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What's really in a deal? Evidence from textual analysis of M&A conference calls

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Abstract

Using a sample of 814 transcripts from 2011 to 2018, we examine information within merger and acquisition conference calls. Textual analysis reveals significant differences between the content of M&A call transcripts and both contemporaneous corporate press releases and prior earnings conference calls. We find participation of target executive types in M&A calls occurs more frequently in diversifying acquisitions and is related to payment choice consistent with promoting managerial sector-specific skills and incentive alignment, respectively. Retention of participating target executives is associated with a negative market reaction. We also identify a negative relation between textual sentiment and market reaction consistent with a response to higher levels of information asymmetry. Greater quantitative information, however, is positively related to the market reaction of M&A calls. We develop targeted M&A motive dictionaries to identify financial and strategic content within call transcripts. Consistent with prior literature on merger motivation, deals with more finance (strategy)-oriented words have a higher (lower) market reaction. Overall, our results show that deal-related textual analysis explains a highly significant and economically important component of gains/losses to acquirers.

KEYWORDS

acquisitions, conference calls, mergers, press releases, textual analysis

JEL CLASSIFICATION

G14; G32; G34; M12

1 | INTRODUCTION

Over the past decades, voluntary disclosure has become an important topic of academic research in both finance and accounting. Conference calls are a common medium for evaluating voluntary disclosure and have been examined in various aspects: the factors influencing a firm's decision to host an earnings conference call (Tasker, 1998), the impact of calls on trading (Frankel et al., 1999), and the effect of calls on analysts' forecasts (Bowen et al., 2002). However, most of these previous studies focus on earnings conference calls, which are usually held at the end of each firm fiscal quarter. In this study, we focus on a relatively new type of conference call: merger and acquisition (M&A) conference calls, which discuss specific transactions. Since much of the variation in acquirer returns remains unexplained (Golubov et al., 2015), we seek to answer the question: what information is inside an M&A call and how do investors react to this information?

M&A conference calls are usually held in conjunction with or after an M&A announcement as a means of voluntary disclosure. To the best of our knowledge, there are only three published papers that examine M&A conference calls (Kimbrough

& Louis, 2011; Siougle et al., 2014; and Fraunhoffer et al., 2018).[1] Using a sample of 1,228 M&A deals in the United States from 2002 to 2006, Kimbrough and Louis (2011) document that M&A conference calls are held when transactions are large and financed by stock. They also find that the average market reaction to a merger announcement is significantly more favorable when the deal is accompanied by an M&A conference call. Siougle et al. (2014) examine a sample of M&A calls in the United Kingdom and find that these calls reduce information asymmetry in stock and options markets and improve sell-side analysts' earnings forecast accuracy. The most recent paper by Fraunhoffer et al. (2018) investigates M&A calls in Europe and shows the premium return for M&A calls is only present in the UK and France and in industries with a focus on research and development. However, none of these prior studies examines the content (i.e., acquirer and target management participants, tone) of M&A conference calls.

We collect M&A conference call data from 2011 to 2018 through Capital IQ and analyze transcripts to extract information such as executive participants, sentiment, and quantitative information within each call. After matching with the SDC Platinum M&A database, we identify 814 merger calls associated with unique merger announcements. Addressing selection bias via the Heckman (1976, 1979) correction model, we show that higher percentage of stock payment and acquisitions of targets in different industries increase the likelihood of both target CEO and CFO participation in the M&A call. The former result is consistent with a tradeoff between realized and unrealized benefits for managers of the target, and the latter result suggests that acquirers seek to publicly demonstrate domain-specific knowledge of target management on the call. We also estimate the market reaction to retention of target management M&A call participants and, consistent with prior literature (Bargeron et al., 2017), find a negative and economically significant response in acquirer stock price.

We next perform textual analysis on event transcripts to determine whether sentiment (i.e., tone) within M&A conference calls influences the market reaction to deals. Textual analysis methods in finance and accounting literature are diverse, widely used, and well summarized in Li (2010), Kearney and Liu (2014), Das (2014), and Loughran and McDonald (2016). Specific subcategories of textual analysis include topic modeling (Dyer et al., 2017; Mazis & Tskrekos, 2017; etc.), document similarity (Brown & Tucker, 2011; Lang & Stice-Lawrence, 2015), document readability (De Franco et al., 2015; Li, 2008), and sentiment analysis (Das & Chen, 2007; Tetlock, 2007). We examine this last category in an M&A disclosure context by applying Loughran and McDonald (2011) dictionaries and find that positive net tone has both a statistically and economically significant *negative* association with acquirer returns.

We extract other pertinent data including the level of quantitative information within each M&A call. Prior research demonstrates that the impact of quantitative versus qualitative information on the market is different (Hutton et al., 2003). In recent work, Zhou (2017) proposes that quantitative information is more precise and has a greater positive market reaction than qualitative information around quarterly earnings conference calls. We predict and find that acquiring firm shareholders react more positively to M&A conference calls with higher levels of quantitative information. Specifically, we find that a one standard deviation increase in the percent of numbers spoken during an M&A call increases acquirer market reaction by nearly 0.44% (significant at the 5% level), representing a $60.8 million increase relative to mean firm market capitalization in our sample.

We then explore the relationship between the negative influence of net positive tone on acquirer returns and the level of information asymmetry. We employ three proxies for a higher level of information asymmetry: private listing status of the target, greater HHI index of the acquiring firm's industry, and lower information intensity (i.e., less frequent 8-K filings) of the acquiring firm. Consistently, significant net tone interaction terms across all three measures suggest that the negative effect of tone is attributed to deals with greater information asymmetry.

Our final analysis examines deal motives within M&A calls. Previous research (Gorbenko & Malenko, 2014; Rodrigues & Stegemoller, 2014) employing novel data of M&A motive characteristics is often restricted by limited sample size of hand-collected data. M&A transaction motives fall into two general groups: financial bidders and strategic bidders. Financial bidders seek undervalued firms and treat the target firm as a part of their portfolio, while strategic bidders focus on long-term operational synergies and try to integrate the target into their own business (Gorbenko & Malenko, 2014). At the behest of Loughran and McDonald (2016), we build concise, targeted dictionaries to represent these two different motives. Specifically, we identify relevant keywords in M&A calls and separate them into two groups of financial and strategic-associated words. Cash-financed deals of larger acquirers with lower analyst coverage use more financial language. Target CEO (CFO) appearances are associated with fewer financial and more (less) strategic language. We further find that the market reacts more positively to more frequent occurrence of financial words and negatively to strategic words. A one standard deviation increase in financial (strategic) words increases (decreases) the market value for the mean size acquirer in our sample by approximately $70 million ($88 million). This result is consistent with previous qualitative research identifying differences in gains/losses between strategic and financial mergers.

Our study makes several contributions to the literature. First, our findings provide further insight into the determinants of variation within acquirer returns. Many prior studies examine M&A announcement returns (Bradley et al., 1988; Jensen &

Ruback, 1983; Masulis et al., 2007; Moeller et al., 2005; Phan, 2014); however, there is still a large proportion of unexplained variation in acquirer announcement stock returns. Our composition analysis of M&A conference calls provides a better understanding of the gains/losses to acquirers.

Second, our study contributes to the existing literature on voluntary disclosure by analyzing the content of management communication regarding a specific, often unexpected, corporate activity. While previous research focuses primarily on earnings conference calls, our research highlights the usefulness of voluntary disclosure for an unscheduled corporate event, particularly when information asymmetry about the event is high (i.e., acquisitions of private targets).

Third, our research advances existing research on M&A calls by adding detailed content analysis. Previous research on this topic (Fraunhoffer et al., 2018; Kimbrough & Louis, 2011; Rohrer, 2017; Siougle et al., 2014) focuses on the determinants or outcomes of hosting a call. Our paper is one of two papers, to the best of our knowledge, to analyze textual content of M&A calls and examine its impact on acquirer returns. A concurrent paper, Dasgupta et al. (2020), uses a different textual analysis methodology (topic modeling), which similarly shows the importance of target/acquirer characteristics and deal payment method-related content in M&A calls. Their study also examines other M&A call-related outcomes including the decision to hold M&A calls, deal completion probability, and market reaction. While we also examine the determinants of holding M&A calls and market reactions, we do so in the context of sentiment in the presence of information asymmetry, quantitative information, and financial/strategic deal motivation. We further conduct our own unique examination of M&A call content relative to press releases and earnings calls, as well as determinants of participation and market reaction to the retention of target firm executives participating in the M&A call.

This paper is organized as follows. In Section 2, we develop our hypotheses related to information inside M&A calls. Section 3 describes the procedure of obtaining our M&A sample. Empirical results are described in Section 4, while Section 5 concludes.

2 | HYPOTHESIS DEVELOPMENT

2.1 | Attendance and retention of top target executives

Fich et al. (2016) point out that acquirers retaining the target CEO in M&A transactions receive a significantly lower return in both short- and long-time periods. The unexpected conclusion of Bargeron et al. (2017) partly supports this result by providing evidence that acquirers pay higher acquisition premiums to target shareholders when the target CEO is retained after the transaction. Therefore, if the mechanisms we describe above are true, we would also expect the market to react negatively to target executives' attendance on, and particularly their retention following, M&A calls.

> **Hypothesis 1:** Retention of top target firm executives appearing on M&A calls exacerbates the negative market impact on the CAR of the acquiring firm.

The participation of top executives is one of the most fundamental pieces of information contained in conference call transcripts. While CEOs and CFOs of a call hosting acquirer firm are very frequent participants, we seek to discover the driving factors of top *target* executives attending a conference call about a proposed transaction. Previous literature shows that in a stock-based merger, target executives face a tradeoff between tax benefits of stock-based sales and risk-minimizing benefits of cash payment (Faccio & Masulis, 2005). When they choose to accept a stock offer, target managers have greater incentives to attend an M&A call since the future value of their stake is linked to ongoing performance of the acquiring company. Target managers are also more likely to retain positions within the acquiring firm when the deal has a higher stock component (Ghosh & Ruland, 1998), and are thus more likely to participate in the M&A conference call. We summarize our second hypothesis accordingly:

> **Hypothesis 2:** Attendance of top executives of the target firm is positively related to the percentage of stock in the M&A offer.

Moreover, differences in acquirer and target firm characteristics may also influence executive participation in M&A calls. Specifically, Walsh (1988) empirically verifies the early work of Pitts (1976) who argues that an acquirer is more likely to retain target management in a diversifying acquisition. Bargeron et al. (2013) add that target firm management is more valuable when acquirer management's knowledge of the target firm's industry is limited. Therefore, in an unrelated acquisition, we hypothesize that

target management is more likely participate on an M&A call in order to capably demonstrate industry-specific expertise for the acquirer to the marketplace.

Hypothesis 3: Attendance of top executives of the target firm is more likely when the acquirer and target firms are in different industries.

2.2 | Net tone and market reaction

The net tone of language used in information disclosures, that is, the net usage of positive words versus negative words, is one of the most common metrics used in previous literature employing textual analysis. Early studies have examined the impact of net tone in different kinds of information disclosures, including press releases (Davis et al., 2012), earnings conference calls (Price et al., 2012), and management discussion and analysis (MD&A) disclosures (Davis & Tama-Sweet, 2012). We investigate how net tone of M&A conference calls affects abnormal returns surrounding acquisitions.

Consistent with previous literature, one would expect the marketplace to react positively to positive tone of information disclosure events (Kimbrough, 2005; Loughran & McDonald, 2011). However, in comparison with other scheduled disclosure events such as earnings conference calls, the level of information asymmetry is much higher between management and investor/analyst participants of an M&A conference call.[2] Moreover, managers of acquiring firms are inclined to "sell the marketplace" on the transaction's viability to ensure that it is completed (Malmendier & Tate, 2008). As a result, words spoken by an acquiring management team are expected to be overly positive, which often means that the sentiment they use to describe a deal may be "too good to be true." A potential question that follows is how much the market believes such information and whether the market can distinguish overoptimistic managers from those who are more realistic about deal prospects. Therefore, we propose two opposing hypotheses and look for clarity in the empirical results.

Hypothesis 4a: Net tone of an M&A conference call is positively associated with the CAR of the acquiring firm.

Hypothesis 4b: Net tone of an M&A conference call is negatively associated with the CAR of the acquiring firm.

2.3 | Information in numbers

Early literature shows that disclosure of both qualitative and quantitative information is valuable to investors. However, more recent studies point out that the impact of these two types of information on the market is different. For example, Hutton et al. (2003) find that when there are no numbers in the headline of a press disclosure, the market tends to underreact to the disclosure. Based on this fact, the authors argue that numbers in disclosure serve as salient information.

Since quantitative information has a stronger market impact, Chuprinin et al. (2017) and Zhou (2017) point out that the proportion of quantitative and qualitative information brings additional insight. A higher percentage of quantitative information, defined as tangible information in Chuprinin et al. (2017), is more precise and subject to easier interpretation.

It is therefore possible that information tangibility within M&A conference calls plays an important role in explaining acquirer equity market reaction. We follow the approach used by Zhou (2017), which uses the percentage of numbers in a conference call as a measure of information tangibility, and examine its impact on market reaction to M&A conference calls. Since higher tangibility of information implies higher quality disclosure, we predict that the market reacts more positively to M&A conference calls with a higher percentage of numbers.

Hypothesis 5: A higher percentage of numbers within an M&A conference call is associated with a higher CAR of the acquiring firm

2.4 | Information asymmetry and sentiment

If the market reaction depends on whether or not investors have enough supporting information to verify messaging presented by the manager, information asymmetry will play an important role in the market response to managerial sentiment during the M&A call. If information asymmetry between the management team and investors is relatively low (i.e., for public target

firms), investors can use other available external information to ascertain whether management is telling the truth about deal prospects. On the other hand, when information asymmetry is high (i.e., for private target firms), investors rely more heavily on information presented by management and may interpret this information as more believable. Give this tension, we again rely on empirics to test the following hypotheses:

Hypothesis 6a: Information asymmetry mitigates negative acquirer market reaction to net tone within an M&A conference call

Hypothesis 6b: Information asymmetry exacerbates negative acquirer market reaction to net tone within an M&A conference call

2.5 | Recognition of M&A motives via conference calls

Market reactions to M&A transactions have been studied extensively in the literature (Gondhalekar et al., 2004; Masulis et al., 2007; Moeller et al., 2004; Rodrigues & Stegemoller, 2014; Schwert, 2000; Travlos, 1987). Many of these prior works focus on how different firm and deal characteristics affect market reaction. These results are often clear and strong. However, in many cases, sample size of deals' non-standard characteristics, such as deal motive, is small due to the high cost associated with hand-collected data. However, employing M&A conference call transcripts and textual analysis techniques, we are able to identify such characteristics and use them to better explain market reactions to acquisitions.

It is commonly accepted that bidders in M&A transactions can be divided into two groups: financial bidders and strategic bidders. Financial bidders seek undervalued firms and treat the target firm as a part of their portfolio, while strategic bidders focus on long-term operational synergies and try to integrate the target into their own business (Gorbenko & Malenko, 2014). Using a small sample of special purpose acquisition corporations, Rodrigues and Stegemoller (2014) conclude that, compared with strategic M&A transactions, financial M&A transactions have significantly higher announcement abnormal returns. Motivated by their work, we create two custom M&A motive dictionaries using keywords (provided in Appendix III) relevant to financial and strategic transactions, respectively, and use the proportion of words in these two dictionaries as measures of how likely a deal is to be finance- or strategy-motivated. Loughran and McDonald (2016) note that "one of the simplest, but at the same time the most powerful, approaches to textual analysis is facilitated by hypotheses that allow the research to target a few specific words or phrases." In an effort to target M&A-specific content and follow the guidance of Loughran and McDonald (2016), each of these dictionaries is intentionally concise (i.e., less than 25 words). According to prior literature, we expect that the market reacts more positively to higher percentages of financial words and lower to higher percentages of strategic words.

Hypothesis 7: More frequent use of financial words and less frequent use of strategic words during M&A calls are associated with a higher CAR of the acquiring firm.

3 | DATA

3.1 | M&A conference calls

We begin the data collection process by extracting all announced mergers and acquisitions between January 2011 and December 2018 from the SDC Platinum Database. We begin our sample in 2011 as this is the year in which M&A conference call transcripts are widely available through S&P Capital IQ.[3] To screen deals in the SDC database, we set several restrictions. We require that deal value is at least 1% of the acquirer's market value or larger than $5 million, the acquirer is public, the acquirer can be linked to CRSP and COMPUSTAT, and that deal status is completed. Applying these filters, we identify 2,945 unique merger announcements.

For each of the 2,945 deal announcements, we manually collect M&A conference call transcripts from Capital IQ. When matching each conference call with deal information in the SDC database, we require that the date of the M&A conference call be within 60 days following the deal announcement to increase the accuracy of the matching process.[4] After careful matching, we identify 906 unique merger calls associated with 934 merger announcements.[5] Among the identified calls, we obtain 814 unique M&A conference call transcripts available in Capital IQ.[6] Merger-related conference calls occur for approximately 32% of all the deals in our sample. Our coverage rate is higher than prior studies since we use a 1% deal ratio threshold, which is

smaller than that of Kimbrough and Louis (2011) (10% deal ratio with 14.9% coverage). 91.5% (70%) of M&A calls occur within 3 days of (on the same day as) the deal announcement date. We report descriptive statistics for the full sample in Table 1.[7]

From Panel A of Table 1, we find distinguishing differences between deals with and without M&A conference calls. Consistent with prior research, acquirers who choose to hold conference calls are much larger, have a lower book-to-market ratio, and have higher analyst coverage than firms that do not hold M&A conference calls. For deal-level characteristics, firms with M&A conference calls have higher payment in stock and a larger deal ratio, and the target is less likely to be private. Bidders are more likely to hold a call when the target is in the same industry.

3.2 | Information in M&A calls

After obtaining individual M&A call transcripts from Capital IQ, we parse and structure the obtained HTML file for each conference call. We identify each participant's name and the paragraph(s) associated with that person in each part (presentation or Q&A) of the transcript using Python's BeautifulSoup package.[8] We also identify the affiliation of each participant on the call (e.g., acquirer/target executive or analyst using Execucomp and other data sources) and various textual metrics (e.g., tone, numbers) in the speech of each participant.

3.2.1 | Participation of executives on M&A calls

For identification of executive participant affiliation, we first use the summary page in each M&A call to broadly separate participants into two groups: executives or analysts. For executives, we identify positions in the firm by extracting keywords such as CEO (Chief Executive Officer) and CFO (Chief Financial Officer) from each participant's title in the executive subgroup. If there is no information in the call summary page, we manually check each participant's position in the firm either within the M&A call content or through Internet searches. We then use Execucomp to check whether each executive is from the acquirer or target.[9]

As shown in Panel B of Table 1, acquirer executives, specifically the CEO or CFO, participate in the majority M&A calls. Since mergers and acquisitions usually lead to a major change in the company's future direction, acquirer executives need to

TABLE 1 Summary statistics for full sample

	Full sample		Call sample		No call sample			
	(*N* = 2,825)		(*N* = 814)		(*N* = 2011)			
Variables	**Mean**	**Std. Dev.**	**Mean**	**Std. Dev.**	**Mean**	**Std. Dev.**	**Diff**	***T*-stat**
Panel A: Acquirer/deal characteristics								
Percent of Stock	18.12	32.90	24.29	35.74	15.62	31.34	1.02	0.60
Deal Ratio	0.20	0.30	0.32	0.36	0.15	0.26	0.08***	4.35
Ln(Analyst)	2.07	0.87	2.23	0.84	2.01	0.87	0.35***	9.00
Same Industry	0.60	0.49	0.70	0.46	0.56	0.50	0.08***	3.52
Private	0.44	0.50	0.29	0.45	0.50	0.50	−0.13***	−5.29
Foreign Target	0.23	0.42	0.21	0.41	0.24	0.43	0.02	1.06
Ln(Size)	7.99	1.75	8.17	1.68	7.92	1.77	0.70***	8.29
Book to Market	0.56	0.40	0.51	0.36	0.59	0.41	−0.06***	−3.49
Leverage	0.24	0.19	0.23	0.18	0.26	0.19	−0.03***	2.78
Panel B: M&A call characteristics								
Acquirer CEO			0.96	0.21				
Acquirer CFO			0.88	0.22				
CARs(−1,+1)			0.02	0.08				
Date Difference			2.46	10.24				

Note: Table reports descriptive statistics for the full sample and M&A call subsample, respectively. A detailed description of all variables can be found in Appendix I. All variables are winsorized at the 1% and 99% levels.

TABLE 2 Comparison among different disclosure channels

	M&A Call			Press Release					Earnings Call				
	N	Mean	Std. Dev.	*N*	Mean	Std. Dev.	Diff	T-stat	*N*	Mean	Std. Dev.	Diff	*T*-stat
Total Words	814	5,420	1,991	670	2,684	5,618	2,736***	12.000	814	7,135	2,101	−1,715***	−16.904
Positive Tone	814	1.87%	0.47%	670	1.02%	0.59%	0.85%***	30.080	814	1.74%	0.28%	0.13%***	6.780
Negative Tone	814	0.72%	0.22%	670	1.04%	0.64%	−0.32%***	−12.324	814	0.82%	0.24%	−0.10%***	−8.763
Net Tone	814	1.13%	0.57%	670	−0.02%	0.88%	1.15%***	28.949	814	0.84%	0.55%	0.29%***	10.446
% Numbers	814	2.02%	0.67%	670	10.71%	8.57%	−8.69%***	−26.170	814	2.41%	0.79%	−0.39%***	−10.742
% Uncertainty	814	1.11%	0.61%	670	1.44%	0.75%	−0.33%***	−9.247	814	0.95%	0.24%	0.16%***	6.964
% Fin Words	814	1.27%	0.56%	670	2.06%	1.26%	−0.79%***	−15.099	814	0.76%	0.13%	0.51%***	25.310
% Str Words	814	2.45%	0.69%	670	2.34%	1.23%	0.11%**	2.062	814	1.05%	0.35%	1.40%***	51.626

Note: Table displays comparisons among M&A calls, press releases, and earnings conference calls. For press releases, we use the relevant 8-K filing around the M&A announcement date. For earnings conference calls, we use the corresponding prior earnings conference call in the same period for firms with M&A calls (i.e., immediately before an M&A call). The difference displayed represents the difference in means between press releases or earnings calls, respectively, and M&A calls. *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively.

participate and explain to analysts and investors how the deal will positively impact the future of the firm. M&A conference calls are generally held by acquirers; therefore, target executives may or may not have an option to attend the call. We directly examine target management participation in Section 4.1.

3.2.2 | Content inside M&A calls

We next shift our focus to content inside M&A conference call transcripts. Following previous literature, we use Loughran and McDonald (2011) dictionaries to separately measure the different sentiment inside each M&A call. This includes positive (negative) tone, defined as the number of positive (negative) words divided by the total number of words in merger calls. We use net positive tone, which is positive tone minus negative tone for our regression analysis. For quantitative information inside the merger calls, we follow the same procedures as described by Zhou (2017). We look for any numeric pattern (excluding numbers more likely to be years) that begins with whitespace or a dollar sign ($) and followed by numbers (0–9), a comma (,), or a period (.). We calculate the percentage of numbers as the total count of numbers divided by the total number of words in each section of the transcript. Table 2 reports summary statistics for information inside M&A conference calls.

From Table 2, we find that the average number of words in an M&A transcript is around 5,400. Approximately 38% (62%) of words are found in the presentation (Q&A) section of a typical merger call. The percentage of positive and negative words in M&A calls is around 1.87% and 0.72%, respectively, resulting in net tone of 1.13%. We observe just over 2% numeric content in each M&A call. Since these statistics are difficult to interpret in isolation, we contrast them against the content of other corporate disclosures related to M&A activity.

In our first comparison, we contrast the content of M&A calls to that of M&A press releases (i.e., 8-K filings describing the M&A corporate event). Unlike M&A calls, M&A press releases are mandatory disclosures required by the U.S. Securities and Exchange Commission.[10] We define a merger-related press release as the nearest 8-K filing around the M&A announcement date with merger relevant keywords inside the document.[11] In our second comparison, we examine earnings conference call transcripts.[12]

Table 2 gives us a clear view that sentiment inside M&A calls is significantly higher than for M&A press releases or earnings conference calls. The net tone for an M&A press release is indistinguishable from zero. This result is consistent with an 8-K filing being a mandatory disclosure, which is subject to regulation and is therefore expected to be more conservative. This is also supported by the percentage of uncertainty words in M&A 8-K filings, which is 0.33% higher than for M&A calls. For earnings conference calls, the net positive sentiment is also significantly (0.31%) lower than for M&A calls. The consistently significant textual analysis differences across these three disclosures suggest that M&A calls are a unique mechanism for communicating deal-related information to the marketplace. More specifically, the results provide initial support for our argument that call participants express far more optimism during M&A calls compared with other forms of corporate disclosure.[13]

3.3 | Endogenous choice of hosting an M&A call

An important potential endogeneity concern exists regarding the holding an M&A conference call since the decision to do so is made by the acquiring firm. This problem has been raised by previous research (Kimbrough & Louis, 2011; Rohrer, 2017). In our empirical methodology, we address this issue using the approach of Kimbrough and Louis (2011). We run a probit regression model to determine the probability of hosting an M&A call in our sample and provide the results in Appendix II. We then calculate the inverse Mills ratio from the Heckman (1976, 1979) selection model to include within all of our subsequent multivariate analyses.[14]

4 | EMPIRICAL RESULTS

4.1 | Target executives in M&A calls

4.1.1 | Appearances and retention of target executives

In contrast to acquirer management M&A call participation in Section 3.2.1, target side participation is much lower: Panel A of Table 3 shows that the target CEO (CFO) participates in approximately 29% (7%) of M&A calls.[15] We then collect retention

TABLE 3 Target executive appearance and retention analysis

Panel A: Target executive appearance and retention summary statistics

Variables	*N*	Mean	Std. Dev
Target Executive Appearance	814	0.287	0.452
Target CEO Appearance	814	0.072	0.257
Target CFO Appearance	814	0.303	0.462
Target Executive Retention	288	0.604	0.490
Target CEO Retention	288	0.413	0.493
Target CFO Retention	288	0.069	0.255

Panel B: Univariate analysis of acquirer market reaction

CAR(−1,+1)	Retained Sample			Non-Retained Sample				
Appearance	*N*	Mean	Std. Dev.	*N*	Mean	Std. Dev.	Diff	*T*-stat
Target Executive	174	−1.519%	9.396%	114	4.135%	9.396%	−5.654%***	6.37
Target CEO	119	−1.095%	6.643%	169	1.995%	8.402%	−3.090%***	3.34
Target CFO	20	−0.963%	7.081%	268	0.844%	7.913%	−1.807%	0.99

Panel C: Appearance probability probit and retention regression analysis

	(1)	(2)	(3)	(4)	(5)	(6)
Variables	Pr(Target Executive)	Pr(Target CEO)	Pr(Target CFO)	CAR(−1,+1)	CAR(−1,+1)	CAR(−1,+1)
Target Executive Retention				−0.037***		
				(−6.504)		
Target CEO Retention					−0.028***	
					(−4.130)	
Target CFO Retention						−0.028*
						(−1.893)
Inverse Mills Ratio (Target)				0.097	0.131	0.109
				(0.263)	(0.352)	(0.289)
Percent of Stock	0.010**	0.009**	0.006	−0.000	−0.000	−0.000
	(2.431)	(2.136)	(0.798)	(−0.070)	(−0.020)	(−0.113)
Deal Ratio	−0.938	−1.352*	−1.220	0.057	0.060	0.066
	(−1.363)	(−1.896)	(−0.944)	(0.783)	(0.808)	(0.898)

(Continues)

TABLE 3 (Continued)

Panel C: Appearance probability probit and retention regression analysis						
	(1)	(2)	(3)	(4)	(5)	(6)
Variables	**Pr(Target Executive)**	**Pr(Target CEO)**	**Pr(Target CFO)**	**CAR(−1,+1)**	**CAR(−1,+1)**	**CAR(−1,+1)**
Ln(Analyst)	−0.227	−0.308**	−0.235	−0.001	−0.001	0.000
	(−1.526)	(−2.012)	(−0.919)	(−0.056)	(−0.064)	(0.010)
Same Industry	−0.641***	−0.700***	−0.453	0.013	0.012	0.016
	(−2.714)	(−2.758)	(−0.985)	(0.257)	(0.231)	(0.301)
Private	0.060	0.056	−0.441	0.005	0.005	0.004
	(0.222)	(0.192)	(−0.817)	(0.608)	(0.557)	(0.467)
Foreign Target	−0.075	−0.093	−0.256	−0.011	−0.012	−0.011
	(−0.334)	(−0.383)	(−0.663)	(−1.430)	(−1.516)	(−1.408)
Ln(Size)	0.158**	0.156**	0.122	−0.004	−0.004	−0.005
	(2.235)	(2.053)	(1.079)	(−0.358)	(−0.290)	(−0.390)
Book to Market	0.312	0.329	0.237	−0.032	−0.032	−0.035
	(0.866)	(0.868)	(0.471)	(−1.083)	(−1.072)	(−1.166)
Leverage	−0.649	−1.066*	−1.135	0.025	0.019	0.023
	(−1.064)	(−1.683)	(−1.048)	(0.508)	(0.367)	(0.453)
Date Diff	0.007	0.004	0.015	0.000	0.000	0.000
	(0.845)	(0.480)	(1.548)	(0.019)	(0.026)	(0.002)
Inverse Mills Ratio (M&A Call)	−3.019***	−3.903***	−3.085*	0.013	0.008	0.029
	(−2.968)	(−3.714)	(−1.689)	(0.056)	(0.035)	(0.123)
Constant	1.936	2.610	0.414	0.004	−0.020	−0.024
	(1.182)	(1.494)	(0.129)	(0.052)	(−0.232)	(−0.274)
Additional Controls	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	814	814	814	814	814	814
Pseudo/Adjusted R^2	.162	.186	.157	.166	.145	.132

Note: Table focuses on the analysis of the probability of target executives' appearances on M&A calls and CARs associated with retention of appearing target executives. Panel A reports summary statistics for our appearance retention variables. Panel B shows the univariate analysis of market reaction to target executive appearances between retained and non-retained subsamples. In Panel C, column (1) reports probit results for participation of any executive from target firm. Columns (2) and (3) represent the involvement of target CEO and CFO separately. We employ a regression analysis on acquirer stock market reaction to the appearance of retained executives in columns (4) through (6) using the *inverse Mills ratio (Target)* from column (1), respectively. Acquirer cumulative abnormal return (CAR) is around the event date (−1 days to + 1 days). A detailed description of independent variables is provided in Appendix I. *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively.

information for all M&A calls in which target firm executives attended. We manually check each target executive's career history for the 288 M&A calls with target firm executive appearances. We employ various resources, including Capital IQ, LinkedIn, and company annual reports to determine whether or not each target executive has been retained by the acquirer.

Target executives are retained in 60% of instances following participation on conference calls. This result is similar to overall target management retention from Fich et al. (2016) but is 10% lower than the study of 761 managers in Walsh (1988). CEOs (CFOs) are retained in just 41% (6.9%) of target participations on M&A conference calls. This compares with 61% (73%) retention of CEOs in Walsh (1988). Overall, our results show that target management retention is less likely following M&A conference call participation. This suggests that a final responsibility for many target managers is to appear on an M&A conference call to "sell the marketplace" on a deal's bright prospects.

4.1.2 | Market reaction to target executive retention

Panel B of Table 3 presents univariate analyses of acquirer market reaction between target management retention and non-retention subsamples. Deals with retained target executives have statistically and economically significantly lower market reaction than the non-retained sample. Acquirer CARs around M&A calls involving retained target executives (CEOs) are 5.65% (3.09%) lower than those without target executive (CEO) retention. These results support our first hypothesis that the negative acquirer market reaction is due to retention of target executives.

4.1.3 | Target executive appearance determinants, retention, and market reaction

We hypothesize that greater proportions of stock payment and diversifying acquisitions will increase the likelihood of appearances by target executives. Target executives are sellers who are faced with a tradeoff between the tax benefits of stock and risk minimization benefits of cash payment (Faccio & Masulis, 2005). It follows that target executives will have greater incentive to participate in an M&A conference call with higher levels of stock payment. Further, target executives from different industries are more likely to have specific expertise that is distinct from acquirer management. In this scenario, target management may be more likely to appear on M&A conference calls in order to demonstrate said expertise to the marketplace.

To test our hypothesis related to the appearance of top executives, we use the following probit regression model:

$$\begin{aligned} Prob\,(ExecutiveParticipation) &= \alpha + \beta_1 \times PercentofStock + \beta_2 \times DealRatio \\ &+ \beta_3 \times Ln\,(Analyst) + \beta_4 \times SameIndustry + \beta_5 \times Private \\ &+ \beta_6 \times Ln\,(Size) + \beta_7 \times BooktoMarket + \beta_8 \times Leverage \\ &+ \beta_9 \times InverseMillsRatio\,(M\&ACall) + IndustryFixedEffects \\ &+ YearFixedEffects + \varepsilon \end{aligned} \tag{1}$$

The dependent variable is an indicator variable equal to one if the M&A conference call includes that target executive position's participation and zero otherwise. The primary independent variables of interest are *Percent of Stock*, measured as stock payment divided by total value of the M&A deal, and *Same Industry*, which is an indicator variable equal to 1 (0) if the acquirer and target (do not) share the same primary industry.[16] We also incorporate other control variables that may affect the appearance of target executives. We include the ratio of deal to acquirer size (*Deal Ratio*), analyst coverage (*Ln(Analyst)*), acquirer equity market value (*Ln(Size)*), acquirer leverage, and acquirer book-to-market ratio. To address selection bias, the inverse Mills ratio from the M&A call probit model in Appendix II (*inverse Mills ratio (M&A Call*)) is also included. Detailed descriptions of each independent variable can be found in Appendix I. Results from estimation of Equation (1) are reported in the first three columns of Panel C in Table 3.

We find evidence supporting our second and third hypotheses. Both an increase in the percentage of stock payment (*Percent of Stock*) and a diversifying deal (negative coefficient on *Same Industry)* increase the likelihood of an appearance by target executives in column (1). However, when we separate our analysis into individual titles, we find significant results only for target CEOs in column (2), but not CFOs in column (3). We view the lack of significance in column (3) with caution as our sample includes just 20 observations in which the participating target CFO is retained. We also find that target executives are more likely to appear when acquired by larger firms.

In the hypothesis section, we argue that the market will react negatively to retention of target firm executives following M&A calls. We attempt to confirm the univariate tests in Panel B in Table 3 by estimating the following multivariate regression:

$$
\begin{aligned}
CAR(-1,+1) = {} & \alpha + \beta_1 \times Executive\text{Re}tention + \beta_2 \\
& \times InverseMillsRatio\,(Target) + \beta_3 \times PercentofStock + \beta_4 \\
& \times DealRatio + \beta_5 \times Ln\,(Analyst) + \beta_6 \times SameIndustry + \beta_7 \\
& \times Private + \beta_8 \times Ln\,(Size) + \beta_9 \times BooktoMarket + \beta_{10} \\
& \times Leverage + \beta_{11} \times InverseMillsRatio\,(M\&ACall) \\
& + IndustryFixedEffects + YearFixedEffects + \varepsilon
\end{aligned}
\tag{2}
$$

The dependent variable here is the cumulative abnormal return from one day before and one day after the M&A call. The independent variable of interest is *Target Executive Retention*, which is a indicator variable equal to one when the specified participating executive in the M&A call is retained and zero otherwise. We also include relevant control variables and the inverse Mills ratio from the probit specification in column (1) (*inverse Mills ratio (Target)*).[17] The regression results of equation (2) are shown in the last three columns of Panel C in Table 3.

From column (4) in Panel C in Table 3, we see that participation of any target manager decreases market reaction by 3.7%, which translates into an additional loss of $511 million from mean acquirer market value of our sample. This result reinforces our first hypothesis and suggests that the participation of target executives play an economically material role in the market reaction. The result is similar if we only focus on target CEOs and CFOs in columns (5) and (6), respectively. Examining the univariate results in Panel B from a different perspective, untabulated specifications show no statistical significance for a coefficient capturing target executives who are *not* retained, further confirming our first hypothesis.

4.2 | Market reaction to M&A call content

4.2.1 | Sentiment within M&A call transcripts

The first type of content-level information that we examine is sentiment (i.e., net tone) within M&A call transcripts. As noted previously, we do not have a directional expectation of the effect of sentiment due to the inherent ex ante optimism of management team(s) that undertake M&A deals. To answer this empirical question, we employ equation (2) but replace executive retention with *Net Tone* measured within each M&A call using Loughran and McDonald (2011) dictionaries. The results are shown in the first three columns of Table 4.

In column (1) of Table 4, we observe a significantly negative relationship between market reaction and net positive tone used in the M&A call. This result indicates that a one standard deviation increase in net positive tone within an M&A call decreases market reaction by 1.3% (significant at the 1% level). This result is also economically significant in that a one percent increase in *Net Tone* is associated with a $179 million decline in acquirer market capitalization.[18]

One concern of our previous regression analysis is the confounding effect of the M&A announcement itself. Most M&A calls are held on the same date of the M&A announcement, and it is therefore difficult to distinguish the effect of M&A calls from the market reaction to the deal itself. To address this issue, we include a control variable *Date Difference* (i.e., the number of days between deal announcement and the M&A call) in all specifications.[19] Further, we repeat our primary specification in Table 4 using two different subsamples. First, we include only calls that occur at least three days after the M&A announcement date. The result is shown in column (2) of Table 4. Despite the greatly reduced number of observations (69 versus 814 in the full specification) and a control for the deal announcement CAR, the coefficient on net tone remains negative and statistically significant. Second, in column (3), we include only observations with deal announcements and M&A calls both occurring in either the premarket or postmarket period. Limited equity market activity during these periods weakens the influence of market reaction to M&A call net tone (Barclay & Hendershott, 2004). Again, the coefficient on net tone is negative and statistically significant. Overall, results in Table 4 support hypothesis 4b.

4.2.2 | Quantitative information

In an examination of quarterly earnings conference calls, Zhou (2017) proposes that quantitative information is more precise and thus receives a higher market reaction compared with qualitative information. Cohen et al. (2012) also document that

TABLE 4 Market reaction to sentiment and quantitative content in M&A call transcripts

	(1)	(2)	(3)	(4)	(5)
Variables condition	**CAR(−1,+1)**	**CAR(−1,+1) Date Diff>=3**	**CAR(−1,+1) Outside market hours**	**CAR(−1,+1)**	**CAR(−1,+1)**
Net Tone	−1.344***	−4.660*	−1.283**		−1.181**
	(−2.758)	(−1.716)	(−2.107)		(−2.408)
% Numbers				0.917**	0.778*
				(2.317)	(1.933)
Announcement CAR(−1,+1)		0.316			
		(1.654)			
Percent of Stock	−0.000	−0.002***	−0.000	−0.000	−0.000
	(−1.355)	(−3.587)	(−1.567)	(−1.103)	(−1.172)
Deal Ratio	0.069***	−0.125	0.066**	0.067***	0.068***
	(2.825)	−0.002***	(2.205)	(2.722)	(2.755)
Date Difference	−0.000	0.000	−0.000	0.000	−0.000
	(−0.263)	(0.502)	(−0.102)	(0.148)	(−0.052)
Inverse Mills Ratio	0.029	−0.282**	0.020	0.035	0.032
	(0.921)	(−2.516)	(0.532)	(1.112)	(1.022)
Constant	0.040	0.594**	0.066	−0.001	0.017
	(0.692)	(2.403)	(0.940)	(−0.011)	(0.295)
Additional Controls	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes
Observations	814	69	579	814	814
Adjusted R^2	.136	.055	.124	.132	.138

Note: Table reports acquirer market reaction to the tone in M&A conference calls. The dependent variable is the cumulative abnormal return around the event date (−1 days to + 1 days). The key independent variables here are the tone used in the M&A-related disclosure. We measure the tone as the percent of positive words minus the percent of negative words in the whole transcripts. A detailed description of independent variables is provided in Appendix I. *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively.

investors tend to react more slowly to less salient and less tangible information. As quantitative information reduces uncertainty, we propose that higher levels of quantitative information in an M&A conference call have a positive effect on market reaction.

In columns (4) and (5) of Table 4, we identify a significantly positive relationship (at the 1% level) between the percentage of numbers spoken during an M&A call and acquirer CAR. Column (4) indicates that a one standard deviation increase in the percent of numbers spoken during an M&A call increases market reaction by nearly 0.92%, which translates into a $126 million increase for acquirer mean market capitalization in our sample. We also add *Net Tone* in column (5), and the coefficient for *% Numbers* continues to be both statistically and economically significant. In summary, higher levels of quantitative information within an M&A call are viewed favorably by the marketplace, which is consistent with hypothesis 5.

4.2.3 | Information asymmetry and negative acquirer market reaction to net tone

Generally, managers will exaggerate the benefits of a deal. Malmendier and Tate (2008) state that overconfident CEOs overestimate returns they can generate on their decisions and have a higher probability of making acquisitions. As a result, words spoken by the CEO or management team will generally be overly positive. In other words, the sentiment that they use to describe a deal is "too good to be true." However, if information asymmetry between the management team and investors is relatively low (i.e., for public firms), investors can use more available information to ascertain whether management is telling the truth. On the other hand, when information asymmetry is high (i.e., for private firms), investors rely more heavily on information presented by management.

To test the relationship between information asymmetry and negative market reaction to net tone in M&A conference calls, we first need to identify relevant measures of information asymmetry between the market and the acquiring firm. There exists no single widely accepted information asymmetry measure in previous M&A literature. Therefore, we use three different proxies of information asymmetry.

The first proxy of information asymmetry is the public/private status of the target firm. Compared to an M&A deal with a public target, an M&A deal with a private target is more opaque across a variety of dimensions, particularly the lack of mandatory reporting data required for public firms. Therefore, we consider deals with a private target to have a higher level of information asymmetry than deals with a public target.

The second proxy of information asymmetry includes instances in which the concentration of the industry of the acquiring firm is reflected by a high Herfindahl–Hirschman index (HHI). Compared to competitive industries, concentrated industries are dominated by a few large companies who control information share (Ali et al., 2014). Thus, it is reasonable to conclude that, ceteris paribus, an M&A deal with an acquirer from a high HHI industry has a higher level of information asymmetry.

Our final proxy is the acquiring firm's information intensity, which is measured by the number of 8-Ks filed by the firm during the past 12 months (Zhao, 2016). If a firm is less willing to file regular disclosures, it is more likely to exhibit a higher level of information asymmetry both generally and when initiating an M&A activity.

In our empirical methodology, we define *Private* as the target listing status in the SDC database; *HHI* is the Herfindahl–Hirschman index of market value for all firms in the industry on the acquirer in a given year; and *Information Intensity* is the inverse (transformed for sign consistency with the other two proxies) of an acquirer's 8-K filing frequency during the 12 months prior to the M&A transaction. Table 5 shows the results.

TABLE 5 Market reaction to sentiment in the presence of information asymmetry

	(1)	(2)	(3)
Variables	**CAR(−1,+1)**	**CAR(−1,+1)**	**CAR(−1,+1)**
Net Tone	−1.870***	−2.114***	0.687
	(−2.629)	(−2.975)	(0.642)
Net Tone × Private	1.776*		
	(1.722)		
Net Tone × HHI		53.351**	
		(2.423)	
Net Tone × Information Intensity			0.059*
			(1.730)
Private	−0.006		
	(−0.379)		
HHI		−0.878***	
		(−2.587)	
Information Intensity			−0.001*
			(−1.862)
Inverse Mills Ratio	−0.025	0.026	0.026
	(−0.576)	(1.112)	(1.052)
Constant	0.169**	0.085	0.062
	(1.989)	(1.486)	(0.965)
Additional Controls	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes
Year FE	Yes	Yes	Yes
Observations	814	814	814
Adjusted R^2	.146	.152	.158

Note: Table reports acquirer market reaction to the tone in M&A conference calls for different channels of information asymmetry (target status, industry concentration, and information intensity). The dependent variable is the acquirer cumulative abnormal return around the event date (−1 days to + 1 days). A detailed description of independent variables is provided in Appendix I. *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively.

The interaction term in column (1) shows that the market reacts positively to positive net tone in a higher information asymmetry environment, proxied by the variable *Private*. This effect is statistically significant at 10% level and almost entirely mitigates the negative market reaction to net tone in isolation. Column (2) and column (3) provide similar results when we change our proxy of information asymmetry to *HHI* or *Information Intensity*. These consistent and significant results support hypothesis 6a that markets react inversely to managerial tone when available information is less able to verify whether executives are overoptimistic about deal prospects. Therefore, we can conclude that information asymmetry plays an important role in determining the market reaction to acquisition-related disclosure in M&A calls.

4.2.4 | M&A motive dictionary

We next examine the market reaction to two major motivations of mergers and acquisitions: financial and strategic. We introduce dictionaries to represent each type of deal motive and count keywords appearing in each M&A conference call. The main independent variables are the percent of financial (strategic) words in our dictionaries divided by the number of total words in the merger call. The word–stem lists of these two dictionaries can be found in Appendix III, and summary statistics are provided in the last two rows of Table 2. Our word–stem choices follow the guidance of Loughran and McDonald (2016) who recommend selecting fewer specific words or phrases that are more deeply related to the research area in question.

As shown in Table 2, our concise, custom dictionaries capture unique features in M&A, as both percentages of financial and strategic words in M&A calls are significantly higher compared with the content of earnings conference call transcripts. We further test the correlation of these two custom M&A motive dictionaries with the other textual measurements (i.e., net tone and numerical content). The result is shown in Panel A of Table 6.

Panel A shows that the correlation between financial words and strategic words is negative indicating that these two dictionaries capture two distinct aspects of an M&A deal. This negative correlation confirms the validity and M&A context-specific approach of these dictionaries. Interestingly, we also find that financial words are more related to numbers and uncertainty and strategic words are more related to net tone.

We further our analysis by examining the determinants of the usage of these two types of dictionaries. We replace the dependent variable in equation (2) with the percentage of financial or strategic words spoken in each M&A call. The result in Panel B of Table 6 shows financial word usage is more related to deal financing choices. Executives also use more financial words when the acquiring firm is larger and has less analyst coverage, and when the target is from a foreign country. In contrast, the use of strategic words is not related to deal fundamentals and is only positively associated with analyst coverage. We also find that the presence of the target CEO decreases (increases) the percentage of financial (strategic) words in an M&A call. In contrast, target CFO appearances are associated with reduced strategic word usage.

In Panel C of Table 6, we examine the market reaction to these two M&A dictionaries. The coefficient for percentage of financial words in Panel C is positive and statistically significant at the 10% level in column (1) and at the 5% level in column (3). This positive coefficient supports the argument that financially oriented M&A is associated with a more positive market reaction. This result is also economically significant, as a one standard deviation increase in financial words increases acquirer market value by 0.9%, or a $124 million gain according to the average acquirer market capitalization in our sample.[20]

The impact of strategic words is also as expected. This negative relationship is significant at the 5% level in both columns (2) and (3). Market reaction decreases by 0.93% from the mean with a one standard deviation increase in strategic words translating into $108 million in lost acquirer market value. Column (4) includes both *% Numbers* and *% Uncertainty*. The high correlation between *% Fin Words* and *% Numbers* subsumes the coefficient of *% Fin Words,* but *% Str Words* remains statistically significant even in the presence of more uncertain (Loughran & McDonald, 2011) word usage. Column (5) incorporates *Net Tone* and sees a similar reduction in significance for *% Str Words*. These final two columns suggest a substitution effect between *% Fin Words*/*% Numbers* and *%Str Words/Net Tone*, respectively, but we note that these financial and strategic dictionaries are more concise and targeted to the specific context of mergers and acquisitions. In conclusion, these results suggest that market participants react differently to various M&A motives communicated on merger conference calls. Reactions are positively (negatively) related to financial (strategic) motivations. These results are consistent with our final hypothesis.

5 | CONCLUSION

We analyze information inside M&A conference calls and investigate its impact on acquirer returns. Although previous research (Fraunhoffer et al., 2018; Kimbrough & Louis, 2011; Rohrer, 2017; Siougle et al., 2014) has studied this specific type

TABLE 6 Market reaction to M&A motives

Panel A: Correlation table				
	% Fin Words	**% Str Words**	**% Numbers**	**% Uncertainty**
% Str Words	−0.023			
% Numbers	0.405	−0.050		
% Uncertainty	0.221	−0.063	0.256	
Net Tone	−0.037	0.404	−0.159	−0.259

Panel B: Determinants of custom dictionaries usage				
	(1)	**(2)**	**(3)**	**(4)**
Variables	**% Fin Words**	**% Fin Words**	**% Str Words**	**% Str Words**
Target CEO Appearance	−0.186***		0.135**	
	(−3.927)		(2.331)	
Target CFO Appearance		−0.021		−0.164*
		(−0.256)		(−1.666)
Percent of Stock	−0.002**	−0.003***	0.000	0.001
	(−2.398)	(−2.742)	(0.169)	(0.455)
Deal Ratio	0.231	0.264*	0.232	0.196
	(1.613)	(1.746)	(1.140)	(0.945)
Ln(Analyst)	−0.130***	−0.119***	0.088*	0.078*
	(−3.899)	(−3.472)	(1.908)	(1.679)
Same Industry	0.067	0.089*	0.032	0.007
	(1.350)	(1.758)	(0.447)	(0.102)
Private	−0.014	−0.017	0.018	0.017
	(−0.247)	(−0.295)	(0.251)	(0.246)
Foreign Target	−0.089**	−0.082*	0.022	0.018
	(−1.968)	(−1.824)	(0.327)	(0.269)
Ln(Size)	0.049***	0.045***	−0.024	−0.020
	(2.919)	(2.597)	(−1.071)	(−0.901)
Book to Market	0.101	0.086	−0.040	−0.023
	(1.377)	(1.153)	(−0.392)	(−0.218)
Date Diff	0.000	0.000	−0.001	−0.001
	(0.274)	(0.197)	(−0.927)	(−0.575)
Inverse Mills Ratio	0.009	0.124	0.435	0.311
	(0.049)	(0.628)	(1.572)	(1.119)
Constant	1.054***	0.903**	2.039***	2.195***
	(3.052)	(2.486)	(4.239)	(4.491)
Industry FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Observations	814	814	814	814
Adjusted R^2	.263	.245	.134	.134

Panel C: Market reaction to M&A motives					
	(1)	**(2)**	**(3)**	**(4)**	**(5)**
Variables	**CAR(−1,+1)**	**CAR(−1,+1)**	**CAR(−1,+1)**	**CAR(−1,+1)**	**CAR(−1,+1)**
% Fin Words	0.899*		1.002**	0.544	0.939*
	(1.789)		(1.994)	(0.996)	(1.855)

(Continues)

TABLE 6 (Continued)

Panel C: Market reaction to M&A motives					
	(1)	**(2)**	**(3)**	**(4)**	**(5)**
Variables	**CAR(−1,+1)**	**CAR(−1,+1)**	**CAR(−1,+1)**	**CAR(−1,+1)**	**CAR(−1,+1)**
% Str Words		−0.925**	−0.984**	−0.926**	−0.687
		(−2.189)	(−2.351)	(−2.243)	(−1.448)
% Numbers				1.868*	
				(1.665)	
% Uncertainty				0.652	
				(1.450)	
Net Tone					−0.798
					(−1.384)
Percent of Stock	−0.000	−0.000	−0.000	−0.000	−0.000
	(−0.776)	(−0.907)	(−0.732)	(−0.676)	(−0.793)
Deal Ratio	0.079***	0.083***	0.081***	0.086***	0.081***
	(3.222)	(3.276)	(3.283)	(3.474)	(3.290)
Inverse Mills Ratio	0.046	0.050	0.050	0.056*	0.047
	(1.500)	(1.613)	(1.615)	(1.812)	(1.528)
Constant	0.001	0.028	0.019	−0.024	0.024
	(0.009)	(0.479)	(0.325)	(−0.389)	(0.399)
Additional Controls	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes
Observations	814	814	814	814	814
Adjusted R^2	.136	.139	.142	.147	.143

Note: Table reports acquirer market reaction to our M&A motive dictionaries. Panel A includes a correlation matrix of textual measures. The dependent variables in Panel B are the percentage of financial and strategic words spoken in each M&A call. The dependent variable in Panel C is acquirer cumulative abnormal return (CAR) in three days around the event date (−1,+1). A detailed description of independent variables is provided in Appendix I. *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively.

of conference call, few have analyzed the information content within each M&A call. Using a sample of 814 merger calls from 2011 to 2018, our overall evidence supports the view that there is rich information within merger conference calls and that the marketplace significantly reacts to that information.

First, we show that stock payment choice and diversifying deals increase the probability that top target executives will participate on the M&A call. The first result is driven by a tradeoff between realized and unrealized benefits for managers of the target. The second allows acquirers to publicly demonstrate industry-specific expertise of target management. We also find that, conditional on participation and consistent with prior literature, the retention of top target management generates a negative market reaction.

Second, we investigate the content of each M&A call. We find a negative relationship between net tone within the call and market reaction. We attribute this negative relation to the level of information asymmetry between management and investors. We employ three proxies for acquirer information asymmetry and confirm that investors rely more on managerial tone when information asymmetry is higher and external information is less available. We also find a statistically and economically significant relationship between quantitative information in M&A calls and returns to acquirers.

Finally, we construct new and efficient M&A dictionaries that better quantify information about financial and strategic deal motivations. Compared with previous literature that can only identify deal motivation in specific types of companies with highly specialized data (Rodrigues & Stegemoller, 2014), our motivation identification method can apply to any M&A deal with associated textual disclosure. Our results show that more financially motivated communication meets with a positive acquirer market reaction and more strategic word usage decreases the market reaction.

Our analysis of M&A conference call content suggests that it is a valuable information source for market participants. Managers of acquiring firms should be aware of what their appearances and communication within these calls reveal about overconfidence, adverse selection, and M&A motives. Future research might explore specific investor and analyst reactions to M&A conference calls, the impact of M&A call disclosure on long-term acquisition outcomes (e.g., goodwill impairment), and spillover effects on other potential targets.

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ENDNOTES

[1] A concurrent working paper by Rohrer (2017) examines the participation of institutional investors in M&A calls. A second concurrent working paper by Dasgupta et al. (2020) examines the impact of M&A calls on deal completion and uses topical analysis to evaluate M&A call content.

[2] For further evidence, we note that the level of uncertainty (*% Uncertainty*) in M&A calls is significantly higher than earnings calls in our comparison within Table 2.

[3] The first year in which M&A calls appear in Capital IQ is 2009, but coverage of M&A call transcripts in Capital IQ is low for the first two years.

[4] Our main results are consistent if we choose different searching windows (7, 15, or 30 days).

[5] In rare instances, one M&A call can involve discussion about several different deals. In our analysis, we delete all calls that involve multiple deals.

[6] Some transcripts are not available in Capital IQ since the company either did not open the call to the general public or did not provide an event transcript to Capital IQ.

[7] We delete all M&A transactions for which there is no deal information in Capital IQ. There are no statistically significant differences in deal fundamentals between deals in Capital IQ and those in SDC Platinum but not Capital IQ. The remaining sample consists of 2,825 deals.

[8] BeautifulSoup works with Python's internal HTML parser to "provide idiomatic ways of navigating, searching, and modifying the parse tree," which contains all M&A conference call participants and call presentation and Q&A content. For more information on BeautifulSoup, see https://pypi.org/project/beautifulsoup4/

[9] Of the 1,021 target executive appearances in our sample, 632 are public target executives matched to Execucomp. 146 (243) observations have no matching Execucomp record and are manually verified in each M&A conference call transcript as associated with the public (private) target.

[10] Under Item 2.01 in 8-K filling (https://www.sec.gov/investor/pubs/readan8k.pdf).

[11] We limit our search for the nearest M&A-related 8-K filing to the six days on and following the deal announcement. We manually search acquiring firm 8-Ks in this window if a filing with merger relevant keywords cannot be found. This process leaves no corresponding 8-K filing for 144 M&A call events in our sample. For example, there were no 8-Ks with Item 2.01 filed at any point in the *full year* following the July 28, 2015, M&A conference call held by Honeywell International Inc. regarding its acquisition of Melrose Industries PLC.

[12] We define a corresponding earnings conference calls as one held by the firm immediately before an M&A conference call. 85.1% (96.3%) of M&A conference calls in our sample occur 10 (5) or more days away from the nearest earnings conference call.

[13] Results in Table 2 are similar when comparing subsample medians using non-parametric Wilcoxon rank-sum univariate tests. Brockman et al. (2015) note that managers and analysts may exhibit different behavior during earnings conference calls. Untabulated results are similar if we use only M&A and earnings conference call Q&A content spoken by managers.

[14] All results are similar if we calculate the inverse Mills ratio using a balanced sample including M&A transactions with M&A calls and matched deal observations without M&A calls.

[15] Target executive participation is defined as true when any participant has an affiliation with the target firm. These participants include CEOs, CFOs, COOs, and vice presidents. The majority of target participants are CEOs and CFOs.

[16] Industry definitions used in our analyses are 12 industry classifications from Fama and French (1997). Our results are robust to alternative industry definitions (e.g. 2-digit SIC).

[17] Results are similar if we use *inverse Mills ratio (Target)* from each of the first three columns in the corresponding CAR(−1,+1) specifications.

[18] Following prior studies (e.g. Larcker and Zakolyukina, 2012; Huang, Teoh, and Zhang, 2014; Blau et al., 2015), we calculate abnormal net tone (i.e. the residual net tone of a regression on deal control variables). Untabulated results using residual net tone are similar.

[19] All results are similar if we follow the restriction of Kimbrough and Louis (2011) to only include M&A calls occurring within 14 days of the deal announcement date. This filter removes 33 M&A call observations.

[20] In an untabulated table, we replicate the results of Table 6, Panel C using the financially oriented dictionary of Matsumoto, Pronk, and Roelofsen (2011). These results are quantitatively similar even though our financial M&A motive dictionary contains 85% fewer words.

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APPENDIX I

Variable definitions

Variable Name	Definition
% Fin Words	Percentage of financial words in our dictionary described in Appendix III
% Numbers	Percentage of numbers spoken in the merger call
% Str Words	Percentage of strategic words in our dictionary described in Appendix III
% Uncertainty	Percentage of uncertainty words using Loughran and McDonald (2011) dictionaries
Book to Market	Book value of equity / market value of equity
CAR(−1,+1)	3-day cumulative abnormal return around the conference call date
Date Diff	Date difference between announcement date and M&A conference call date
Deal Ratio	Value of deal / Market value of acquirer
HHI	Herfindahl–Hirschman index (HHI) using market value of firms in the acquirer's industry
Information Intensity	Inverse of 8-K filing frequency by the acquirer in a given year
Leverage Ratio	(Long-term debt + short-term debt) / total assets
Ln(Analyst)	Natural log of number of analysts follows
Ln(Size)	Natural log of market value
Net Tone	Positive tone minus negative tone using Loughran and McDonald (2011) dictionaries
Percent of Stock	Percentage of stock payment to the total payment of a deal
Private	An indicator variable for a deal involving a private target
Retention Executives	An indicator variable for target executives (CEO, CFO, COO, Vice Presidents, etc.) who appear in the M&A call that retained by bidder
Retention CEO	An indicator variable for target CEO who appears in the M&A call that retained by bidder
Retention CFO	An indicator variable for target CFO who appears in the M&A call that retained by bidder
Same Industry	An indicator variable for bidder and target have the same two-digit SIC code
Target Executives	An indicator variable for any target executives who participate in the M&A call
Target CEO	An indicator variable for target CEO who participate in the M&A call
Target CFO	An indicator variable for target CFO who participate in the M&A call
Total Words	Total number of words in an M&A call

APPENDIX II

Probability model for holding an M&A conference call

	(1)
Dependent Variable	**Call Indicator**
Percent of Stock	0.007***
	(4.62)
Deal Ratio	−1.568***
	(−5.41)
Ln(Analyst)	2.590***
	(12.89)
Same Industry	0.212***
	(3.40)
Private	0.358***
	(3.73)

(Continues)

APPENDIX II (Continued)

	(1)
Dependent Variable	**Call Indicator**
Ln(Size)	−0.476***
	(−4.95)
Book to Market	0.120***
	(3.55)
Leverage	−0.797***
	(−5.40)
Constant	−1.722***
	(−4.83)
Industry FE	Yes
Year FE	Yes
Pseudo R^2	.147
Observations	2,825

Appendix replicates the probability regression model from Kimbrough and Louis (2011). The dependent variable is an indicator that measures whether there is an M&A conference call associated with each specific deal announcement. A detailed description of independent variables are provided in Appendix I. *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively.

APPENDIX III

M&A motive dictionaries

Panel A: Financial words		
Groups	**Definition**	**Stems**
Financial Information	Related to firms' financial performance	capit contract credit debt financ loan return tax cash
Financial Ratios	Ratios that are mentioned in M&A calls	ebitda ebit roa roe
Others	Describe short-term financial actions that are performed by the firm following M&A	annual bank book flow invest purchas volum
Panel B: Strategic words		
Groups	**Definition**	**Stems**
Future Orientated	Describe the future of the firm or the deal	confid develop opportun project
Business Strategy	Describe strategic initiatives	synergi structur patient merger
Governance	Describe governance of the firm after the M&A	lead leader leadership manag oper organ
Operating	Describe operating actions that are performed by the firm following M&A	custom expens manufactur margin market produc sale suppli

Appendix shows the custom dictionaries we use to identify M&A motives. Each entry of the table is a stem, not a word, in English. Panel A reports the stems for financial motives, and Panel B reports the stems for strategic motives.