with subsequent narrative synergy discussion, acquirers discuss underperformance relative to synergy expectations in 13.7% of the deals. Among the deals with subsequent numeric synergy, 26.4% of the deals revise synergy guidance downwards. The average revision is upwards (46.3%) but the median revision is zero, and the synergy revision scaled by the sum of combined values hovers around zero

We include a host of deal and acquirer characteristics in our set of control variables. Turning to deal characteristics, 19.6% of transactions involve public targets, the typical deal size is 28.9% of acquirer market value, and stock comprises 19.3% of total consideration on average.

Acquirers are generally large and established public companies, with average market capitalization of approximately $9 billion and an average book-to-market ratio of 0.48. The average leverage ratio is 0.56 and R&D capital averages 7.8% of assets. Acquiring firms have moderate vertical integration scores (0.008), broad firm scope (operating across 10.5 industry-level markets on average), and operate in competitive industries with an average Herfindahl-Hirschman Index of approximately 0.078. The average acquirer is followed by

approximately 10 analysts with 66.3% of institutional investor ownership.[12]

In terms of forecasting experience, the average acquirer issues earnings guidance roughly 8.7 times in the fiscal year before the deal announcement. Historical synergy guidance behavior also varies widely. Among acquirers with prior M&A deals in the sample, the average acquirer has 0.57 prior deals with textual synergy disclosure and 0.28 with a numeric estimate in the five years preceding the current deal.

Approximately 55% of transactions involve acquirers and targets within the same industry, and 38.6% involve vertically related industries. Litigation exposure is similar across acquirers (27%) and targets (24%). The acquirers and targets are also broadly comparable on measures of accounting quality, measured following McNichols and Stubben (2015).

4 Results

4.1 What determines synergy disclosure?

We examine the determinants of synergy disclosure using an OLS regression model that includes deal announcement year, acquirer industry, and target industry fixed effects. Specifically, we estimate:

$$Disclosure_{i,t} = \mathbf{X}_{i,t}\boldsymbol{\beta} + \alpha_{i(a)} + \gamma_{i(t)} + \delta_t + \varepsilon_{i,t} \tag{2}$$

where $Disclosure_{i,t}$ is one of four synergy guidance measures (*I(Textual)*, *I(Numeric)*, *Text Index*, or *Amount*) for deal i announced in year t. The vector $\mathbf{X}_{i,t}$ includes deal- and acquirer-level characteristics: public target status, relative value, stock consideration, acquirer size, book-to-market ratio, leverage, R&D intensity, return volatility, vertical integration, firm scope, and industry concentration. All variables are defined in Appendix B. Columns (1)–(2) are estimated on the full sample; columns (3)–(4) restrict to deals with *I(Textual)* =

[12]The average public target is relatively less visible, with an average of 0.26 covering analysts, 8.6% institutional investor ownership (untabulated).

1 and *I(Numeric)* = 1, respectively. We include acquirer industry fixed effects $\alpha_{i(a)}$ and target industry fixed effects $\gamma_{i(t)}$ based on the Fama–French 30-industry classification, and announcement year fixed effects δ_t. Standard errors are clustered by acquirer industry.

Table 3 presents the results. Column 1 examines the likelihood of textual synergy guidance (*I(Textual)*). Deals involving public targets, larger relative values, higher stock consideration, and larger acquirers with lower stock return volatility are significantly more likely to include textual synergy discussion. These results are consistent with acquirers using synergy guidance to justify deal economics, particularly in stock-financed deals where equity financing incentives are stronger and in public-target acquisitions where transaction visibility is higher. The associations are broadly consistent with those in Dutordoir et al. (2014), who use a smaller sample of 1,990 M&A deals from 1995 to 2008, and extend their evidence to a much larger and more recent sample.

Column 2 examines the likelihood of numeric synergy guidance (*I(Numeric)*). Many of the deal characteristics that predict textual guidance also predict numeric guidance, with similar signs and significance on public-target status, relative value, stock consideration, and acquirer size. Acquirer leverage, which is insignificant in column 1, now loads positively at the 1% level, suggesting that more levered acquirers face stronger incentives to provide quantified synergy expectations. Numeric estimates are also more likely when the acquirer has lower R&D intensity, higher vertical integration, and operates in less concentrated industries, consistent with quantified guidance being withheld when forecasts are noisier and when the proprietary costs of disclosure are higher.

Columns 3 and 4 examine the intensive margin among deals that provide textual or numeric synergy guidance. More detailed textual discussion (*Text Index*) is associated with public targets, larger relative deal size, higher stock consideration, higher acquirer book-to-market, higher acquirer leverage, and greater vertical integration, but is less common for acquirers with more R&D capital. Larger numeric estimates (*Amount*) are associated with

public targets, larger relative deal size, higher stock consideration, higher acquirer book-to-market, higher leverage, greater R&D intensity, and higher return volatility. R&D intensity loads negatively on the decision to disclose a numeric estimate (column 2) but positively on *Amount* conditional on disclosure (column 4), an asymmetry consistent with different forces shaping the disclosure decision and the disclosed amount. The negative coefficient on *Log(Acq. MV)* in column 4 indicates that larger acquirers disclose smaller scaled synergy amounts, suggesting that while larger acquirers may guide to larger absolute dollar figures, these estimates represent a smaller fraction of combined firm value.

Altogether, these findings highlight how the decision to provide synergy guidance, and how much detail to provide, is shaped by deal visibility, acquirer size, equity financing incentives, and the perceived need to justify the transaction to investors.

In Table 4, we next examine how environmental factors shape firms' decisions to disclose synergies by augmenting the baseline model with variables capturing signaling incentives, forecasting ability, deal fit, and litigation risk. Columns 1–4 examine textual guidance (*I(Textual)*) and columns 5–8 examine numeric guidance (*I(Numeric)*).

For textual guidance, column 1 shows that both acquirer analyst following and institutional ownership are positively associated with disclosure, consistent with capital-market scrutiny increasing pressure to provide synergy expectations. Column 2 shows that acquirers with more frequent earnings guidance activity and prior synergy disclosure experience, both textual and numeric, are more likely to provide synergy discussion, consistent with forecasting ability and a transparent disclosure policy facilitating forward-looking M&A communication. Column 3 shows that textual guidance is more likely when the acquirer and target operate in the same industry, while vertical relatedness is not statistically significant, consistent with closer operational overlap encouraging qualitative synergy discussion. Column 4 shows that acquirer litigation risk is a significant deterrent to textual synergy guidance, though target litigation risk is not, suggesting that acquirers in high-litigation industries exercise caution

even with qualitative synergy claims.

For numeric guidance, columns 5–8 reveal broadly consistent patterns with some notable differences. Analyst following and institutional ownership remain positively associated with the likelihood of numeric estimates (column 5). Among forecasting variables in column 6, earnings guidance activity and prior numeric synergy disclosure experience are positively associated with numeric guidance, but prior textual disclosure experience is not significant, suggesting that experience with quantified estimates specifically, rather than qualitative discussion, drives the willingness to provide numeric synergy claims. Column 7 shows that numeric guidance is more likely in both horizontal and vertically related deals. Unlike textual guidance, vertical relatedness matters here, suggesting that operational overlap along the supply chain pushes acquirers to quantify synergies rather than only describe them. Finally, column 8 shows that both acquirer and target litigation risk are significant deterrents to numeric disclosure, whereas only acquirer litigation risk deters textual disclosure. This asymmetry suggests that managers perceive numeric synergy estimates as more legally sensitive than qualitative statements and weigh that risk more heavily when deciding whether to quantify their synergy expectations.

4.2 What is the market reaction to synergy disclosures?

A key question in evaluating the credibility and informativeness of synergy guidance is how financial markets respond to it at the time of deal announcement. If investors view synergy guidance as informative about the future benefits of a merger, we should observe a positive market reaction, particularly when guidance is more detailed. To test this, we examine the association between acquirer abnormal announcement returns and the presence and intensity of synergy guidance.[13]

[13]We examine cumulative abnormal returns around M&A announcements because prior research employs them as market-based assessments of expected value creation. However, Ben-David et al. (2025) and Ellahie et al. (2025) find that announcement returns do not correlate with ex post outcomes. We therefore follow

Table 5 reports regression results for acquirer cumulative abnormal returns (CARs) over the $[-3, +3]$ event window around deal announcement. All models include the same deal and acquirer controls as the determinants tests, along with fixed effects for announcement year, acquirer industry, and target industry.

Columns 1 and 2 show that acquirers earn significantly higher announcement returns when the deal communication includes a textual or numeric synergy disclosure, with coefficients of approximately 77 and 73 basis points, respectively.[14] These estimates suggest that investors view synergy guidance as a credible signal of value creation at the time of announcement. On the intensive margin, columns 3 and 4 show that the detail and substance of synergy guidance, rather than the mere decision to disclose, are what investors appear to price. Among deals with textual disclosure, a one-standard-deviation increase in *Text Index* is associated with approximately 52 basis points of additional announcement returns. Among deals with a numeric estimate, a one-standard-deviation increase in the disclosed *Amount* is associated with approximately 96 basis points of additional returns.[15] Taken together, these results indicate that more specific and quantified synergy guidance generates stronger market reactions at announcement.

Figure 2 complements these regression estimates by visualizing announcement-window CARs in event time. Figure 2a plots acquirer CARs for deals with above-median *Text Index* (labeled *High Text*) alongside non-disclosers, and Figure 2b repeats the exercise for deals with above-median *Amount* (labeled *High Numeric*). In both panels, acquirer CARs jump sharply at $t = 0$ for disclosers, while pre-announcement trends over $[-10, -1]$ are flat and similar across groups, consistent with the absence of systematic pre-announcement drift. After the

this recent literature and infer actual value creation from measures of ex post outcomes in Section 4.3.

[14]For context, the average acquirer CAR over $[-3, +3]$ is 0.87% across the full sample of 12,176 deals, which includes both public and private targets, but is -1.04% in the public-target subsample of 2,386 deals, consistent with prior public-to-public M&A samples. The CAR results are also robust to excluding deals with deal values of $1 million or less. This restriction drops 169 deals (1.4% of the sample) but does not qualitatively alter our inferences (untabulated).

[15]Computed as the coefficient multiplied by the standard deviation of the respective disclosure measure among disclosers. For *Text Index*, $0.192 \times 2.732 = 0.524$. For *Amount*, $0.626 \times 1.527 = 0.956$.

announcement, CARs for non-disclosers revert toward zero over $[0, +10]$. For *High Text*, the post-announcement path remains modestly above non-disclosers but the difference is not statistically significant. However, for *High Numeric*, the CARs remain elevated throughout $[0, +10]$ and are statistically higher than for non-disclosers, consistent with numeric estimates conveying more precise information about deal economics.

Table A1 reports regression results for combined acquirer–target CARs over the $[-3, +3]$ event window for the subset of public-target deals. All models include the same deal and acquirer controls as the determinants tests, along with fixed effects for announcement year, acquirer industry, and target industry. Columns 1 and 2 show that combined acquirer–target returns are significantly higher when the deal communication includes a textual or numeric synergy disclosure, with coefficients of approximately 91 and 93 basis points, respectively. The intensive-margin results in columns 3 and 4 show a similar pattern. Among public-target deals with textual disclosure, a one-standard-deviation increase in the *Text Index* is associated with approximately 68 basis points of additional combined returns. Among public-target deals with a numeric estimate, a one-standard-deviation increase in the disclosed *Amount* is associated with approximately 84 basis points of additional returns.[16]

Taken together, the regressions and event-study plots indicate a positive announcement-period response to synergy guidance, particularly when disclosures are more detailed or include numeric estimates.[17] As noted in Section 2, however, a favorable market reaction at announcement does not establish that disclosed synergies are ultimately realized. We turn to that question next.

[16]Computed as the coefficient multiplied by the standard deviation of the respective disclosure measure among public-target disclosers. For *Text Index*, $0.253 \times 2.694 = 0.682$. For *Amount*, $0.552 \times 1.522 = 0.840$.

[17]Disclosure also predicts higher deal completion likelihood (*I(Completed)*) and longer time to completion *Log(Days to Complete)*. Table A2 reports results for these two completion outcomes on textual and numeric synergy disclosure. Both disclosure variables load positively and significantly on *I(Completed)* and *Log(Days to Complete)*. The pattern is consistent with synergy guidance accompanying larger, more complex transactions that take longer to close but are more likely to be carried through to completion.

4.3 Are disclosed synergies realized?

To assess whether the value creation expectations communicated through synergy guidance ultimately materialize, we examine four post-acquisition outcomes. We begin with goodwill impairment, which we argue provides our cleanest measure of synergy realization and anchors both the main outcome tests and the cross-sectional analysis in Section 4.4. A goodwill impairment is an unambiguous accounting recognition that the acquired assets delivered less value than expected at the time of acquisition, and prior literature interprets impairments as evidence that anticipated synergies proved unattainable (e.g., Gu and Lev, 2011; Ben-David et al., 2025; Ellahie et al., 2025). We then turn to management's own subsequent revisions to disclosed synergy estimates, which provide a complementary view from acquirers themselves. We finally examine changes in return on assets (ROA) and long-run stock returns as corroborative but noisier measures. Post-merger ROA conflates synergy realization with other operational changes, and long-run returns are difficult to attribute to discrete corporate events given the influence of intervening macroeconomic conditions, firm-specific developments, and model misspecification (e.g., Kothari and Warner, 1997; Betton et al., 2008; Bessembinder et al., 2019). Taken together, these four outcomes offer complementary tests of whether disclosed synergies are reflected in post-acquisition realizations.

4.3.1 Goodwill impairments

Table 6 presents regressions of post-acquisition goodwill impairment outcomes on synergy guidance measures for completed deals over the three fiscal years following deal completion, against a sample mean impairment rate of 25.2%. All models control for the acquirer's pre-deal goodwill level (*Log(Acq. Goodwill)*) to absorb mechanical differences in the scale of goodwill present prior to the acquisition. Columns 1 and 2 examine the impairment indicator using the extensive-margin measures. Both textual and numeric synergy guidance are associated with a significantly higher likelihood of a goodwill impairment, with coefficients

of 2.9 percentage points for both *I(Textual)* and *I(Numeric)*. On the intensive margin, column 3 shows that *Text Index* is not significantly associated with impairment likelihood, while column 4 shows that larger numeric estimates (*Amount*) are associated with a significantly higher impairment likelihood.

Turning to impairment magnitude in columns 5–8, where the dependent variable is goodwill impairment as a percent of acquirer total assets, we find that deals with textual synergy guidance are associated with impairments that are larger by 17 basis points (column 5), while the coefficient on *I(Numeric)* in column 6 is not statistically significant. On the intensive margin, *Text Index* is not significantly associated with impairment magnitude (column 7). By contrast, *Amount* is positive and statistically significant in column 8, with a coefficient of 0.275 implying approximately 42 basis points of additional impairment per standard deviation of disclosed synergy amount (1.527 percentage points), consistent with the extensive-margin results. Relative to the sample mean post-acquisition impairment of 1.2 percent of total assets reported in Table 2, the column 5 and column 8 effects represent approximately 14 percent and 35 percent of typical impairment magnitude, respectively. Taken together, the goodwill impairment evidence suggests that synergy guidance is, on average, associated with subsequent recognition that the acquired assets delivered less value than communicated at announcement, consistent with systematic overoptimism or forecasting noise in disclosed synergy expectations.

Figure 3 corroborates the regression evidence. The figure plots event-time goodwill impairment outcomes around the completion date for high-disclosure deals (*High Text* or *High Numeric*, defined as above-median *Text Index* or *Amount* respectively) against deals without disclosure. Disclosure and non-disclosure groups track each other closely before completion and diverge after, both on impairment likelihood (Panels A and B) and on impairment magnitude as a proportion of total assets (Panels C and D).

The goodwill impairment results are robust to several additional checks. The results hold

under alternative controls for acquisition premium and acquirers' deal experience, reported in Table A3, and under entropy-balanced reweighting of disclosing and non-disclosing acquirers, reported in Table A4. Finally, excluding deals with deal value below $1 million mirrors the announcement-return robustness noted earlier and does not qualitatively alter our inferences (untabulated).

4.3.2 Subsequent synergy revisions

As a complementary realization measure, we examine management's own subsequent revisions to disclosed synergy estimates among numeric disclosers. We collect textual synergy discussions and numeric synergy estimates from earnings call transcripts over the three years following deal completion, which are available for 1,170 and 673 of the 1,678 numeric-discloser deals, respectively. From these data we construct four post-completion revision outcomes. Table 7 reports regressions of these outcomes on *Amount*.

The first outcome (*I(Underperform)*) is an indicator variable set equal to one if management discusses below-expectation synergy realization on at least one post-completion conference call, and zero otherwise. Column 1 shows that a one-standard-deviation increase in *Amount* (1.527 percentage points) is associated with a 2.6 percentage-point higher likelihood of underperformance discussion, relative to a sample mean of 13.7%. The second outcome (*I(Downward Revision)*) is an indicator variable set equal to one if the average post-completion revision relative to the announcement estimate is negative, and zero otherwise. Column 2 shows that a one-standard-deviation increase in *Amount* is associated with a 12.2 percentage-point higher likelihood of downward revision, relative to a sample mean of 26.4%. The third outcome (*Synergy Revision*) is the average revision scaled by the announcement estimate, and the fourth (*Synergy Forecast Error*) is the average revision scaled by deal value plus acquirer market capitalization (that is, the same scalar used for *Amount*). Columns 3 and 4 show that a one-standard-deviation increase in *Amount* predicts more

negative revisions on both scaled measures, with effects of −0.388 and −0.003, respectively. Together, the four outcomes indicate that larger announcement-period numeric estimates are associated with more negative subsequent revisions, corroborating the goodwill impairment evidence and indicating that the gap between disclosed and realized synergies is reflected in management's own commentary as well as in accounting outcomes.

4.3.3 Operating performance

Panel A of Table 8 examines changes in ROA over the three fiscal years following deal completion, estimated using the same baseline model and fixed effects structure as in the goodwill impairment analysis. On the extensive margin, both textual and numeric synergy guidance are associated with significantly larger declines in post-acquisition ROA, with coefficients of −1.4 and −1.3 percentage points for *I(Textual)* and *I(Numeric)*, respectively (columns 1 and 2), relative to a sample mean ROA change of −3.5 percentage points. On the intensive margin, neither *Text Index* nor *Amount* is significantly associated with ROA changes (columns 3 and 4). These findings suggest that synergy disclosers experience even larger post-acquisition profitability declines than non-disclosers, against a baseline of generally negative ROA changes across the full sample.[18]

4.3.4 Long-run stock returns

Panel B of Table 8 examines characteristics-adjusted log acquirer returns (Bessembinder et al., 2019) over 12- and 24-month horizons following deal completion, estimated using the same baseline model and fixed effects structure as the previous post-acquisition outcome analyses. At the 12-month horizon, none of the synergy guidance measures is significantly associated with long-run returns. At the 24-month horizon, larger numeric synergy estimates are associated with significantly lower returns, with a coefficient of −4.237 on *Amount*,

[18] Table A5 reports a parallel cost-side test using post-acquisition restructuring costs in years 2–3 after completion (that is, after excluding the first post-completion year to account for one-time integration charges). The pattern is consistent with the operating performance evidence.

implying a −6.47 percentage-point change at one standard deviation of disclosed synergies, while *Text Index* is insignificant. The absence of 12-month associations is unsurprising given the well-documented difficulty of attributing long-run returns to discrete corporate events. The 24-month result for *Amount* is consistent with the market repricing acquirers as negative news about disclosed synergies arrives in the form of subsequent goodwill impairments, downward revisions of synergies and operating performance declines documented above, though we caution against overinterpreting a single horizon-specific finding.

Taken together, the four outcomes yield consistent inferences. While synergy guidance is viewed favorably by investors at announcement, the disclosed expectations are, on average, not borne out. Disclosers experience higher impairment rates and larger ROA declines than non-disclosers. Larger numeric estimates predict more frequent impairments, more negative synergy revisions, and lower long-run returns. This pattern is consistent with the wedge between announcement-period pricing and long-run realization described in Section 2, and motivates the cross-sectional analysis in the next section.

4.4 When is synergy guidance more credible?

The main results establish that synergy guidance is, on average, associated with higher goodwill impairment likelihood and larger impairment magnitudes. As discussed in Section 2, however, the association between disclosed expectations and realized outcomes should vary with factors that affect strategic bias (b_i) and forecasting noise (η_i). We explore this heterogeneity through cross-sectional interaction tests, using goodwill impairments as the outcome throughout. We examine four moderating variables, namely acquirer numeric disclosure experience (*Acq. Num Exp.*), acquirer textual disclosure experience (*Acq. Text Exp.*), acquirer accounting quality (*Acq. Acc. Quality*), and target accounting quality (*Tgt. Acc. Quality*). Prior synergy disclosure experience proxies for the acquirer's ability to produce credible

forward-looking claims, while accounting quality proxies for the richness of the information environment available for due diligence and synergy forecasting. Table 9 reports the results across four panels. Panels A and B use the goodwill impairment indicator as the dependent variable, while Panels C and D use impairment magnitude. The textual disclosure measures are reported in Panels A and C and the numeric disclosure measures are reported in Panels B and D.

4.4.1 Disclosure experience

Columns 1 and 2 of each panel examine whether prior synergy disclosure experience attenuates the positive association between synergy guidance and impairment outcomes. For impairment likelihood, acquirer numeric disclosure experience significantly attenuates the association for both textual and numeric guidance (Panels A and B, column 1). Prior textual disclosure experience does not significantly attenuate impairment likelihood among numeric disclosers (Panel B, column 2), although it attenuates the association at the 10% level for textual guidance (Panel A, column 2). For impairment magnitude, both numeric and textual disclosure experience significantly attenuate the association with textual synergy guidance (Panel C, columns 1 and 2). For numeric guidance, acquirer numeric disclosure experience also significantly attenuates the impairment magnitude (Panel D, column 1), while prior textual disclosure experience is not significant in this panel (Panel D, column 2). These results suggest that prior synergy forecasting experience, particularly with quantified estimates, improves the credibility of forward-looking claims, consistent with learning reducing forecasting noise η_i over time.

4.4.2 Accounting quality

Columns 3 and 4 of each panel examine whether the information environment shapes the credibility of synergy guidance. For impairment likelihood, acquirer accounting quality significantly attenuates the association for both textual and numeric guidance (Panels A and B,

column 3), while target accounting quality does not load significantly in either panel. For impairment magnitude among textual disclosers, neither acquirer nor target accounting quality produces a significant interaction (Panel C, columns 3 and 4), suggesting that accounting quality primarily affects whether an impairment occurs rather than its size when it does. For numeric guidance on the intensive margin, target accounting quality significantly attenuates both impairment likelihood (Panel B, column 5) and impairment magnitude (Panel D, column 5). These results map onto the two sources of disclosure error in our framework, with acquirer accounting quality constraining strategic bias b_i at the disclosure decision and target accounting quality reducing forecasting noise η_i for quantified estimates.

4.4.3 Exogenous shock to disclosure credibility

In our final set of tests, we examine whether external accountant and adviser review shapes the credibility of numeric synergy guidance. The U.K. Takeover Panel's 2013 implementation of Rule 28 requires that quantified financial benefits statements in U.K.-target deals be reported on by independent accountants and financial advisers as to their proper compilation and underlying assumptions, providing external scrutiny that is absent in the U.S. setting (The Takeover Panel, 2013). Because Rule 28 applies only to deals where the acquirer offers its own shares as consideration, we compare stock-financed acquisitions of U.K. public targets (treated) to stock-financed acquisitions of U.S. public targets (control), with entropy balancing reweighting U.S. control deals to match U.K. treated deals on observable characteristics. The resulting matched sample contains 1,391 deals. We estimate a triple-difference specification in which $UK \times Post \times I(Numeric)$ captures the differential post-Rule 28 effect for U.K.-target numeric disclosers relative to U.S.-target numeric disclosers, after controlling separately for U.K.-target effects, post-Rule 28 effects, and numeric-disclosure effects.[19]

[19]For U.K.-target deals, we also estimate the cross-sectional association between synergy guidance and the likelihood of future goodwill impairment. The results are directionally consistent with our U.S. findings and are reported in Table A6, although the coefficients do not reach conventional significance levels once we control for the acquirer's pre-deal goodwill, likely reflecting lower statistical power in the smaller U.K. subsample.

Table 10 reports the results across eight specifications. At the three-year horizon, the *UK* × *Post* × *I(Numeric)* coefficient ranges from −0.386 to −0.469, with three of the four specifications significant at the 5% level. At the five-year horizon, the coefficient ranges from −0.459 to −0.544 and is significant at the 5% level in all four specifications. The results are robust to excluding announcements made in 2013 prior to the Rule 28 implementation date (columns 3 and 7) and to the inclusion of target industry fixed effects (columns 4 and 8). The triple-difference coefficient represents a large and economically meaningful attenuation of the impairment-disclosure association for U.K.-target numeric disclosers in the post-Rule 28 period. This pattern is consistent with the verification requirement constraining strategic bias b_i in quantified guidance by raising the cost of unsupported claims, and supports the view that mandated external review can meaningfully improve the credibility of forward-looking synergy disclosures.

Taken together, these heterogeneity analyses suggest that the average post-acquisition underperformance of synergy disclosers is not uniform. Acquirers with greater forecasting experience, those operating in richer information environments, and those subject to external verification of quantified guidance produce synergy guidance that is more closely aligned with realized outcomes. These patterns map onto the two sources of disclosure error in the conceptual framework of Section 2. Prior synergy disclosure experience and target accounting quality reduce forecasting noise η_i, with experience reflecting learning from past acquisitions and target accounting quality reflecting a richer information environment for forecasting expected synergies. Acquirer accounting quality and Rule 28 verification constrain strategic bias b_i, with acquirer accounting quality reflecting stronger internal governance over forward-looking disclosure and Rule 28 imposing independent accountant and adviser sign-off that raises the cost of unsupported claims. When η_i is lower and b_i is more constrained, the wedge between announced expectations and realized performance narrows, consistent with what we observe in the data.

5 Conclusion

This study examines the credibility and consequences of synergy guidance in 12,176 U.S. M&A transactions announced between 2004 and 2021. Using corporate press releases and conference call transcripts, we identify and extract qualitative and quantitative statements about expected synergies and analyze their determinants, market reactions, and post-acquisition realizations. Synergy guidance is systematically associated with acquirer, deal, and environmental characteristics, including relative deal value, form of consideration, analyst coverage, institutional ownership, forecasting experience, and litigation risk. Investors respond positively to synergy guidance at announcement, especially when it is more detailed or includes numeric estimates. However, post-acquisition outcomes suggest that these expectations are often overoptimistic. Synergy disclosers experience more frequent and larger goodwill impairments than non-disclosers, managers themselves subsequently revise disclosed estimates downward, and disclosers also exhibit larger declines in post-merger return on assets. Larger numeric estimates additionally predict significantly lower long-run stock returns. Cross-sectional tests show that the impairment-guidance association is attenuated when acquirers have greater synergy forecasting experience and when the target information environment is richer, consistent with learning and information quality constraining both forecasting noise and strategic bias. Evidence from the 2013 U.K. Takeover Panel Rule 28 reform further indicates that mandated external accountant and adviser review reduces overoptimism in quantified synergy guidance.

Our findings highlight a disconnect between the market's favorable announcement-period reaction to synergy guidance and its limited long-run realization. Although synergy guidance can help communicate the anticipated financial benefits of an acquisition, it may also reflect managerial miscalibration or be used strategically to justify the deal valuation (Ben-David et al., 2013). A key limitation of our study is the inherent endogeneity of voluntary disclosure

(Healy and Palepu, 2001), which limits our ability to draw causal inferences about the effects of synergy guidance on market reactions and post-acquisition outcomes. The cross-sectional patterns we document and our Rule 28 evidence are nonetheless consistent with the channels described in our framework.

While our results do not suggest that firms should avoid acquisitions, they caution against overestimating the long-term payoffs from M&A activity, consistent with the broader pattern in Moeller et al. (2005) and Malmendier et al. (2018). For investors and other market participants, the findings underscore the need for skepticism toward forward-looking synergy claims, particularly when such disclosures lack formal verification or mechanisms for ex post accountability.

For standard setters and securities regulators, our findings speak to ongoing policy debates about the adequacy of M&A disclosure requirements. The IASB's 2024 Exposure Draft proposes standardized quantitative synergy disclosure under IFRS 3, together with ex post reporting on subsequent realization for strategic business combinations, motivated by investor concerns about insufficient information to assess post-acquisition performance (International Accounting Standards Board, 2024). The U.K. Takeover Panel's Rule 28 has, since 2013, required quantified financial benefits statements to be reported on by independent accountants and financial advisers at the time of announcement (The Takeover Panel, 2013), although Rule 28 does not mandate ex post reporting against realized outcomes. Our findings are broadly supportive of three policy levers represented across these two regimes, namely standardization, independent verification, and ex post accountability. The positive market reaction to numeric synergy estimates and the attenuation of the impairment-guidance association in richer information environments suggest that standardization could improve credibility. Our Rule 28 evidence indicates that independent verification meaningfully reduces overoptimism in quantified guidance. Our cross-sectional evidence on forecasting experience further suggests that disclosure mandates may be insufficient when acquirers lack

the forecasting infrastructure to produce reliable estimates, supporting the case for ex post realization reporting as a complementary mechanism. The three levers may be more effective in combination than any one alone, since standardization without verification risks codifying optimistic estimates, verification at announcement does not by itself impose realization discipline, and ex post reporting without standardization limits comparability across firms and over time.

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A Construction of Synergy Measures

A.1 FinBERT

FinBERT is a transformer-based language model trained on both general-domain and financial texts (e.g., annual reports and conference call transcripts). It is designed for multi-class classification and is fine-tuned using supervised learning on labeled data. Task complexity dictates training data needs—the more complex the task, the larger the required dataset.

In implementing FinBERT, we adhere to established best practices in the field (Huang et al., 2023). Our training data consists of actual paragraphs extracted from M&A conference call transcripts. The training data contains 2,903 paragraphs, among which 215 paragraphs contain information related to synergies.

To fine-tune the pre-trained FinBERT model, we split the training dataset into three segments: approximately 81% for training (2,350 paragraphs), 9% for validation (262 paragraphs), and 10% for testing (291 paragraphs). The training set is used to adjust the model's parameters, while the validation set helps optimize hyperparameters and monitor performance. The testing set evaluates the model's overall performance.

In a manual evaluation, we found accuracy—defined as the proportion of correctly classified paragraphs in the test sample—of 96.91%.

We calculate a document-level score based on FinBERT's classifications which is the ratio of synergy-related paragraphs to the total number of paragraphs in each conference transcript.

A.1.1 Example of paragraphs classified as synergy-related:

Quidel Corp–Ortho Clinical Diagnostics M&A call (Dec 23, 2021).

> "Yes, we'll run those to ground over time, but we have not modeled any of those things I just discussed. The $90 million in cost synergies are fairly straightforward, conservative, and imminently actionable within the first 12 months."

U.S. Bancorp–MUFG Union Bank call (Sep 21, 2021).

> "We are confident in the ability to achieve the overall cost savings on the timeline discussed, with opportunities across business operations, systems and technology integration, and back-office redundancies and support functions."

A.2 ChatGPT

Following de Kok (2025), we apply zero-shot prompting of GPT-4o to extract synergy-related information from M&A conference call transcripts and press releases, which leverage the model's general language capabilities without task-specific fine-tuning.

A.2.1 Extraction of Textual Synergy-Related Information

We first capture textual evidence. The prompt below instructs the model to return the exact paragraphs discussing synergies in the context of the merger, including those that help classify synergy type. We supply a definition of synergy.

```
### Task:
You are provided with an excerpt from a company's M&A conference call or press release.
  Extract the paragraphs where conference participants:
1. Mention numeric estimates of expected synergies.
2. Provide information helpful in classifying the type of synergy.

### Definition of Synergy:
Synergy refers to the combined efficiency, effectiveness, and performance that the
  merged entities can achieve together, which is greater than the sum of their
  individual parts.

### Important Notes:
- These references are **rare**. It is ok to return an empty list.
- Do **not** include general discussions about synergies unless they contribute to
  identifying a specific type of synergy.
'''
```

To mitigate precision loss on long inputs, we split documents into contiguous ∼2,000-token chunks that preserve full executive turns and intact analyst Q&A pairs. The outputs are subsequently concatenated at the conference call or press release level.

A.2.2 Extraction of Synergy Estimates

For monetary disclosures, we instruct the model to extract all numeric synergy estimates relevant to the focal deal and to return a structured JSON object containing both the total and the component-level (detailed) estimates. We encode decision rules to select the total when explicitly stated, aggregate components when a total is not provided, and exclude ambiguous or non-synergy figures. We constrain the output to typed fields (amount, unit, currency, synergy type, frequency) to facilitate downstream normalization and analysis.

```
### Task:
You are provided with an excerpt from a company's M&A conference call or press release.

Extract all the **numeric estimates of expected synergies** from the provided text
  regarding the current deal.

Moreover identify the total estimate, following these rules:
1. **Single Estimate Available:** If only **one** monetary synergy estimate is provided,
   consider that as the total estimate.
2. **Multiple Estimates with a Total Estimate:** If multiple synergy estimates are
  mentioned and **one represents the total synergy**, report that total estimate.
3. **Multiple Estimates Without a Total Estimate:** If multiple **distinct** synergy
  estimates exist and no total estimate is provided, aggregate by **summing or averaging
  ** the available estimates depending on the context.
4. **Exclude Unclear or Unallocated Figures:**
   - Ignore numbers **not explicitly identified as synergies**.
   - If a figure's role is ambiguous, exclude it unless **directly stated** as a synergy
   estimate.

### Response Format:
```

```
Return the extracted information in the following structured JSON format:
```json
{
  "total_synergy_estimate": [{"estimate": "<numeric_value>",
      "unit": "<million/billion/percentage/etc.>", "currency": "<currency>",
      "synergy_type": "<cost-saving/revenue-enhancing/both>",
      "frequency": "<one-time/quarterly/annually/etc.>" }],
  "detailed_synergy_estimates": [{"estimate": "<numeric_value>",
      "unit": "<million/billion/percentage/etc.>", "currency": "<currency>",
      "synergy_type": "<cost-saving/revenue-enhancing/both>",
      "frequency": "<one-time/quarterly/annually/etc.>"}]
}
```
- If a field is **not mentioned** or **unclear**, leave it as an empty string (`""`).
- If **no monetary synergy estimate is provided** or if the available estimates are **
  unclear or ambiguous**, return an empty JSON object `{}`.

Field Definitions:
- **"estimate"**: The point estimate which corresponds to a numeric value. If an
  interval is provided, report the mean between the minimum and maximum values.
- **"unit"**: The unit of the estimate (e.g., "million", "billion", "percentage").
- **"currency"**: Specify the currency (e.g., `"USD"`, `"EUR"`, `"GBP"`) for monetary
  values.
- **"synergy_type"**: Categorize as:
  - `"cost-saving"` (if related to expense reductions).
  - `"revenue-enhancing"` (if related to increased earnings).
  - `"both"` (if it includes both types).
- **"frequency"**: Indicate whether the synergy is:
  - `"One-time"` for non-recurring synergies.
  - A recurring time frame (e.g., `"quarterly"`, `"annually"`, `"every 2 years"`) for
  run-rate synergies.
```

After extraction we standardize units, harmonize currencies, and map frequency descriptors (run-rate, annual, one-time).

Following de Kok (2025), we draw a random sample of 100 conference call transcripts and manually validate GPT-4o's monetary extraction. For each transcript, a manual annotator records the ground-truth synergy amount, unit, currency, frequency, and synergy type. An output is classified as a true positive only if GPT-4o's extraction matches the manual annotation on *all* five fields: amount, unit, currency, frequency, and synergy type. Misclassification of any single field counts as a false negative. True negatives are transcripts in which the manual annotator identifies no numeric synergy disclosure and GPT-4o returns an empty extraction.

Metric	Formula	Definition	Result
Accuracy	$\frac{\text{TP+TN}}{\text{Total Cases}}$	Measures the proportion of correct predictions (both synergy disclosures correctly identified as synergies and non-synergy disclosures correctly identified as non-synergies) out of the total number of documents analyzed.	88%
Precision	$\frac{\text{TP}}{\text{TP+FP}}$	Measures how many of the cases identified by the model as synergy disclosures are actually correct. In other words, it shows the accuracy of the model's positive predictions (cases where the model predicted a synergy disclosure).	100%
Recall	$\frac{\text{TP}}{\text{TP+FN}}$	Measures how many of the actual synergy disclosures were correctly identified by the model. This shows the model's ability to capture all true synergy disclosures in the dataset.	80%

Counts in the manual sample: TP = 47, TN = 41, FP = 0, FN = 12.

A.2.3 Example of Extracting Synergy Estimates

Entegris Inc. to acquire CMC Materials Inc. call (Dec 15, 2021)

Input:

> "The combination is expected to generate annualized cost savings of approximately $75 million within 12 to 18 months following the close of the transaction... you talked about capital avoidance of about $40 million. Can you walk us through in what areas that may come from?... Yes. No, those would be onetime in nature."

Output:


```
{
  "total_synergy_estimate":     [{ "estimate": "75", "unit": "million", "currency": "USD",
                                   "synergy_type": "cost-saving", "frequency": "annually"
    }],
  "detailed_synergy_estimates": [{ "estimate": "75", "unit": "million", "currency": "USD",
                                   "synergy_type": "cost-saving", "frequency": "annually"
    },
                                  { "estimate": "40", "unit": "million", "currency": "USD",
                                   "synergy_type": "cost-saving", "frequency": "one-time"
    }]
}
```

B Variable Definitions

Disclosure Measures	
I(Textual)	An indicator variable set equal to one if *Text Index* for an M&A deal is non-missing, and zero otherwise.
Text Index	A continuous synergy-related textual disclosure score for each M&A deal constructed using the following steps. First, we employ FinBERT and GPT-4o separately to identify the number of synergy-related paragraphs contained in M&A conference call transcripts and deal announcement press releases. The conference call transcripts are sourced from Refinitiv and FactSet, and the press releases are collected from 8-Ks filed on SEC EDGAR. Second, we scale the number of synergy-related paragraphs by the total number of paragraphs in each source document. Third, we standardize the FinBERT and GPT-4o document-level scores separately using a z-score transformation (i.e., subtracting the cross-sectional mean and dividing by the cross-sectional standard deviation), where deals without detected synergy paragraphs contribute a value of zero to the standardization. Finally, we average these standardized values across FinBERT and GPT-4o for M&A deals with non-missing synergy-disclosure measures from both methods to compute *Text Index*, which captures the deal-specific intensity of textual synergy disclosure. See Appendix A for further details.
I(Numeric)	An indicator variable set equal to one if *Amount* is non-missing, and zero otherwise.
Amount	The disclosed dollar value of expected synergies, scaled by the sum of total deal value and acquirer market value, expressed in percentage terms. We employ GPT-4o to assess the existence of a disclosed numeric estimate of synergies (in U.S. dollars) in either the M&A conference call transcript or deal announcement press release, and if available, extract the value. The conference call transcripts are sourced from Refinitiv and FactSet, and the press releases are collected from 8-Ks filed on SEC EDGAR. See Appendix A for further details.
Outcome Variables	
Acq. CAR$[-3, +3]$	The cumulative abnormal return (CAR) of the acquirer over the [-3, +3] window around the deal announcement date. Abnormal returns are computed as the residuals from a market model estimated over the [-252, -42] trading-day window prior to the announcement date. Source: CRSP.
I(GwImp)	An indicator variable set equal to one if a goodwill impairment (`gdwlip`) occurs in any of the three years after the deal completion. Source: Compustat.

GwImp/Assets	Goodwill impairment `gdwlip` scaled by the acquirer's total assets (`at`) in the baseline year, defined as the fiscal year prior to the deal completion. The variable is averaged over the three fiscal years following deal completion and expressed as a percentage. Source: Compustat.
Char-adj Log(Acq R)	The cumulative excess log returns of the acquirer after deal completion relative to the characteristics-based benchmark (C14) developed by Bessembinder et al. (2019). In each post-completion month t, we compute $xr_t = r_t^{\text{acq}} - \hat{r}_t^{C14}$, where r_t^{acq} is the acquirer's realized log return and $\hat{r}_t^{C14}$ is the C14 predicted log return, and then cumulate these monthly excess log returns over the post-deal horizon as $\sum_{t=1}^{H} xr_t$. The C14 predicted log returns are obtained from market-wide cross-sectional regressions of returns on fourteen lagged firm characteristics. Source: Compustat/CRSP
ΔROA	The change in the acquirer return on assets in the 3 years after the deal completion. The ROA is calculated by dividing the sum of NOPAT and the tax-adjusted goodwill amortization expense (`gdwlam`), if applicable, by book value of total assets (`at`). NOPAT is calculated as income before extraordinary items (`ib`) minus preferred dividends (`dvp`), minus tax-adjusted special items (`spi`), plus tax-adjusted interest expense (`xint`). Source: Compustat.
I(Underperform)	An indicator variable set equal to one if management discusses below-expectation synergy realization on at least one post-completion conference call within three years after deal completion, and zero otherwise.
I(Downward Revision)	An indicator variable equal to one if *Synergy Revision* is negative, and zero otherwise.
Synergy Revision	Average revision across all post-completion synergy estimates disclosed over the three-year post-completion period, relative to the announcement estimate: $(1/N)\sum_{p=1}^{N}(E_p - E_a)/E_a$, where E_p denotes a post-completion estimate, E_a denotes the announcement estimate, and N is the number of post-completion estimates.
Synergy Forecast Error	Average revision across all post-completion synergy estimates disclosed over the three-year post-completion period, relative to the sum of total deal value and acquirer market value: $(1/N)\sum_{p=1}^{N}(E_p - E_a)/(Deal\ Value + Acq.\ MV)$, where E_p denotes a post-completion estimate, E_a denotes the announcement estimate, N is the number of post-completion estimates, $Deal\ Value$ denotes total deal value, and $Acq.\ MV$ denotes acquirer market value.

Control Variables

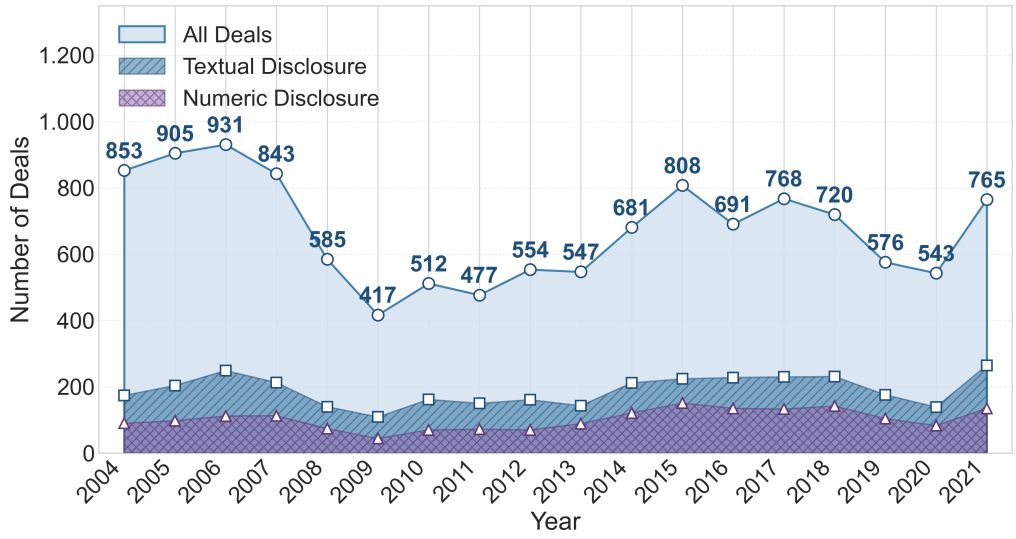
Public Target	An indicator variable set equal to one if the target is a public firm, and zero otherwise.
Relative Value	The ratio of the deal value to the acquirer's market value of equity. The deal value is from SDC Platinum (LSEG) and market value of equity is computed as the share price from CRSP two months before the deal announcement date multiplied by the number of outstanding shares, also from CRSP.

Stock Consid.	The proportion of the transaction value paid in stock. Source: SDC Platinum (LSEG).
Acq. MV	The acquirer's market value of equity computed as the share price from CRSP two months before the deal announcement date multiplied by the number of outstanding shares. Source: CRSP.
Acq. BM	The acquirer's book-to-market ratio of equity in the fiscal year prior to the deal announcement, calculated as book value of equity (`ceq`) divided by market value of equity. Source: Compustat/CRSP.
Acq. Leverage	The leverage of the acquirer in the fiscal year prior to the deal announcement, calculated as book value of total debt (`lt`) divided by book value of total assets (`at`). Source: Compustat.
Acq. R&D Cap.	The acquirer's R&D capital in the fiscal year prior to the deal announcement, scaled by total assets (`at`). R&D capital is estimated by capitalizing annual R&D expense (`xrd`) and amortizing it using the straight-line method over five years, following Chan et al. (2001). Source: Compustat.
Acq. Return Vol.	The acquirer's idiosyncratic volatility, measured as the standard deviation of daily abnormal returns over the [-252, -42] trading-day window relative to the deal announcement date. Daily abnormal returns are the residuals from a CAPM market model estimated over the same window. Source: CRSP.
Acq. Vert. Integ.	The acquirer's firm-level vertical integration score from Frésard et al. (2020). It measures the extent to which the firm's product offerings (from its 10-K business description) span vertically related product markets. A high score means the firm's product vocabulary maps to BEA commodity pairs that are vertically linked (supplier–purchaser). Source: Hoberg-Phillips data.
Acq. Firm Scope	The acquirer's text-based firm scope measure from Hoberg and Phillips (2025). It measures the number of distinct 'Doc2Vec industries' to which the firm's business description is materially similar. A higher value indicates a broader product-market scope and a lower value indicates a more focused scope. Source: Hoberg-Phillips data.
Log(Acq. HHI)	The natural logarithm of one plus the Herfindahl-Hirschman Index (HHI) of the acquirer industry in the fiscal year prior to the deal announcement, computed using the Fama-French 48 industry classification. We compute the HHI as the sum of squared sales shares within each industry. Source: Compustat.
Log(Acq. Goodwill)	The natural logarithm of one plus the acquirer's goodwill (`gdwl`) in the fiscal year prior to the deal announcement. Missing values are treated as zero. Source: Compustat.

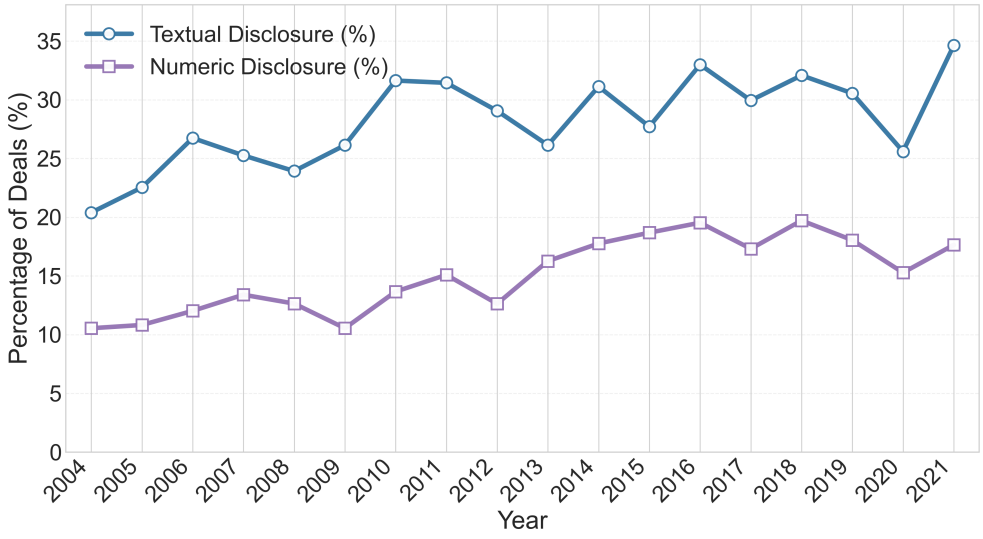
Environmental Determinants & Other Variables

Log(Acq. # Analysts)	The natural logarithm of one plus the number of equity research analysts in I/B/E/S covering the acquirer in the fiscal year prior to the deal announcement. Missing values are treated as zero. Source: I/B/E/S.

Acq. Inst. Own.	The percentage of the acquirer's shares held by institutional investors, computed as institutional holdings from 13F filings divided by total shares outstanding. The LSEG Institutional (13F) dataset provides this percentage directly. Missing values are treated as zero. Source: LSEG Institutional (13F) holdings.
Log(Acq. # Guidance)	The natural logarithm of one plus the total number of management guidance provided by the acquirer in the fiscal year prior to the deal announcement. We count all forecasted items (EPS, revenue, and other metrics) issued during that fiscal year. Missing values are treated as zero. Source: I/B/E/S.
Acq. Text Exp.	The number of past M&A announcements by the acquirer in the 5 years prior to the current deal's announcement in which the acquirer provided textual synergy disclosure. Source: SDC Platinum (LSEG).
Acq. Num. Exp.	The number of past M&A announcements by the acquirer in the 5 years prior to the current deal's announcement in which the acquirer provided numeric synergy disclosure. Source: SDC Platinum (LSEG).
SameInd	An indicator variable set equal to one if the acquirer and target operate in the same 2-digit SIC industry, and zero otherwise. Source: Compustat.
Vertical Relatedness	An indicator variable set equal to one if the acquirer and target operate in vertically related industries, defined as having a Vertical Requirement Coefficient (VRC) of at least 0.01, and zero otherwise. The VRC, computed from the BEA Input–Output tables following Harford et al. (2025), quantifies the extent of vertical linkages between the two industries. Source: BEA Input–Output tables.
Acq. Litig. Risk	An indicator variable set equal to one if the acquirer operates in a high-litigation industry, defined by SIC codes: 2833–2836, 3570–3577, 3600–3674, 5200–5961, or 7370–7374, following Francis et al. (1994), and zero otherwise. Source: Compustat.
Tgt. Litig. Risk	An indicator variable set equal to one if the target operates in a high-litigation industry, defined by SIC codes: 2833–2836, 3570–3577, 3600–3674, 5200–5961, or 7370–7374, following Francis et al. (1994), and zero otherwise. Source: Compustat.
Acq. Acc. Quality	Acquirer Accounting Quality from McNichols and Stubben (2015). The measure equals the negative standard deviation of residuals from a cross-sectional regression estimated within the acquirer's two-digit SIC industry and year: $CF_t = a + b_1 CF_{t-1} + b_2 ACC_{t-1} + e_t$, where CF is cash flow from operations and ACC is accruals. Higher values indicate better industry-level accrual quality. Source: Compustat.
Tgt. Acc. Quality	Target Accounting Quality from McNichols and Stubben (2015). The measure equals the negative standard deviation of residuals from a cross-sectional regression estimated within the target's two-digit SIC industry and year: $CF_t = a + b_1 CF_{t-1} + b_2 ACC_{t-1} + e_t$, where CF is cash flow from operations and ACC is accruals. Higher values indicate better industry-level accrual quality. Source: Compustat.

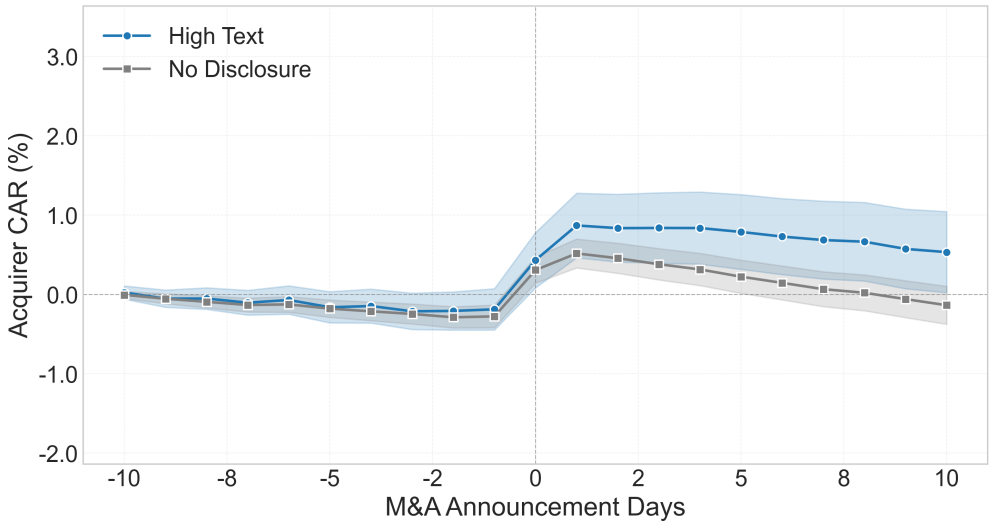


(a) Annual Deal Volume

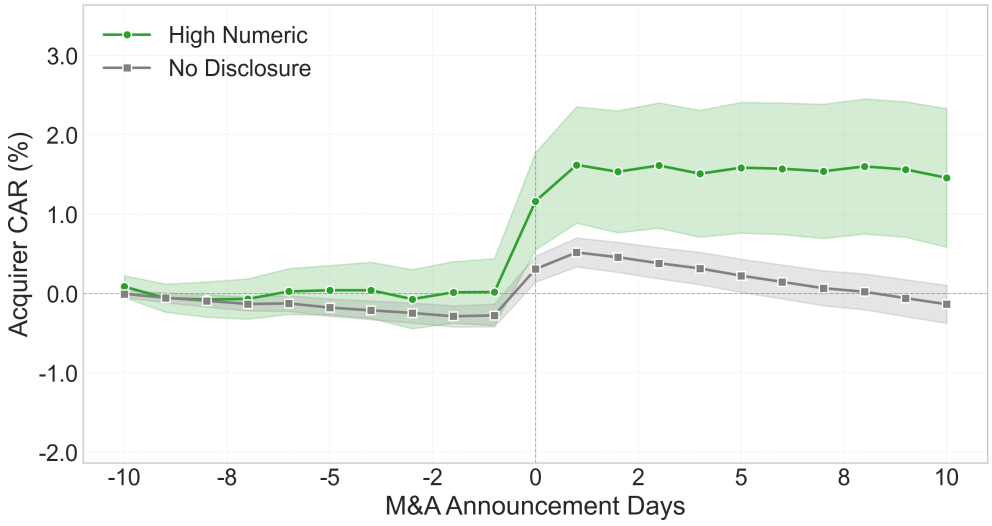


(b) Synergy Disclosure Rates

Figure 1: Synergy disclosure and deal volume by year. The top panel plots the annual number of M&A announcements between U.S. public acquirers and U.S. targets for 2004–2021. The panel shows three bars per year: total announcements, deals with textual synergy disclosure, and deals with numeric synergy disclosure. The bottom panel plots two time series of disclosure rates: (i) *Textual disclosure rate* – the share of announcements with any narrative discussion of expected synergies in the press release or the conference call transcript; and (ii) *Numeric disclosure rate* – the share of announcements that include an estimate of expected synergies. For both rates, the denominator is all announcements in the sample; deals without a press release or transcript are treated as non-disclosers. See Appendix B for variable definitions.

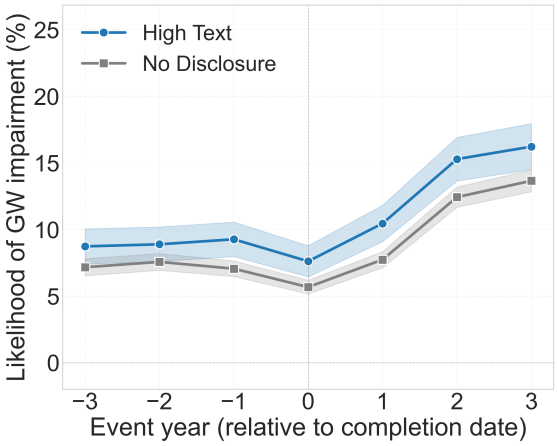


(a) Textual Disclosure

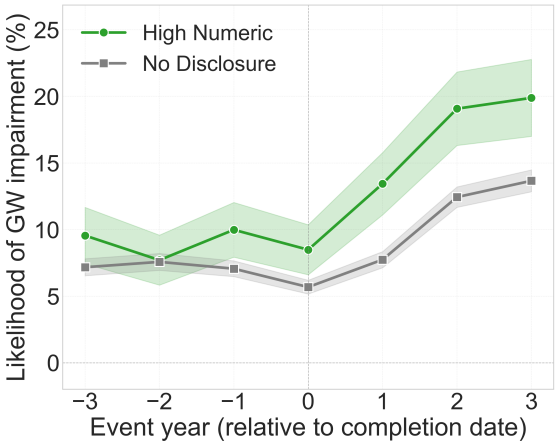


(b) Numeric Disclosure

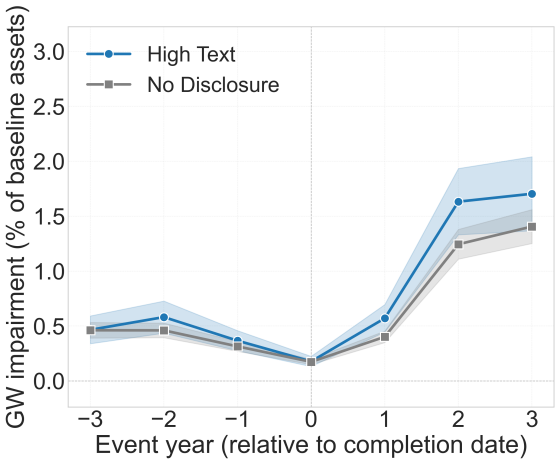
Figure 2: Announcement-period cumulative abnormal returns by synergy disclosure. Each panel plots average cumulative abnormal returns (CAR, %) by trading day t in $[-10, +10]$ relative to the M&A announcement date ($t = 0$). Within each panel, the two lines compare the CAR of high-disclosure deals and no-disclosure deals. Panel (a) defines *High Text* as deals with *Text Index* above the median; the baseline *No Disclosure* is defined as deals with *I(Textual)* $= 0$ and *I(Numeric)* $= 0$. Panel (b) defines *High Numeric* as deals with *Amount* above the median; the baseline is *No Disclosure*. Abnormal returns are estimated using a market model over the $[-252, -42]$ trading-day window prior to announcement. Shaded bands denote 95% confidence intervals. See Appendix B for variable definitions.



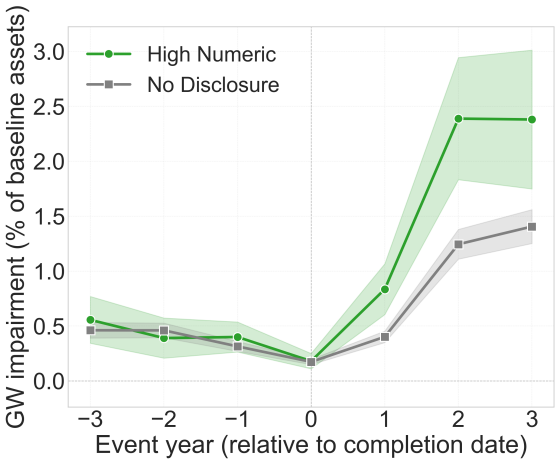
(a) Textual Disclosure — Impairment Likelihood



(b) Numeric Disclosure — Impairment Likelihood



(c) Textual Disclosure — Impairment Magnitude



(d) Numeric Disclosure — Impairment Magnitude

Figure 3: Fundamental changes around the completion (effective) date. Each panel plots the mean outcome by event year t in $[-3, +3]$ relative to the deal completion (effective) date ($t = 0$). Panels (a) and (c) compare deals with *High Text* to *No Disclosure*, where *High Text* is defined as *Text Index* above the median among deals with non-missing *Text Index* and *No Disclosure* is defined as deals with *I(Textual)* $= 0$ and *I(Numeric)* $= 0$. Panels (b) and (d) compare deals with *High Numeric* to *No Disclosure*, where *High Numeric* is defined as *Amount* above the median among deals with non-missing *Amount*. The top row outcome is the likelihood of goodwill impairment (%), and the bottom row outcome is goodwill impairment scaled by total assets in the baseline year. The baseline year is the fiscal year immediately preceding the deal completion date. Shaded bands denote 95% confidence intervals. See Appendix B for variable definitions.

Table 1: Sample Construction and Industry Composition

Panel A: Sample Construction

	Full	CC	PR
US-to-US M&A with Public Acquirer (2004-2021)	41,331	8,229	9,806
Public Acquirer with CRSP/Compustat match	28,956	7,637	9,419
Available Aquirer industry data	28,802	7,588	9,375
Available deal-level data (deal value & consideration type)	12,176	4,855	6,162

Panel B: Acquirer Industry Distribution

Industry	N	%
Business Services	1,854	15.23
Other Financials	1,574	12.93
Banking	1,450	11.91
Pharmaceuticals	545	4.48
Electronic Comp	536	4.40
Oil & Gas	523	4.30
Computers	522	4.29
Telecommunications	379	3.11
Medical Equipment	350	2.87
Wholesale	334	2.74
Healthcare	316	2.60
Machinery	287	2.36
Retail	286	2.35
Lab Equipment	271	2.23
Other	257	2.11

Panel C: Target Industry Distribution

Industry	N	%
Business Services	2,720	22.34
Banking	1,356	11.14
Real Estate	706	5.80
Oil & Gas	564	4.63
Pharmaceuticals	508	4.17
Electronic Comp	501	4.11
Other Financials	482	3.96
Healthcare	416	3.42
Telecommunications	379	3.11
Restaurants & Hotels	372	3.06
Medical Equipment	362	2.97
Wholesale	319	2.62
Retail	297	2.44
Computers	257	2.11
Transportation	232	1.91

The table reports the sample construction and industry composition. Panel A shows the filters applied to SDC Platinum (LSEG) deals over 2004–2021. We consider all M&A deals with public U.S. acquirers and public or private U.S. targets that are control-oriented transactions (bidder ownership $< 50\%$ pre-announcement and intended $> 50\%$ upon completion) classified by SDC as *Acquisition of Assets*, *Merger*, or *Acquisition of Majority Interest*. We then require deals to have CRSP and Compustat matches, with available industry codes, non-missing deal value, and consideration variables. At each step, we report the number of deals retained, the number of deals with associated Conference Call (CC) disclosures, and the number of deals with associated Press Release (PR) disclosures. Panels B and C report the top 15 acquirer and target Fama–French 48 industry distributions for the final sample.

Table 2: Descriptive Statistics

VARIABLES	(1) N	(2) Mean	(3) Std	(4) 25th	(5) Median	(6) 75th
Disclosure Measures						
I(Textual)	12,176	0.280	0.449	0.000	0.000	1.000
Text Index (I(Textual)=1)	3,410	4.406	2.732	2.206	3.880	6.128
I(Numeric)	12,176	0.151	0.358	0.000	0.000	0.000
Amount (%; I(Numeric)=1)	1,836	1.498	1.527	0.420	0.932	1.930
Amount - $ Mil	1,836	197.654	1,164.397	9.900	26.000	91.500
Outcome Variables						
Acq. CAR[-3, +3] (%)	12,176	0.867	8.451	-3.093	0.266	4.004
I(GwImp)	10,772	0.252	0.434	0.000	0.000	1.000
GwImp/Assets (%)	10,772	1.234	4.193	0.000	0.000	0.005
ΔROA	10,758	-0.035	0.237	-0.076	-0.010	0.026
Char-adj Log(Acq R) (%) 12 months	9,099	-6.896	50.868	-24.745	-1.723	18.465
Char-adj Log(Acq R) (%) 24 months	9,159	-11.584	77.948	-31.409	-0.253	26.076
I(Underperformance)	1,170	0.137	0.344	0.000	0.000	0.000
I(Downward Revision)	673	0.264	0.441	0.000	0.000	1.000
Synergy Revision	673	0.463	1.532	-0.033	0.000	0.333
Synergy Forecast Error	673	0.005	0.023	-0.000	0.000	0.004
Completed	12,176	0.914	0.281	1.000	1.000	1.000
Control Variables						
Public Target	12,176	0.196	0.397	0.000	0.000	0.000
Relative Value	12,176	0.289	0.650	0.023	0.076	0.237
Stock Consid. (%)	12,176	0.193	0.340	0.000	0.000	0.262
Acq. MV - $ Bil	12,176	9.316	38.705	0.332	1.172	3.978
Log(Acq. MV)	12,176	7.110	1.965	5.806	7.066	8.289
Acq. BM	12,176	0.483	0.372	0.235	0.412	0.656
Acq. Leverage	12,176	0.561	0.261	0.369	0.555	0.765
Acq. R&D Cap.	12,176	0.078	0.164	0.000	0.000	0.084
Acq. Return Vol.	12,176	0.023	0.015	0.013	0.019	0.027
Acq. Vert. Integ.	12,176	0.008	0.009	0.002	0.005	0.010
Acq. Firm Scope	12,176	10.513	6.391	6.000	10.000	14.000
Log(Acq. HHI)	12,176	0.075	0.056	0.043	0.056	0.087
Log(Acq. Goodwill)	12,176	3.867	2.932	0.519	4.120	6.140
Environmental Determinants & Other Variables						
Acq. # Analysts	12,176	9.820	9.155	3.000	7.000	14.000
Log(Acq. # Analysts)	12,176	1.989	0.967	1.386	2.079	2.708
Acq. Inst. Own.	10,867	0.663	0.309	0.457	0.749	0.905
Acq. # Guidance	12,176	8.764	10.879	0.000	4.000	14.000
Log(Acq. # Guidance)	12,176	1.526	1.332	0.000	1.609	2.708
Acq. Text Exp.	6,997	0.566	0.845	0.000	0.000	1.000
Acq. Num. Exp.	6,997	0.276	0.591	0.000	0.000	0.000
SameInd	12,176	0.549	0.498	0.000	1.000	1.000
Vertical Relatedness	12,176	0.386	0.487	0.000	0.000	1.000
Acq. Litig. Risk	12,176	0.270	0.444	0.000	0.000	1.000
Tgt. Litig. Risk	12,176	0.244	0.430	0.000	0.000	0.000
Acq. Acc. Quality	12,168	-0.367	0.939	-0.421	-0.201	-0.094
Tgt. Acc. Quality	12,118	-0.331	0.643	-0.468	-0.218	-0.089

The table reports the number of observations, mean, standard deviation, and selected percentiles (N, Mean, Std, 25th, Median, and 75th, respectively) of the variables used in the analyses. The sample comprises US-to-US public acquirer M&A deals over 2004–2021. All continuous variables, except long-term returns, are winsorized at the 1st and 99th percentiles. See Appendix B for variable definitions.

Table 3: Deal and Firm-level Determinants of Synergy Disclosure

	I(Textual)	*I(Numeric)*	*Text Index*	*Amount*
	(1)	(2)	(3)	(4)
Public Target	0.260***	0.230***	1.171***	0.169*
	(7.93)	(7.20)	(6.15)	(1.99)
Relative Value	0.084***	0.085***	0.306**	0.154***
	(3.36)	(4.00)	(2.42)	(3.05)
Stock Consid.	0.158***	0.147***	0.580***	0.490**
	(4.65)	(8.28)	(5.14)	(2.61)
Log(Acq. MV)	0.021*	0.017*	0.045	-0.171***
	(1.78)	(1.92)	(0.69)	(-3.14)
Acq. BM	-0.009	0.022	0.394**	0.446***
	(-0.34)	(1.56)	(2.33)	(3.85)
Acq. Leverage	0.036	0.070***	0.542**	0.854***
	(1.03)	(3.25)	(2.49)	(4.12)
Acq. R&D Cap.	0.050	-0.099**	-1.238**	1.465**
	(0.75)	(-2.10)	(-2.49)	(2.77)
Acq. Return Vol.	-1.968**	-0.941	5.949	31.751***
	(-2.08)	(-1.69)	(0.58)	(3.96)
Acq. Vert. Integ.	0.984	1.517*	18.587*	0.612
	(1.34)	(1.95)	(1.94)	(0.12)
Acq. Firm Scope	-0.001	0.000	-0.016	-0.002
	(-1.21)	(0.19)	(-1.43)	(-0.35)
Log(Acq. HHI)	-0.324	-0.393*	-0.015	-0.085
	(-0.98)	(-1.83)	(-0.01)	(-0.08)
Year FE	Y	Y	Y	Y
Acquirer Ind. FE	Y	Y	Y	Y
Target Ind. FE	Y	Y	Y	Y
Observations	12,176	12,176	3,410	1,835
Adj. R^2 (%)	15.6	19.3	12.1	28.1

This table reports coefficients and t-statistics (in parentheses) from regressions of synergy disclosure variables on various firm- and deal-level determinants, announcement-year fixed effects, acquirer industry fixed effects, and target industry fixed effects. Industry affiliations are identified using the FF-30 industry classifications. Columns (1)–(2) examine synergy disclosure on the extensive margin (*I(Textual)* and *I(Numeric)*) and columns (3)–(4) examine the intensive margin (*Text Index* and *Amount*), where the sample is restricted to either where *I(Textual)* equals one (in column (3)) or *I(Numeric)* equals one (in column (4)). The t-statistics are based on standard errors clustered by acquirer FF-30 industry. The symbols *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels (two-tailed), respectively. See Appendix B for variable definitions.

Table 4: Environmental Determinants of Synergy Disclosure

	I(Textual)				*I(Numeric)*			
	(1) Signalling	(2) Forecast	(3) Fit	(4) Litigation	(5) Signalling	(6) Forecast	(7) Fit	(8) Litigation
Log(Acq. # Analysts)	0.082***				0.035***			
	(6.54)				(3.70)			
Acq. Inst. Own.	0.177***				0.092***			
	(8.58)				(7.09)			
Log(Acq. # Guidance)		0.040***				0.021***		
		(3.59)				(3.88)		
Acq. Text Exp.		0.065***				-0.001		
		(3.13)				(-0.20)		
Acq. Num. Exp.		0.042***				0.118***		
		(3.10)				(6.58)		
SameInd			0.095**				0.101***	
			(2.55)				(3.67)	
Vertical Relatedness			0.039				0.060**	
			(0.91)				(2.18)	
Acq. Litig. Risk				-0.036**				-0.039***
				(-2.38)				(-3.13)
Tgt. Litig. Risk				-0.000				-0.026***
				(-0.01)				(-2.97)
Controls	Y	Y	Y	Y	Y	Y	Y	Y
Year FE	Y	Y	Y	Y	Y	Y	Y	Y
Acquirer Ind. FE	Y	Y	Y	Y	Y	Y	Y	Y
Target Ind. FE	Y	Y	Y	Y	Y	Y	Y	Y
Observations	10,867	6,995	12,176	12,176	10,867	6,995	12,176	12,176
Adj. R^2 (%)	17.3	22.3	15.9	15.6	19.8	25.4	19.8	19.5

This table reports coefficients and t-statistics (in parentheses) from regressions of synergy disclosure on environmental determinants. Columns (1)–(4) use *I(Textual)* as the dependent variable and columns (5)–(8) use *I(Numeric)*. Within each block, columns are organized by environmental determinants: Signalling (analyst coverage and institutional ownership), Forecast (management guidance and past disclosure experience), Fit (industry proximity and vertical relatedness), and Litigation (litigation exposure). All models include announcement-year, acquirer FF-30 industry, and target FF-30 industry fixed effects. The t-statistics are based on standard errors clustered by acquirer FF-30 industry. The symbols *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels (two-tailed), respectively. See Appendix B for variable definitions.

Table 5: Announcement Returns

	Acq. CAR[-3, +3]			
	(1)	(2)	(3)	(4)
I(Textual)	**0.770*****			
	(3.87)			
I(Numeric)		**0.729****		
		(2.18)		
Text Index			**0.192***	
			(2.01)	
Amount				**0.626*****
				(4.26)
Public Target	-2.416***	-2.383***	-3.259***	-3.603***
	(-9.28)	(-10.83)	(-7.41)	(-12.18)
Relative Value	1.779***	1.781***	0.740*	0.629
	(5.03)	(5.15)	(1.75)	(1.28)
Stock Consid.	-1.186**	-1.171*	-1.920***	-2.246*
	(-2.19)	(-2.00)	(-2.78)	(-2.01)
Log(Acq. MV)	-0.312***	-0.308***	-0.503**	-0.344
	(-3.17)	(-3.01)	(-2.10)	(-0.98)
Acq. BM	0.610	0.588	-0.235	-1.325*
	(1.57)	(1.53)	(-0.42)	(-1.72)
Acq. Leverage	1.168***	1.144***	2.298***	1.436
	(3.08)	(3.03)	(3.05)	(1.12)
Acq. R&D Cap.	-1.402**	-1.291**	-3.595***	-9.896***
	(-2.25)	(-2.09)	(-4.53)	(-4.67)
Acq. Return Vol.	7.938	7.109	9.684	57.255
	(0.58)	(0.51)	(0.30)	(1.66)
Acq. Vert. Integ.	23.831**	23.482**	14.527	42.700
	(2.48)	(2.39)	(0.56)	(1.42)
Acq. Firm Scope	-0.028*	-0.029*	0.003	-0.026
	(-1.90)	(-1.95)	(0.10)	(-0.64)
Log(Acq. HHI)	2.820	2.857	6.432	15.072**
	(0.97)	(0.97)	(1.68)	(2.09)
Year FE	Y	Y	Y	Y
Acquirer Ind. FE	Y	Y	Y	Y
Target Ind. FE	Y	Y	Y	Y
Observations	12,176	12,176	3,410	1,835
Adj. R^2 (%)	5.1	5.1	6.7	10.8

This table reports coefficients and t-statistics (in parentheses) from announcement-window regressions of acquirer cumulative abnormal returns. The dependent variable is the cumulative abnormal return over 7 days around the announcement date. Columns (1)–(2) examine synergy disclosure on the extensive margin (*I(Textual)* and *I(Numeric)*); columns (3)–(4) examine the intensive margin (*Text Index* and *Amount*). All models include announcement-year, acquirer FF-30 industry, and target FF-30 industry fixed effects. The t-statistics are based on standard errors clustered by acquirer FF-30 industry. The symbols *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels (two-tailed), respectively. See Appendix B for variable definitions.

Table 6: Post-Acquisition Goodwill Impairments

	I(GwImp)				*GwImp/Assets*			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
I(Textual)	**0.029****				**0.170****			
	(2.12)				**(2.15)**			
I(Numeric)		**0.029*****				**-0.030**		
		(3.08)				**(-0.25)**		
Text Index			**-0.004**				**-0.022**	
			(-1.54)				**(-0.78)**	
Amount				**0.032*****				**0.275****
				(3.48)				**(2.14)**
Public Target	0.000	0.001	0.003	0.012	0.215	0.263	0.123	-0.244
	(0.02)	(0.06)	(0.11)	(0.36)	(1.14)	(1.28)	(0.61)	(-0.88)
Relative Value	0.025	0.026*	0.071***	0.065***	0.782***	0.817***	1.527***	1.462***
	(1.62)	(1.73)	(5.45)	(6.25)	(4.38)	(4.26)	(5.32)	(4.50)
Stock Consid.	0.009	0.009	-0.002	0.001	0.395	0.426*	0.623*	0.919
	(0.40)	(0.41)	(-0.10)	(0.04)	(1.58)	(1.71)	(1.91)	(1.64)
Log(Acq. MV)	-0.019**	-0.018**	-0.014	-0.016*	-0.181***	-0.179***	-0.261***	-0.192*
	(-2.65)	(-2.70)	(-1.63)	(-1.92)	(-3.10)	(-3.10)	(-3.50)	(-1.85)
Acq. BM	0.086*	0.085*	0.048	-0.031	-0.341	-0.347	-0.680*	-1.312***
	(1.86)	(1.84)	(1.03)	(-0.67)	(-1.24)	(-1.27)	(-1.80)	(-3.02)
Acq. Leverage	-0.041	-0.043	-0.088*	-0.099	-1.905***	-1.910***	-2.874***	-3.079***
	(-1.29)	(-1.34)	(-1.80)	(-1.16)	(-13.26)	(-13.23)	(-6.45)	(-3.92)
Acq. R&D Cap.	-0.141***	-0.136***	-0.195***	-0.335***	-1.818**	-1.806**	-1.648**	-2.122
	(-3.03)	(-2.94)	(-6.05)	(-3.20)	(-2.23)	(-2.20)	(-2.11)	(-1.14)
Acq. Return Vol.	3.968***	3.933***	4.518***	1.620	72.183***	71.763***	92.208***	58.615**
	(6.00)	(5.92)	(4.35)	(0.98)	(5.66)	(5.70)	(4.54)	(2.20)
Acq. Vert. Integ.	-0.187	-0.204	0.964	-1.955	-15.758**	-15.669**	-11.479	-34.446***
	(-0.14)	(-0.16)	(0.60)	(-0.94)	(-2.25)	(-2.23)	(-1.10)	(-2.99)
Acq. Firm Scope	0.001	0.001	0.002	0.004	-0.006	-0.006	-0.000	-0.002
	(0.94)	(0.92)	(0.77)	(1.63)	(-0.56)	(-0.57)	(-0.01)	(-0.11)
Log(Acq. HHI)	-0.450*	-0.446*	-0.726*	-0.209	-1.493	-1.508	0.027	-3.237
	(-1.74)	(-1.73)	(-2.02)	(-0.39)	(-0.66)	(-0.67)	(0.01)	(-0.65)
Acq. CAR[-3, +3]	-0.002**	-0.002**	-0.002	-0.004***	-0.004	-0.004	-0.000	-0.038**
	(-2.57)	(-2.50)	(-1.60)	(-3.45)	(-0.68)	(-0.61)	(-0.00)	(-2.25)
Log(Acq. Goodwill)	0.033***	0.033***	0.028***	0.031***	0.175***	0.177***	0.220***	0.210***
	(8.48)	(8.43)	(5.05)	(5.24)	(3.39)	(3.48)	(4.34)	(3.58)
Year FE	Y	Y	Y	Y	Y	Y	Y	Y
Acquirer Ind. FE	Y	Y	Y	Y	Y	Y	Y	Y
Target Ind. FE	Y	Y	Y	Y	Y	Y	Y	Y
Observations	10,772	10,772	3,093	1,634	10,772	10,772	3,093	1,634
Adj. R^2 (%)	10.9	10.9	10.8	13.1	12.1	12.1	15.8	18.7

This table reports coefficients and t-statistics (in parentheses) from regressions of post-acquisition goodwill impairment outcomes on synergy disclosure for completed deals over the three fiscal years following completion. The specification controls for *Log(Acq. Goodwill)*, the natural logarithm of the acquirer's pre-deal goodwill level. Columns (1)–(4) use the goodwill impairment indicator as the dependent variable; columns (5)–(8) use goodwill impairments scaled by total assets. Within each block, columns (1)–(2) and (5)–(6) examine the extensive margin (*I(Textual)* and *I(Numeric)*); columns (3)–(4) and (7)–(8) examine the intensive margin (*Text Index* and *Amount*). All models include announcement-year, acquirer FF-30 industry, and target FF-30 industry fixed effects. The t-statistics are based on standard errors clustered by acquirer FF-30 industry. The symbols *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels (two-tailed), respectively. See Appendix B for variable definitions.

Table 7: Synergy Guidance Revision

	I(Underperform)	*I(Downward Revision)*	*Synergy Revision*	*Synergy Forecast Error*
	(1)	(2)	(3)	(4)
Amount	**0.017****	**0.080*****	**-0.254*****	**-0.002****
	(2.50)	**(3.56)**	**(-4.94)**	**(-2.20)**
Public Target	-0.014	-0.078	-0.097	0.002
	(-0.62)	(-1.62)	(-0.72)	(1.41)
Relative Value	-0.016	0.032	-0.175**	-0.001
	(-1.02)	(1.09)	(-2.34)	(-1.18)
Stock Consid.	0.040	0.032	0.000	-0.001
	(1.00)	(0.70)	(0.00)	(-0.42)
Log(Acq. MV)	0.007	0.018	0.004	-0.002**
	(0.83)	(1.00)	(0.09)	(-2.44)
Acq. BM	-0.053	-0.099	0.496*	0.010***
	(-1.62)	(-1.68)	(1.91)	(3.33)
Acq. Leverage	-0.095**	-0.213*	0.738***	0.018***
	(-2.46)	(-1.74)	(2.81)	(3.76)
Acq. R&D Cap.	0.101*	-0.394*	3.129***	0.094***
	(1.97)	(-2.03)	(3.10)	(6.87)
Acq. Return Vol.	-0.369	-3.399	8.055	0.397**
	(-0.35)	(-1.49)	(0.94)	(2.43)
Acq. Vert. Integ.	1.915*	0.796	-6.314*	0.008
	(1.74)	(0.47)	(-1.79)	(0.16)
Acq. Firm Scope	-0.000	-0.003	-0.024**	-0.000***
	(-0.06)	(-0.82)	(-2.11)	(-3.20)
Log(Acq. HHI)	0.383*	0.016	2.702	0.012
	(1.76)	(0.05)	(1.25)	(0.81)
Acq. CAR[-3, +3]	-0.000	-0.003**	0.005	-0.000
	(-0.50)	(-2.62)	(0.94)	(-0.52)
Log(Acq. Goodwill)	0.007**	0.002	0.011	0.000
	(2.27)	(0.19)	(0.67)	(1.06)
Year FE	Y	Y	Y	Y
Acquirer Ind. FE	Y	Y	Y	Y
Target Ind. FE	Y	Y	Y	Y
Observations	1,166	670	670	670
Adj. R^2 (%)	1.4	5.3	3.5	24.5

This table reports coefficients and t-statistics (in parentheses) from regressions of synergy guidance revision outcomes on the numeric synergy disclosure measure (*Amount*) for completed deals. Column (1) uses an indicator equal to one if management discusses below-expectation synergy realization after deal completion; column (2) uses an indicator equal to one if the average revision to synergy estimates after deal completion is negative; column (3) uses the average difference between post-completion synergy estimates and the announcement estimate, scaled by the announcement estimate; column (4) uses the average difference between post-completion synergy estimates and the announcement estimate, scaled by the sum of total deal value and acquirer market value. All models include announcement-year, acquirer FF-30 industry, and target FF-30 industry fixed effects. The t-statistics are based on standard errors clustered by acquirer FF-30 industry. The symbols *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels (two-tailed), respectively. See Appendix B for variable definitions.

Table 8: Post-Acquisition Performance

Panel A: Operating Profitability

	ΔROA			
	(1)	(2)	(3)	(4)
I(Textual)	**-0.014*****			
	(-3.68)			
I(Numeric)		**-0.013****		
		(-2.67)		
Text Index			**-0.001**	
			(-0.46)	
Amount				**-0.002**
				(-0.68)
Public Target	-0.013	-0.014	-0.020**	-0.030**
	(-1.62)	(-1.67)	(-2.47)	(-2.42)
Relative Value	-0.010	-0.010*	-0.019**	-0.013*
	(-1.68)	(-1.71)	(-2.13)	(-1.72)
Stock Consid.	-0.004	-0.004	0.016	0.017
	(-0.39)	(-0.41)	(1.07)	(1.21)
Log(Acq. MV)	0.009***	0.009***	0.011**	0.007
	(3.77)	(3.69)	(2.70)	(1.12)
Acq. BM	0.014	0.015	0.067***	0.096***
	(1.56)	(1.63)	(4.54)	(3.46)
Acq. Leverage	0.147***	0.148***	0.178***	0.191***
	(6.24)	(6.30)	(5.99)	(6.10)
Acq. R&D Cap.	0.170***	0.168***	0.133***	0.176*
	(6.99)	(6.81)	(4.63)	(1.82)
Acq. Return Vol.	1.138*	1.156*	1.318	0.519
	(2.03)	(2.05)	(1.54)	(0.48)
Acq. Vert. Integ.	0.912***	0.919***	0.619	0.565
	(3.17)	(3.19)	(1.42)	(1.18)
Acq. Firm Scope	0.000	0.000	0.000	0.001
	(0.06)	(0.08)	(0.40)	(0.63)
Log(Acq. HHI)	-0.024	-0.026	-0.149	-0.082
	(-0.32)	(-0.35)	(-1.50)	(-0.79)
Acq. CAR[-3, +3]	0.001**	0.001*	0.001	0.001
	(2.05)	(2.01)	(1.29)	(1.31)
Year FE	Y	Y	Y	Y
Acquirer Ind. FE	Y	Y	Y	Y
Target Ind. FE	Y	Y	Y	Y
Observations	10,758	10,758	3,089	1,632
Adj. R^2 (%)	5.3	5.2	4.8	5.6

Continued on next page.

Table 8: Post-Acquisition Performance (continued)

Panel B: Long-Run Stock Returns

	Char-adj Log(Acq R)					
	(1) 12 months	(2) 12 months	(3) 24 months	(4) 12 months	(5) 12 months	(6) 24 months
I(Textual)	**-0.039**					
	(-0.03)					
Text Index		**-0.263**	**-0.171**			
		(-1.04)	**(-0.33)**			
I(Numeric)				**2.382**		
				(1.33)		
Amount					**-1.500**	**-4.237*****
					(-1.50)	**(-3.31)**
Public Target	1.275	1.129	1.377	0.786	-2.837	-3.746
	(0.78)	(0.87)	(0.51)	(0.48)	(-1.09)	(-0.74)
Relative Value	-3.862*	-5.411*	-11.001***	-4.263**	-1.115	-1.641
	(-2.03)	(-1.92)	(-3.04)	(-2.12)	(-0.54)	(-0.41)
Stock Consid.	-5.464**	2.283	7.200	-5.780**	0.318	1.081
	(-2.24)	(0.72)	(1.10)	(-2.33)	(0.09)	(0.20)
Log(Acq. MV)	0.874*	-1.019	-1.667	0.825	-0.032	0.118
	(1.83)	(-1.39)	(-1.42)	(1.69)	(-0.05)	(0.11)
Acq. BM	7.160***	5.811*	18.145***	7.098***	3.026	15.366***
	(3.40)	(2.04)	(5.05)	(3.42)	(0.76)	(3.12)
Acq. Leverage	9.464***	8.286	9.167*	9.362***	3.949	-4.265
	(2.79)	(1.39)	(1.71)	(2.81)	(0.81)	(-0.48)
Acq. R&D Cap.	12.188	12.977	15.976	12.408	44.659***	63.357***
	(1.50)	(1.15)	(0.96)	(1.53)	(4.77)	(6.63)
Acq. Return Vol. (%)	-4.413***	-8.926***	-15.914***	-4.392***	-8.291***	-13.579***
	(-4.13)	(-4.24)	(-4.44)	(-4.16)	(-4.44)	(-3.28)
Acq. Vert. Integ.	108.314	100.287	99.274	105.709	170.379	149.706
	(1.27)	(0.91)	(0.59)	(1.25)	(1.20)	(0.67)
Acq. Firm Scope	-0.130	0.058	0.151	-0.131	0.026	0.379
	(-1.55)	(0.38)	(0.68)	(-1.53)	(0.15)	(1.53)
Log(Acq. HHI)	-10.019	27.952	51.742	-9.102	2.653	87.278
	(-0.42)	(1.12)	(1.13)	(-0.39)	(0.12)	(1.69)
Acq. CAR[-3, +3]	-0.114	-0.145*	-0.410**	-0.116	-0.015	-0.080
	(-1.62)	(-1.73)	(-2.55)	(-1.68)	(-0.08)	(-0.35)
Year FE	Y	Y	Y	Y	Y	Y
Acquirer Ind. FE	Y	Y	Y	Y	Y	Y
Target Ind. FE	Y	Y	Y	Y	Y	Y
Observations	9,099	2,848	2,867	9,099	1,472	1,480
Adj. R^2 (%)	11.4	13.3	13.9	11.5	14.4	14.3

This table reports coefficients and t-statistics (in parentheses) from regressions of post-acquisition performance on synergy disclosure for completed deals. Panel A examines operating profitability over the three fiscal years following deal completion; Panel B examines long-run acquirer stock performance at 12- and 24-month horizons following deal completion. In Panel B, columns (1)–(3) use textual disclosure measures (*I(Textual)* and *Text Index*) and columns (4)–(6) use numeric disclosure measures (*I(Numeric)* and *Amount*). Main variables of interest are *I(Textual)*, *I(Numeric)*, *Text Index*, and *Amount*. All models include announcement-year, acquirer FF-30 industry, and target FF-30 industry fixed effects. The t-statistics are based on standard errors clustered by acquirer FF-30 industry. The symbols *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels (two-tailed), respectively. See Appendix B for variable definitions.

Table 9: Cross-Sectional Heterogeneity in Post-Acquisition Goodwill Impairments

Panel A: Goodwill Impairment Indicator and Textual Synergy Disclosure

	(1)	(2)	(3)	(4)	(5)
Dependent Variable	*I(GwImp)*	*I(GwImp)*	*I(GwImp)*	*I(GwImp)*	*I(GwImp)*
Disclosure Variable:	*I(Textual)*	*I(Textual)*	*I(Textual)*	*I(Textual)*	*Text Index*
Interacting Variable:	*Acq. Num. Exp.*	*Acq. Text Exp.*	*Acq. Acc. Quality*	*Tgt. Acc. Quality*	*Tgt. Acc. Quality*
Disclosure × Interacting	**-0.045***	**-0.016***	**-0.041*****	**-0.020**	**-0.009**
	(-1.99)	**(-1.81)**	**(-4.73)**	**(-0.99)**	**(-1.70)**
Disclosure Variable	0.026	0.025	0.016	0.023	-0.007**
	(1.25)	(1.55)	(1.15)	(1.45)	(-2.30)
Interacting Variable	0.044***	0.010	0.004	-0.010	0.024
	(2.91)	(0.96)	(0.77)	(-1.42)	(0.95)
Log(Acq. Goodwill)	0.036***	0.037***	0.033***	0.033***	0.028***
	(7.71)	(9.03)	(8.57)	(8.50)	(5.06)
Controls	Y	Y	Y	Y	Y
Year FE	Y	Y	Y	Y	Y
Acquirer Ind. FE	Y	Y	Y	Y	Y
Target Ind. FE	Y	Y	Y	Y	Y
Observations	6,303	6,303	10,765	10,723	3,082
Adj. R^2 (%)	13.7	13.5	11.0	11.0	10.9

Panel B: Goodwill Impairment Indicator and Numeric Synergy Disclosure

	(1)	(2)	(3)	(4)	(5)
Dependent Variable	*I(GwImp)*	*I(GwImp)*	*I(GwImp)*	*I(GwImp)*	*I(GwImp)*
Disclosure Variable:	*I(Numeric)*	*I(Numeric)*	*I(Numeric)*	*I(Numeric)*	*Amount*
Interacting Variable:	*Acq. Num. Exp.*	*Acq. Text Exp.*	*Acq. Acc. Quality*	*Tgt. Acc. Quality*	*Tgt. Acc. Quality*
Disclosure × Interacting	**-0.048***	**-0.008**	**-0.024*****	**-0.010**	**-0.029*****
	(-1.95)	**(-0.52)**	**(-4.34)**	**(-0.69)**	**(-3.76)**
Disclosure Variable	0.048*	0.036	0.022**	0.026**	0.024**
	(1.91)	(1.55)	(2.22)	(2.41)	(2.53)
Interacting Variable	0.038**	0.005	-0.001	-0.013**	0.030
	(2.30)	(0.50)	(-0.26)	(-2.23)	(1.53)
Log(Acq. Goodwill)	0.036***	0.037***	0.033***	0.033***	0.030***
	(7.56)	(8.87)	(8.48)	(8.44)	(5.17)
Controls	Y	Y	Y	Y	Y
Year FE	Y	Y	Y	Y	Y
Acquirer Ind. FE	Y	Y	Y	Y	Y
Target Ind. FE	Y	Y	Y	Y	Y
Observations	6,303	6,303	10,765	10,723	1,632
Adj. R^2 (%)	13.7	13.5	10.9	10.9	13.2

Continued on next page.

Table 9: Cross-Sectional Heterogeneity in Post-Acquisition Goodwill Impairments (continued)

Panel C: Goodwill Impairment Magnitude and Textual Synergy Disclosure

	(1)	(2)	(3)	(4)	(5)
Dependent Variable	*GwImp/Assets*	*GwImp/Assets*	*GwImp/Assets*	*GwImp/Assets*	*GwImp/Assets*
Disclosure Variable:	*I(Textual)*	*I(Textual)*	*I(Textual)*	*I(Textual)*	*Text Index*
Interacting Variable:	*Acq. Num. Exp.*	*Acq. Text Exp.*	*Acq. Acc. Quality*	*Tgt. Acc. Quality*	*Tgt. Acc. Quality*
Disclosure × Interacting	**-0.528*****	**-0.314****	**-0.108**	**-0.159**	**-0.151*****
	(-3.22)	**(-2.63)**	**(-1.18)**	**(-1.50)**	**(-3.21)**
Disclosure Variable	0.342***	0.331**	0.137	0.129	-0.070**
	(3.51)	(2.66)	(1.52)	(1.30)	(-2.21)
Interacting Variable	0.263**	0.310***	0.007	-0.011	0.795***
	(2.15)	(4.03)	(0.11)	(-0.16)	(3.00)
Log(Acq. Goodwill)	0.149***	0.134***	0.176***	0.177***	0.219***
	(2.78)	(2.83)	(3.40)	(3.40)	(4.28)
Controls	Y	Y	Y	Y	Y
Year FE	Y	Y	Y	Y	Y
Acquirer Ind. FE	Y	Y	Y	Y	Y
Target Ind. FE	Y	Y	Y	Y	Y
Observations	6,303	6,303	10,765	10,723	3,082
Adj. R^2 (%)	14.2	14.2	12.1	12.1	15.9

Panel D: Goodwill Impairment Magnitude and Numeric Synergy Disclosure

	(1)	(2)	(3)	(4)	(5)
Dependent Variable	*GwImp/Assets*	*GwImp/Assets*	*GwImp/Assets*	*GwImp/Assets*	*GwImp/Assets*
Disclosure Variable:	*I(Numeric)*	*I(Numeric)*	*I(Numeric)*	*I(Numeric)*	*Amount*
Interacting Variable:	*Acq. Num. Exp.*	*Acq. Text Exp.*	*Acq. Acc. Quality*	*Tgt. Acc. Quality*	*Tgt. Acc. Quality*
Disclosure × Interacting	**-0.411***	**-0.311**	**-0.020**	**-0.215**	**-0.506*****
	(-1.97)	**(-1.69)**	**(-0.21)**	**(-1.67)**	**(-3.93)**
Disclosure Variable	0.119	0.133	-0.036	-0.091	0.126
	(0.69)	(0.66)	(-0.32)	(-0.78)	(1.20)
Interacting Variable	0.191*	0.267***	-0.014	-0.008	0.725***
	(1.86)	(3.41)	(-0.19)	(-0.11)	(2.77)
Log(Acq. Goodwill)	0.152***	0.137***	0.177***	0.179***	0.205***
	(2.91)	(2.93)	(3.48)	(3.48)	(3.39)
Controls	Y	Y	Y	Y	Y
Year FE	Y	Y	Y	Y	Y
Acquirer Ind. FE	Y	Y	Y	Y	Y
Target Ind. FE	Y	Y	Y	Y	Y
Observations	6,303	6,303	10,765	10,723	1,632
Adj. R^2 (%)	14.1	14.2	12.1	12.0	19.4

This table reports coefficients and t-statistics (in parentheses) from cross-sectional interaction regressions of goodwill impairment outcomes on synergy disclosure in the three fiscal years following completion. All specifications control for *Log(Acq. Goodwill)*, the natural logarithm of the acquirer's pre-deal goodwill level. Panels A and B use the goodwill impairment indicator as the dependent variable; Panels C and D use goodwill impairments scaled by total assets. The columns of the different panels examine interactions between disclosure measures (*I(Textual)*, *I(Numeric)*, *Text Index*, and *Amount*) and cross-sectional characteristics (*Acq. Num Exp.*, *Acq. Text Exp.*, *Acq. Acc. Quality*, and *Tgt. Acc. Quality*). All models include announcement-year, acquirer FF-30 industry, and target FF-30 industry fixed effects. The t-statistics are based on standard errors clustered by acquirer FF-30 industry. The symbols *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels (two-tailed), respectively. See Appendix B for variable definitions.

Table 10: Post-Acquisition Outcomes after UK Takeover Panel Rule 28

	I(GwImp, 3Y)				*I(GwImp, 5Y)*			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
UK* × *Post* × *I(Numeric)	**-0.443****	**-0.409***	**-0.469****	**-0.386***	**-0.492****	**-0.489****	**-0.544****	**-0.459****
	(-2.04)	**(-1.90)**	**(-2.16)**	**(-1.83)**	**(-2.24)**	**(-2.26)**	**(-2.49)**	**(-2.13)**
UK × *Post*	0.118	0.088	0.098	0.088	0.238**	0.221*	0.231**	0.228**
	(1.00)	(0.77)	(0.85)	(0.79)	(1.99)	(1.92)	(1.98)	(2.02)
UK × *I(Numeric)*	0.363**	0.338**	0.384**	0.359**	0.284*	0.288*	0.332**	0.314**
	(2.38)	(2.26)	(2.57)	(2.54)	(1.90)	(1.94)	(2.22)	(2.22)
Post × *I(Numeric)*	0.139	0.101	0.124	0.130	0.105	0.082	0.108	0.118
	(1.10)	(0.85)	(1.03)	(1.19)	(0.82)	(0.66)	(0.86)	(1.02)
UK	-0.180**	-0.144*	-0.146*	-0.169**	-0.196**	-0.174**	-0.177**	-0.203***
	(-2.13)	(-1.91)	(-1.92)	(-2.34)	(-2.38)	(-2.32)	(-2.31)	(-2.86)
I(Numeric)	-0.021	0.022	0.007	-0.010	0.003	0.025	0.006	-0.011
	(-0.21)	(0.23)	(0.07)	(-0.12)	(0.03)	(0.25)	(0.06)	(-0.13)
Log(Acq. Goodwill)	0.002	0.003	0.004	-0.002	0.012	0.011	0.012	0.005
	(0.22)	(0.29)	(0.36)	(-0.22)	(1.20)	(1.04)	(1.07)	(0.49)
Relative Value		0.037	0.033	0.025		0.039	0.035	0.027
		(1.33)	(1.17)	(0.93)		(1.45)	(1.28)	(1.01)
Log(Acq. MV)		0.020	0.017	0.027		0.024	0.022	0.033*
		(1.09)	(0.96)	(1.61)		(1.33)	(1.22)	(1.92)
Acq. BM		0.083	0.086	0.065		0.147**	0.149**	0.120*
		(1.25)	(1.26)	(0.98)		(2.12)	(2.12)	(1.75)
Acq. Leverage		-0.026	-0.010	-0.127		-0.064	-0.052	-0.176*
		(-0.24)	(-0.10)	(-1.31)		(-0.57)	(-0.45)	(-1.73)
Acq. R&D Cap.		-0.122	0.100	-0.331		0.878	1.084	0.512
		(-0.13)	(0.10)	(-0.35)		(0.54)	(0.64)	(0.32)
Acq. Return Vol.		2.241	2.116	4.025**		1.918	1.791	3.565*
		(1.25)	(1.15)	(2.21)		(1.06)	(0.96)	(1.93)
Log(Acq. HHI)		1.160**	1.197***	1.232***		0.701	0.727	0.673
		(2.55)	(2.65)	(2.79)		(1.53)	(1.60)	(1.56)
Acq. CAR[-3, +3]		-0.004*	-0.005*	-0.004		-0.003	-0.003	-0.002
		(-1.84)	(-1.94)	(-1.56)		(-1.21)	(-1.27)	(-0.88)
Year FE	Y	Y	Y	Y	Y	Y	Y	Y
Acquirer Ind. FE	Y	Y	Y	Y	Y	Y	Y	Y
Target Ind. FE	N	N	N	Y	N	N	N	Y
Sample	Full	Full	No 2013	Full	Full	Full	No 2013	Full
Observations	1,391	1,387	1,349	1,386	1,391	1,387	1,349	1,386
Adj. R^2 (%)	16.7	20.4	20.1	24.1	18.4	21.5	20.9	25.0

This table reports coefficients and t-statistics (in parentheses) of the effect of Rule 28 on post-acquisition goodwill impairment. Columns (1)–(4) use the goodwill impairment indicator for the three years after deal completion as the dependent variable; columns (5)–(8) use the goodwill impairment indicator for the five years after deal completion as the dependent variable. *UK* is defined as an indicator equal to one if the target nation is United Kingdom, and zero otherwise. *Post* is defined as an indicator equal to one for deals announced after the 2013 implementation of UK Takeover Panel Rule 28, and zero otherwise. The main coefficient of interest (*UK* × *Post* × *I(Numeric)*) captures the differential post-Rule 28 effect for deals with a U.K. target relative to deals with a U.S. target. The specification controls for *Log(Acq. Goodwill)*, the natural logarithm of the acquirer's pre-deal goodwill level. All specifications include announcement-year and acquirer FF-30 industry fixed effects; columns (4) and (8) additionally include target FF-30 industry fixed effects. The sample is the entropy-balanced matched sample of stock-financed acquisitions with U.K. and U.S. public targets; columns labeled No 2013 exclude 2013 announcements before the Rule 28 implementation. The t-statistics are based on standard errors clustered by acquirer FF-30 industry. The symbols *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels (two-tailed), respectively. See Appendix B for variable definitions.

C Online Appendix

Table A1: Combined Acquirer and Target CARs

	Comb. CAR[-3, +3]			
	(1)	(2)	(3)	(4)
I(Textual)	**0.907****			
	(2.19)			
I(Numeric)		**0.929***		
		(2.04)		
Text Index			**0.253****	
			(2.48)	
Amount				**0.552****
				(2.77)
Relative Value	1.617***	1.577***	0.913**	0.744*
	(5.91)	(5.81)	(2.36)	(2.02)
Stock Consid.	-3.535***	-3.572***	-3.296***	-3.899***
	(-6.67)	(-7.00)	(-5.50)	(-4.04)
Log(Acq. MV)	-0.585***	-0.590***	-0.638**	-0.464
	(-2.96)	(-2.94)	(-2.08)	(-1.26)
Acq. BM	0.029	-0.044	0.594	-0.428
	(0.05)	(-0.07)	(0.60)	(-0.31)
Acq. Leverage	1.132	0.981	2.076*	1.742
	(1.03)	(0.85)	(1.76)	(0.95)
Acq. R&D Cap.	-5.627**	-5.463**	-6.000***	-6.239**
	(-2.66)	(-2.62)	(-2.88)	(-2.26)
Acq. Return Vol.	-9.564	-10.622	-45.960	-76.815
	(-0.20)	(-0.22)	(-1.00)	(-1.10)
Acq. Vert. Integ.	11.075	7.061	33.772	33.633
	(0.50)	(0.32)	(1.52)	(1.17)
Acq. Firm Scope	0.007	0.007	0.047	0.044
	(0.26)	(0.26)	(1.33)	(0.98)
Log(Acq. HHI)	-3.775	-3.614	-4.477	-15.448
	(-0.55)	(-0.53)	(-0.48)	(-1.53)
Year FE	Y	Y	Y	Y
Acquirer Ind. FE	Y	Y	Y	Y
Target Ind. FE	Y	Y	Y	Y
Observations	1,863	1,863	1,164	855
Adj. R^2 (%)	13.7	13.7	14.6	14.8

This table reports coefficients and t-statistics (in parentheses) from announcement-window regressions of combined acquirer and target cumulative abnormal returns. The combined CAR is the market-value-weighted average of acquirer and target daily abnormal returns. The sample is limited to public-target deals. The dependent variable is combined $CAR[-3,+3]$. Columns (1)–(2) examine synergy disclosure on the extensive margin (*I(Textual)* and *I(Numeric)*); columns (3)–(4) examine the intensive margin (*Text Index* and *Amount*). All models include announcement-year, acquirer FF-30 industry, and target FF-30 industry fixed effects. The t-statistics are based on standard errors clustered by acquirer FF-30 industry. The symbols *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels (two-tailed), respectively. See Appendix B for variable definitions.

Table A2: Deal Completion and Days to Completion

	I(Completed)		*Log(Days to Complete)*	
	(1)	(2)	(3)	(4)
I(Textual)	**0.041*****		**0.694*****	
	(4.73)		**(12.14)**	
I(Numeric)		**0.026****		**0.659*****
		(2.11)		**(10.75)**
Public Target	-0.062**	-0.057**	1.170***	1.202***
	(-2.47)	(-2.25)	(10.62)	(13.08)
Relative Value	-0.023*	-0.021	0.629***	0.635***
	(-1.73)	(-1.65)	(8.20)	(8.69)
Stock Consid.	0.023*	0.026*	1.021***	1.031***
	(1.93)	(1.96)	(6.07)	(5.29)
Log(Acq. MV)	0.003	0.003	0.194***	0.197***
	(0.85)	(1.00)	(3.57)	(3.89)
Acq. BM	0.003	0.003	0.358***	0.331***
	(0.25)	(0.18)	(3.48)	(3.06)
Acq. Leverage	-0.007	-0.007	1.251**	1.224**
	(-0.45)	(-0.45)	(2.30)	(2.21)
Acq. R&D Cap.	0.049***	0.053***	0.350***	0.456***
	(5.21)	(5.72)	(6.13)	(6.44)
Acq. Return Vol.	-1.309***	-1.366***	-0.945	-1.781
	(-3.37)	(-3.54)	(-0.33)	(-0.65)
Acq. Vert. Integ.	0.687	0.689	-9.778***	-10.029***
	(1.19)	(1.19)	(-2.88)	(-3.10)
Acq. Firm Scope	-0.001*	-0.001*	0.010	0.010
	(-1.73)	(-1.83)	(1.09)	(1.00)
Log(Acq. HHI)	-0.113	-0.117	2.110**	2.162***
	(-1.28)	(-1.21)	(2.62)	(2.86)
Year FE	Y	Y	Y	Y
Acquirer Ind. FE	Y	Y	Y	Y
Target Ind. FE	Y	Y	Y	Y
Sample	Full	Full	Completed	Completed
Observations	12,176	12,176	11,125	11,125
Adj. R^2 (%)	3.2	2.9	37.7	36.8

This table reports coefficients and t-statistics (in parentheses) from regressions of deal completion outcomes on synergy disclosure measures. Columns (1)–(2) use *I(Completed)*, an indicator equal to one if the deal is completed, and zero otherwise, as the dependent variable. Columns (3)–(4) use *Log(Days to Complete)*, the natural logarithm of the number of days between announcement and effective date as the dependent variable. The main variables of interest are *I(Textual)* and *I(Numeric)*. All models include announcement-year, acquirer FF-30 industry, and target FF-30 industry fixed effects. The t-statistics are based on standard errors clustered by acquirer FF-30 industry. The symbols *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels (two-tailed), respectively. See Appendix B for variable definitions.

Table A3: Post-Acquisition Goodwill Impairments — Robustness

	I(GwImp)			*GwImp/Assets*		
	(1)	(2)	(3)	(4)	(5)	(6)
Amount	**0.042*****	**0.032*****	**0.033*****	**0.294**	**0.272****	**0.276****
	(3.69)	**(3.48)**	**(3.57)**	**(1.50)**	**(2.12)**	**(2.14)**
Public Target	0.108	0.012	0.012	0.436	-0.247	-0.243
	(0.67)	(0.36)	(0.38)	(0.38)	(-0.90)	(-0.88)
Relative Value	0.094***	0.065***	0.067***	1.398**	1.461***	1.466***
	(6.72)	(6.24)	(6.06)	(2.71)	(4.52)	(4.51)
Stock Consid.	-0.014	0.001	0.001	1.105	0.915	0.919
	(-0.51)	(0.03)	(0.04)	(1.54)	(1.66)	(1.64)
Log(Acq. MV)	-0.021*	-0.016*	-0.016*	-0.108	-0.192*	-0.193*
	(-1.84)	(-1.93)	(-1.95)	(-0.46)	(-1.83)	(-1.87)
Acq. BM	-0.095*	-0.031	-0.032	-1.186	-1.307***	-1.314***
	(-1.74)	(-0.65)	(-0.69)	(-1.53)	(-3.05)	(-3.00)
Acq. Leverage	-0.157	-0.100	-0.100	-3.226*	-3.083***	-3.079***
	(-1.51)	(-1.17)	(-1.18)	(-1.89)	(-3.95)	(-3.90)
Acq. R&D Cap.	-0.294	-0.338***	-0.324***	-1.315	-2.163	-2.095
	(-1.51)	(-3.34)	(-3.11)	(-0.45)	(-1.16)	(-1.13)
Acq. Return Vol.	1.063	1.619	1.595	66.911	58.601**	58.549**
	(0.45)	(0.98)	(0.96)	(1.63)	(2.20)	(2.20)
Acq. Vert. Integ.	-2.091	-1.952	-1.948	-22.609	-34.400***	-34.427***
	(-0.53)	(-0.94)	(-0.92)	(-1.35)	(-2.98)	(-2.98)
Acq. Firm Scope	0.009**	0.004	0.004	0.017	-0.001	-0.002
	(2.54)	(1.63)	(1.59)	(0.77)	(-0.06)	(-0.13)
Log(Acq. HHI)	-0.720	-0.214	-0.206	-10.647	-3.308	-3.228
	(-1.52)	(-0.40)	(-0.38)	(-1.66)	(-0.66)	(-0.64)
Acq. CAR[-3, +3]	-0.004**	-0.004***	-0.004***	-0.034	-0.038**	-0.038**
	(-2.16)	(-3.47)	(-3.34)	(-1.62)	(-2.25)	(-2.25)
Log(Acq. Goodwill)	0.036***	0.031***	0.030***	0.207*	0.215***	0.207***
	(4.93)	(5.38)	(5.02)	(1.90)	(3.55)	(3.45)
Premium	0.067			0.535		
	(0.98)			(1.47)		
Acq. Deal Exp.		-0.003			-0.045	
		(-0.49)			(-0.83)	
Serial Acquirer			0.034			0.092
			(1.36)			(0.61)
Year FE	Y	Y	Y	Y	Y	Y
Acquirer Ind. FE	Y	Y	Y	Y	Y	Y
Target Ind. FE	Y	Y	Y	Y	Y	Y
Observations	819	1,634	1,634	819	1,634	1,634
Adj. R^2 (%)	16.5	13.0	13.1	24.8	18.7	18.7

This table reports coefficients and t-statistics (in parentheses) from robustness regressions of post-acquisition goodwill impairment outcomes on the numeric synergy disclosure measure (*Amount*) for completed deals. Columns (1)–(3) use the goodwill impairment indicator (*I(GwImp)*) as the dependent variable; columns (4)–(6) use goodwill impairments scaled by total assets (*GwImp/Assets*). All specifications include *Log(Acq. Goodwill)*, the natural logarithm of the acquirer's pre-deal goodwill level, as a control. Columns (1) and (4) add *Premium*, the four-week acquisition premium (offer price relative to the target's closing price four weeks before announcement); columns (2) and (5) add *Acq. Deal Exp.*, the number of prior M&A announcements by the same acquirer in the five years before the current deal's announcement; columns (3) and (6) add *Serial Acquirer*, an indicator equal to one if the acquirer announced at least two prior deals in the preceding five years. All models include announcement-year, acquirer FF-30 industry, and target FF-30 industry fixed effects. The t-statistics are based on standard errors clustered by acquirer FF-30 industry. The symbols *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels (two-tailed), respectively. See Appendix B for variable definitions.

Table A4: Post-Acquisition Goodwill Impairments — Entropy-Balanced Matched Sample

	I(GwImp)				*GwImp/Assets*			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
I(Textual)	**0.031****				**0.218***			
	(2.11)				**(1.99)**			
I(Numeric)		**0.036*****				**0.149**		
		(3.25)				**(1.51)**		
Text Index			**-0.005**				**-0.016**	
			(-1.57)				**(-0.49)**	
Amount				**0.037*****				**0.310****
				(4.92)				**(2.35)**
Public Target	0.002	-0.003	-0.000	0.005	0.337*	0.100	0.179	-0.142
	(0.12)	(-0.15)	(-0.00)	(0.13)	(1.75)	(0.51)	(0.88)	(-0.42)
Relative Value	0.026**	0.049***	0.080***	0.073***	0.719***	0.809***	1.403***	1.452***
	(2.29)	(3.37)	(4.83)	(5.41)	(3.53)	(3.57)	(4.21)	(3.06)
Stock Consid.	0.029	0.028	0.013	0.001	0.539*	0.686*	0.648	0.854*
	(1.02)	(1.03)	(0.44)	(0.02)	(1.79)	(1.88)	(1.70)	(1.71)
Log(Acq. MV)	-0.018**	-0.014*	-0.014	-0.011	-0.211***	-0.189***	-0.283***	-0.213
	(-2.56)	(-2.00)	(-1.26)	(-1.26)	(-3.51)	(-2.98)	(-3.65)	(-1.26)
Acq. BM	0.056	0.006	0.023	-0.015	-0.558*	-0.836**	-0.887*	-1.013*
	(1.23)	(0.12)	(0.50)	(-0.35)	(-1.98)	(-2.67)	(-1.91)	(-1.82)
Acq. Leverage	-0.059*	-0.041	-0.074	-0.002	-2.434***	-2.523***	-2.954***	-2.221**
	(-1.96)	(-0.95)	(-1.39)	(-0.02)	(-12.33)	(-7.67)	(-4.67)	(-2.58)
Acq. R&D Cap.	-0.165***	-0.265***	-0.209***	-0.316***	-1.726*	-2.114*	-1.801	-1.760
	(-3.46)	(-3.32)	(-3.97)	(-3.91)	(-1.86)	(-1.94)	(-1.67)	(-0.92)
Acq. Return Vol.	4.572***	4.030***	4.666***	0.030	84.857***	73.356***	100.323***	39.529
	(5.60)	(5.25)	(4.44)	(0.02)	(4.70)	(4.26)	(4.85)	(1.25)
Acq. Vert. Integ.	-0.623	-2.093	0.441	-1.122	-17.621**	-31.983***	-19.047*	-32.910**
	(-0.51)	(-1.49)	(0.28)	(-0.67)	(-2.63)	(-5.06)	(-1.90)	(-2.30)
Acq. Firm Scope	0.002	0.004*	0.003	0.002	-0.009	-0.006	0.000	-0.029
	(1.51)	(1.96)	(1.25)	(0.85)	(-0.73)	(-0.44)	(0.00)	(-1.03)
Log(Acq. HHI)	-0.699*	-0.581	-0.773**	-0.662	-1.212	-1.949	1.349	-9.356**
	(-1.92)	(-1.68)	(-2.49)	(-1.51)	(-0.33)	(-0.58)	(0.37)	(-2.14)
Acq. CAR[-3, +3]	-0.002*	-0.004***	-0.002*	-0.005***	-0.011	-0.030***	-0.001	-0.049**
	(-2.04)	(-4.15)	(-1.93)	(-3.56)	(-1.00)	(-2.77)	(-0.06)	(-2.55)
Log(Acq. Goodwill)	0.031***	0.030***	0.030***	0.032***	0.177***	0.159***	0.250***	0.284***
	(6.47)	(6.23)	(5.67)	(5.08)	(3.97)	(4.27)	(4.38)	(3.75)
Method	Ebal	Ebal	Ebal	Ebal	Ebal	Ebal	Ebal	Ebal
Year FE	Y	Y	Y	Y	Y	Y	Y	Y
Acquirer Ind. FE	Y	Y	Y	Y	Y	Y	Y	Y
Target Ind. FE	Y	Y	Y	Y	Y	Y	Y	Y
Observations	10,772	10,772	3,093	1,634	10,772	10,772	3,093	1,634
Adj. R^2 (%)	11.3	14.7	12.6	17.6	13.6	15.9	19.1	23.3

This table reports coefficients and t-statistics (in parentheses) from regressions of post-acquisition goodwill impairment outcomes on synergy disclosure for completed deals over the three fiscal years following completion, using entropy-balanced reweighting. For the extensive-margin specifications (*I(Textual)* and *I(Numeric)*), non-disclosing acquirers are reweighted to match the covariate moments of disclosing acquirers on observable deal- and firm-level controls; the regression sample is the full sample of completed deals. For the intensive-margin specifications (*Text Index* and *Amount*), the sample is restricted to disclosing acquirers, split at the median into above- and below-median disclosers, and below-median disclosers are reweighted to match the covariate moments of above-median disclosers. The specification controls for *Log(Acq. Goodwill)*, the natural logarithm of the acquirer's pre-deal goodwill level. Columns (1)–(4) use the goodwill impairment indicator as the dependent variable; columns (5)–(8) use goodwill impairments scaled by total assets. Within each block, columns (1)–(2) and (5)–(6) examine the extensive margin (*I(Textual)* and *I(Numeric)*); columns (3)–(4) and (7)–(8) examine the intensive margin (*Text Index* and *Amount*). All models include announcement-year, acquirer FF-30 industry, and target FF-30 industry fixed effects. The t-statistics are based on standard errors clustered by acquirer FF-30 industry. The symbols *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels (two-tailed), respectively. See Appendix B for variable definitions.

Table A5: Post-Acquisition Restructuring Costs — Excluding One-Time Charges

	I(Restruct)				*Restruct/Sales*			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
I(Textual)	**0.107*****				**0.121*****			
	(7.57)				**(3.77)**			
I(Numeric)		**0.114*****				**0.130****		
		(8.03)				**(2.23)**		
Text Index			**0.012*****				**0.008**	
			(3.70)				**(1.15)**	
Amount				**0.025****				**0.077***
				(2.56)				**(1.83)**
Public Target	0.009	0.011	-0.013	-0.014	0.056	0.058	0.052	-0.046
	(0.45)	(0.61)	(-0.36)	(-0.52)	(1.00)	(1.16)	(0.58)	(-0.50)
Relative Value	0.023*	0.023*	0.016	0.017	0.182***	0.183***	0.266***	0.281***
	(1.85)	(1.78)	(1.28)	(0.90)	(3.61)	(3.44)	(3.18)	(3.31)
Stock Consid.	-0.061**	-0.061**	-0.086**	-0.103***	0.008	0.008	-0.065	-0.051
	(-2.75)	(-2.37)	(-2.69)	(-3.55)	(0.17)	(0.17)	(-0.70)	(-0.48)
Log(Acq. MV)	0.048***	0.048***	0.041***	0.043***	0.050**	0.050**	0.048	0.066**
	(9.29)	(9.66)	(11.77)	(6.23)	(2.63)	(2.73)	(1.65)	(2.74)
Acq. BM	0.144***	0.140***	0.128***	0.092**	0.081	0.076	0.129	0.075
	(4.43)	(4.44)	(3.24)	(2.11)	(0.90)	(0.85)	(1.21)	(0.65)
Acq. Leverage	0.191***	0.186***	0.123**	0.108	0.015	0.008	-0.106	0.299
	(4.10)	(4.05)	(2.32)	(1.52)	(0.10)	(0.05)	(-0.54)	(1.60)
Acq. R&D Cap.	0.139	0.157	0.201	0.358***	0.942***	0.964***	1.395***	2.507***
	(1.09)	(1.22)	(1.57)	(5.17)	(4.92)	(5.16)	(3.66)	(4.19)
Acq. Return Vol.	-0.431	-0.562	0.936	-0.699	7.783***	7.644***	9.888*	0.662
	(-0.45)	(-0.57)	(0.60)	(-0.39)	(5.39)	(5.23)	(1.75)	(0.13)
Acq. Vert. Integ.	1.367	1.281	2.448	1.951	-8.157***	-8.259***	-8.123***	-5.677
	(1.05)	(0.99)	(1.62)	(0.95)	(-3.20)	(-3.26)	(-2.96)	(-1.31)
Acq. Firm Scope	-0.000	-0.000	0.002	-0.000	0.003	0.003	0.002	0.000
	(-0.01)	(-0.11)	(0.99)	(-0.03)	(1.09)	(1.04)	(0.44)	(0.01)
Log(Acq. HHI)	-0.175	-0.153	-0.340	0.084	-0.551	-0.521	-0.697	-0.798
	(-0.51)	(-0.43)	(-0.73)	(0.14)	(-0.56)	(-0.53)	(-0.61)	(-0.62)
Acq. CAR[-3, +3]	-0.000	0.000	-0.001	-0.001	0.004**	0.004**	0.007*	0.004
	(-0.08)	(0.15)	(-0.59)	(-1.37)	(2.25)	(2.29)	(2.00)	(1.15)
Year FE	Y	Y	Y	Y	Y	Y	Y	Y
Acquirer Ind. FE	Y	Y	Y	Y	Y	Y	Y	Y
Target Ind. FE	Y	Y	Y	Y	Y	Y	Y	Y
Observations	10,253	10,253	2,951	1,565	10,168	10,168	2,937	1,557
Adj. R^2 (%)	22.6	22.4	18.5	24.4	9.5	9.5	10.2	15.1

This table reports coefficients and t-statistics (in parentheses) from regressions of post-acquisition restructuring costs on synergy disclosure for completed deals. The dependent variables are: (i) *I(Restruct)*, an indicator equal to one if the acquirer reports any restructuring costs in years 2–3 after deal completion; and (ii) *Restruct/Sales*, restructuring costs scaled by sales in the year before deal completion, averaged over years 2–3 after completion, expressed as a percentage. The first post-completion year is excluded to isolate recurring cost-restructuring activity from one-time integration charges. The main variables of interest are *I(Textual)*, *I(Numeric)*, *Text Index*, and *Amount*. All models include announcement-year, acquirer FF-30 industry, and target FF-30 industry fixed effects. The t-statistics are based on standard errors clustered by acquirer FF-30 industry. The symbols *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels (two-tailed), respectively. See Appendix B for variable definitions.

Table A6: Post-Acquisition Goodwill Impairments — UK Sample

	I(GwImp)			
	(1)	(2)	(3)	(4)
I(Textual)	**0.095***		**0.075**	
	(1.70)		**(1.34)**	
I(Numeric)		**0.115***		**0.096**
		(1.83)		**(1.50)**
Relative Value	0.041	0.041	0.036	0.036
	(1.20)	(1.23)	(1.06)	(1.07)
Log(Acq. MV)	0.030***	0.030***	0.020*	0.021*
	(2.67)	(2.74)	(1.81)	(1.85)
Acq. BM	-0.003**	-0.003**	-0.002*	-0.002*
	(-2.19)	(-2.07)	(-1.86)	(-1.74)
Acq. Leverage	0.075	0.065	0.061	0.053
	(0.81)	(0.70)	(0.67)	(0.57)
Acq. R&D Cap.	-0.553	-0.440	-0.536	-0.447
	(-0.52)	(-0.41)	(-0.49)	(-0.40)
Acq. Return Vol.	0.968	1.023	1.079	1.124
	(0.63)	(0.66)	(0.70)	(0.73)
Log(Acq. HHI)	0.169	0.179	0.218	0.228
	(0.53)	(0.55)	(0.69)	(0.72)
Acq. CAR[-3, +3]	0.002	0.002	0.002	0.001
	(0.92)	(0.84)	(0.66)	(0.59)
Log(Acq. Goodwill)			0.025***	0.025***
			(3.27)	(3.27)
Year FE	Y	Y	Y	Y
Acquirer Ind. FE	Y	Y	Y	Y
Target Ind. FE	Y	Y	Y	Y
Sample	Full	Full	Full	Full
Observations	519	519	518	518
Adj. R^2 (%)	7.7	7.8	10.0	10.1

This table reports coefficients and t-statistics (in parentheses) from regressions of post-acquisition goodwill impairment outcomes on synergy disclosure for the deals with UK public target firms. Columns (1)–(2) use specifications without the goodwill control; columns (3)–(4) add *Log(Acq. Goodwill)* as an additional control. The columns alternate between textual disclosure (*I(Textual)*, columns 1 and 3) and numeric disclosure (*I(Numeric)*, columns 2 and 4) over a three-year horizon. All models include announcement-year, acquirer FF-30 industry, and target FF-30 industry fixed effects. The t-statistics are based on standard errors clustered by acquirer FF-30 industry. The symbols *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels (two-tailed), respectively. See Appendix B for variable definitions.