

Disclosures about intangible resources in M&A press releases and quality of the deal

Andrei Filip, ESSEC Business School
filip@essec.edu

Gerald J. Lobo, University of Houston – Bauer College of Business
gjlobo@uh.edu

Luc Paugam, HEC Paris
paugam@hec.fr

Hervé Stolowy, HEC Paris
stolowy@hec.fr

This version: February 14, 2017

Please do not cite. Comments welcome.

Acknowledgements. The authors gratefully acknowledge comments by Christof Beuselinck, Raúl Barroso, and workshop participants at IÉSEG School of Management (February 2017). Responsibility for the ideas expressed, or for any errors, remains entirely with the authors. Hervé Stolowy expresses his thanks to the HEC Foundation for funding the research project 4F73F1502. Luc Paugam and Hervé Stolowy are members of the GREGHEC, CNRS Unit, UMR 2959.

Disclosures about intangible resources in M&A press releases and quality of the deal

Abstract: We investigate the relation between disclosures provided by acquirers about growth, synergies and intangible resources in mergers and acquisitions (M&A) press releases and the characteristics of M&A deals. Whereas on the one hand, managers may objectively explain the key value drivers associated with a transaction when they announce it to market participants, they may, on the other hand, attempt to justify lower quality M&A deals by using terms about synergies, growth, and other intangible resources acquired more frequently in an attempt to convey a better impression about the deal. First, we examine whether the frequency of use of intangible-related terms in press releases is positively related to the size of the deal relative to the size of the acquirer. Second, we study whether soft disclosures about intangible resources provided in press releases are consistent with assets recognized in acquirers' financial statements. Third, we investigate whether the disclosures in M&A press releases are systematically associated with the quality of the M&A deal, measured using stock returns, Tobin's Q and operating cash flows. Overall, we find evidence consistent with impression management. Deals that are relatively larger are associated with more frequent use of intangible-related terms in M&A press releases. We also find consistency between soft disclosures and assets recognized by acquirers. Finally, we find that managers justify weaker deals with several generic terms related to synergies and growth. Our study contributes to the M&A literature and is relevant for investors attempting to assess the performance of M&As.

Keywords: Mergers and acquisitions, Press releases, Quality of the deal, Intangibles

1. Introduction

Managers announce decisions about mergers and acquisitions (M&A) in press releases in which they explain the rationale for the deal. Conceptually, M&As are driven by synergies (Bradley, Desai, and Kim 1988; Healy, Palepu, and Ruback 1992; Devos, Kadapakkam, and Krishnamurthy 2009) – two firms will merge if combining their operations increases value as assessed by the acquiring firm’s manager. Yet, there is evidence that over half of M&As are value destroying. Prior research indicates that managerial hubris (Roll 1986; Seth, Song, and Pettit 2000; Baker, Ruback, and Wurgler 2007), managerial private benefits (Jensen 1986; Harford and Li 2007), and managerial power (Grinstein and Hribar 2004) are plausible explanations for why managers may engage in value-destroying acquisitions. Regardless of the underlying reason for managers’ engaging in value-destroying acquisitions, we hypothesize that managers attempt to influence the perceptions of outsiders by using more convincing forms of language, especially for weaker deals.

We draw on the impression management literature to provide theoretical justification for our hypothesis. This literature suggests that individuals attempt to positively influence stakeholders’ opinions by shaping information used in social interactions (Washburn and Bromiley 2014). Several studies indicate that since the end of the 20th century, firm performance relies on new engines associated with the control and ability to exploit intangible resources (Amir and Lev 1996; Healy and Palepu 2001; Nakamura 2001; Healy, Myers, and Howe 2002; Clem, Cowan, and Jeffrey 2004; Ciftci, Darrough, and Mashruwala 2014). As a result, intangible resources related to marketing, customers, technology and human capital often explain why managers engage in M&As. The acquisition of WhatsApp by Facebook in 2014 illustrates this point. The purchase consideration of \$17.2 billion resulted in the recognition of \$2 billion of “Acquired users”, \$448 million of “Trade names”, and \$288 million of “Acquired

technology” (among other assets).¹ Given the intangible nature of many of the benefits expected from M&As, acquirers have incentives to explain the synergies and the growth prospects expected from the transactions. Whether managers attempt to create a favorable impression about the M&As by being overly optimistic about growth, synergies, and other intangible resources in their press releases, and whether such optimism is associated with the quality of the deal are questions of considerable interest that we attempt to address in this study.

Managers initially announce M&As to market participants using press releases in which they present the rationale for the deal along with explanations about how the deal creates “synergies” or “efficiencies” or allows the acquirer to gain access to key brands and technologies (see the example in Appendix A).² We focus on specific terms used in press releases that relate to growth, synergies, and other intangible resources because they are generally perceived as instrumental to value creation. We reason that, on the one hand, if managers communicate objective information about expected growth, synergies, and intangible resources involved in the transaction, then we should observe that these soft disclosures are positively related to acquisition performance. On the other hand, as suggested by impression management, managers may attempt to justify lower quality M&As by relying on disclosures about growth, synergies, and other intangible resources acquired whose accuracy is difficult for outsiders to verify *ex ante*. It is challenging to assess synergies because they depend on integration costs and the conceptualization and implementation of strategy. The value of intangible assets such as brands is subjective and also depends on managers’ future actions. Managers engaging in M&As for motives other than creating value for shareholders may use soft disclosures in press releases to influence market participants’ views. In this case such disclosures would be negatively related to M&A performance.

¹ See Facebook’s 2014 10-K filing (January 29, 2015).

² Press releases contain additional information such as a description of the acquirer and target firms, methods of payment, financial advisors as well as other legal or regulatory information (forward looking statements).

We test our hypotheses using a sample of 394 transactions completed by US acquirers purchasing publicly traded US targets between 2003 and 2014 for which we can find M&A press releases. We explore the degree of heterogeneity in disclosures about several terms associated with growth, synergies, and intangible resources. We identify six categories of terms in M&A press releases related to: (1) growth, (2) synergy, (3) marketing (brands, trademarks, trade names), (4) customer relationship (customers' lists, customer relationships, backlogs), (5) technology (patents, specific technologies), and (6) human capital.

First, we find that acquirers are more likely to use terms associated with growth and synergies for more material transactions than for less material transactions, where materiality is defined as the price paid divided by the acquirer's pre-transaction total assets. This result can reflect either that managers attempt to justify riskier deals or that relatively larger deals generate more synergies and growth.

Second, we exploit purchase price allocations (PPAs) that involve fair value estimation of acquired assets and liabilities after a business combination to assess the consistency of soft disclosures in press releases (FASB 2001).³ We test whether soft information disclosed in press releases about intangible assets is consistent with assets subsequently recognized in acquirers' accounts after controlling for industry characteristics. As expected, we find that acquirers that use more terms related to growth or human capital in press releases recognize more goodwill on their balance sheet. We also document that acquirers that discuss brands in their press releases exhibit a higher level of the purchase price allocated to brands. Acquirers that more frequently use customer-related terms in press releases exhibit a higher percentage of the purchase price allocated to customer relationship assets. Overall, we find evidence that the soft information in press releases maps into hard information in PPA, which indicates that the terms

³ SFAS 141 is now included in the Accounting Standards Codification (ASC) paragraphs 805-10-50 and 805-30-50.

used in press releases are in line with the economics of the transaction as reflected in the recognition of assets disclosed in the PPA. Nonetheless, the consistency between soft and hard information does not mean that managers do not attempt to use soft disclosures to influence shareholders. Indeed, given the subjectivity involved in PPAs (Shalev, Zhang, and Zhang 2013), managers may attempt to maintain a consistent story by identifying intangible assets in PPAs in line with soft disclosures provided in press releases. To understand whether soft disclosures relate to the underlying economics of transactions or are motivated by impression management we investigate the relation between these disclosures and the quality of the deal.

We explore whether disclosures about intangible assets in press releases are related to ex ante and ex post measures of deal quality. We use the likelihood of a decrease in the acquirer's stock price upon announcement of the transaction as an ex ante measure of deal quality. We find that acquirers using more growth-related terms are more likely to exhibit negative cumulative abnormal returns in the three days surrounding announcement of the transaction. We also find that firms using more technology-related terms in their press releases are more likely to show negative three-day cumulative abnormal returns. We use two ex post measures of M&A quality: the acquirer's Tobin's Q one year after the deal is completed and the acquirers' change in operating cash flows one year following completion of the deal. We find that acquirers that use growth, synergy, and customers-related terms more often have lower Tobin's Q relative to other acquirers. We also find that the use of terms related to synergies in press releases is negatively associated with the change in the acquirer's operating cash flows. Overall, we find that managers justify weaker deals with several generic terms related to synergies and growth. These findings are consistent with the impression management hypothesis. We find no evidence that the terms we examine in press releases are positively associated with deal quality.

Our study makes several contributions to the literature. First our findings are relevant to investors examining the implications of M&As. We find that soft disclosures provided in press

releases are negatively associated with the quality of the deal, which is useful for market participants assessing whether the deal would in fact create value. Second, we contribute to the analysis of how soft disclosures relate to deal characteristics and quality of the deal (Gu and Lev 2011; Ahern and Sosyura 2014; Cicon, Clarke, Ferris, and Jayaraman 2014). We complement past studies by exploring how managers use specific terms related to intangible assets in press releases. Third, an extensive literature has analyzed earnings press releases (e.g., Huang, Teoh, and Zhang 2014; Kimbrough and Wang 2014; Lundholm, Rogo, and Zhang 2014; Riley, Semin, and Yen 2014; Bozanic and Thevenot 2015), restatement press releases (Files, Swanson, and Tse 2009), post-restatement press releases (Chakravarthy, de Haan, and Rajgopal 2014), press releases and R&D information (Weiss, Falk, and Zion 2013) and other press releases (Fernández, Callén, and Gadea 2011). Unlike those studies, we analyze press releases related to a significant investment decision, M&As, which, with the notable exception of Kimbrough and Henock (2011) who investigate merger announcements and compare merger-related information releases to conference calls, have received relatively little academic attention. Fourth, our study complements the textual analysis literature exploring tone or readability of corporate disclosures (Lehavy, Feng, and Merkley 2011; Loughran and McDonald 2011, 2014, 2016; Lo, Ramos, and Rogo Forthcoming). Fifth, we contribute to the literature on impression management (for a review, see Merkl-Davies and Brennan 2007), which has focused on annual reports (Neu, Warsame, and Pedwell 1998; Cho, Roberts, and Patten 2010), analysts' reports (Abhayawansa and Guthrie 2012), management forecasts (Schleicher and Walker 2010), conference calls (Washburn and Bromiley 2014), graphs and pictures (Beattie and Jones 2008; Jones 2011; Cho, Michelon, and Patten 2012) and, to a lesser extent, on press releases (García Osma and Guillamón-Saorín 2011). Sixth, to the best of our knowledge, our study is the first to relate soft disclosures in M&A press releases to recognition of specific assets in the acquirers' accounts following completion of M&As. Seventh, we extend

past literature on accounting for business combinations (Shalev 2009; Paugam, André, Henri, and Harfouche 2016).

The remainder of this paper is organized as follows. We develop our hypotheses in Section 2, present our empirical strategy in Section 3, report our findings in Section 4, and conclude the study in Section 5.

2. Hypotheses

There are several economic reasons why M&As may lead to value creation including synergies (Bradley et al. 1988) or access to and control of key resources (Pfeffer and Salancik 2003). Synergies arise from the ability to save transaction costs, to save tax, from economies of scale and from increasing market power (Devos et al. 2009). When managers announce M&As in press releases they may objectively explain the factors that led them to conduct M&As such as the identifications of important potential synergies with another firm or the need to control key intangible resources to boost growth. The latter can be critical following the turn of the last century given that the success of firms is driven by new forces related to investment in intangible assets (Nakamura 2001). At the end of the 1990s the aggregate investment on research and development, acquisition or creation of software, marketing and organizational change had reached the same level as that in tangible assets: approximately 10% of US GDP vs. approximately 4% of US GDP in 1977 (Paugam et al. 2016, p. 16). Managers may objectively look for target firms to get access to these intangible resources. Press releases that provide a rationale for transactions may therefore explain objectively these factors associated with value creation. Cicon et al. (2014) report a positive association between terms related to synergies and optimism and market reaction upon announcement of M&A press releases.

Nonetheless, Ahern and Sosyura (2014) find evidence that managers use press releases strategically around M&A activities. They examine whether bidders in stock deals use press

releases before M&A announcements to generate stronger media coverage which leads to a short-term increase in their stock price to influence the stock exchange ratio during the negotiation period. We also consider the possibility that managers use press releases strategically but we focus on the content of M&A press releases. Managers may rely on impression management strategies to influence shareholders' views of lower quality M&As.

As Clatworthy and Jones (2001, p. 311) explain, accounting narratives provide a potential scope for managers “to control and manipulate the impression conveyed to users of accounting information”. The phenomenon known as “impression management” originates from human psychological and cognitive processes (Schlenker 1980) according to which individuals present themselves to others as to be perceived favorably (Merkl-Davies and Brennan 2011). As recalled by Brennan, Guillamon-Saorin, and Pierce (2009, p. 790), the term “impression management” refers to “the process by which individuals attempt to control the impressions of others (Leary and Kowalski 1990, p. 34)”. According to Merkl-Davies and Brennan's impression management framework (Merkl-Davies and Brennan 2007), “corporate attempts at concealment and attribution focus primarily on manipulating either the presentation (language and verbal tone) or the disclosure (quantity, thematic content, and attribution) of the information that is to be provided” (Cho et al. 2010, p. 432).

Evidence of impression management is well documented in accounting research (Clatworthy and Jones 2003) for instance with regard to earnings management (Watts and Zimmerman 1986; Watts and Zimmerman 1990; UBS Phillips and Drew 1991; Smith 1992) or use of other format of disclosures such as graphs and photographs (Beattie and Jones 1992; Preston, Wright, and Young 1996; Beattie and Jones 1997; Beattie and Jones 1998). Managers have incentives to represent their strategic decisions in the best possible light, causing “selective financial representation” (Revsine 1991) for example by highlighting potential positive outcome of a deal (e.g., discussing “synergies”, “cost savings”, “growth”, “technologies”) and

avoiding disclosures of potential important issues to overcome (e.g., overpayment, integration costs, litigation risks, conflict between corporate cultures)⁴ that are known to lead to major M&A failures (e.g., Gong, Louis, and Sun 2008; Ahern, Daminelli, and Fracassi 2015). Managers engaging in lower quality deals may attempt to influence shareholders to view positively the transaction by being more biased in the choice and repetition of words used in M&A press releases relative to better deals.

Our first hypothesis examines whether the relative size of the deal influence the disclosures provided in M&A press releases. Relatively larger deals are associated with higher risks of failure to deliver synergies. Empirical evidence indicate that, on average, larger deals destroy value (e.g., Moeller, Schlingemann, and Stulz 2004; Humphery-Jenner and Powell 2014). Managers may therefore attempt to manage impression by using more biased language related to value creation stemming from growth, synergies and other intangible-related terms for relatively larger deals relative to smaller deals. Our first hypothesis is stated as follows:

H1: Acquirers use more terms related to synergies, growth, and other intangible resources for deals that are relatively larger than for deals that are relatively smaller.

We exploit accounting rules to investigate whether managers provide a consistent story across soft and hard disclosures. We examine whether soft disclosures provided in press releases are associated with the recognition of specific assets in financial statements after completion of the transaction. FAS 141 (FASB 2001, 2007), which became effective in 2002, requires management to allocate the purchase price of the target to the net fair value of acquired assets through PPA after completion of the acquisition.⁵ The purchase price of the target entity must be allocated to the fair values of identifiable tangible and intangible assets such as brands,

⁴ Our study press releases has shown that these “potential issues” are almost absent from the releases, which prevents a “reverse study” of negative terms.

⁵ FAS 141 eliminated the “pooling of interests” accounting treatment for M&As for which no goodwill was disclosed. FAS 141 is now included in the Accounting Standards Codification (ASC) 805, *Business Combinations*.

customer relationships and technology. Goodwill is considered as a residual of the consideration paid. It captures unidentified intangible assets such as future growth, synergies or human capital which do not meet the GAAP definition of an asset. The identification and valuation of intangible assets is a subjective exercise involving modeling fair values for illiquid assets such as brands (Paugam, Astolfi, and Ramond 2015). Shalev et al. (2013) find that CEO compensation motives affect how the purchase price is allocated to acquired assets. To convince outsiders, managers may provide a consistent picture across qualitative and quantitative disclosures so our second hypothesis investigate whether soft disclosures influence hard disclosures, i.e., the identification and valuation of intangible assets in acquirers' books.

H2: The extent of use of terms related to growth, synergies, and other intangible resources in M&A press releases is positively associated with the purchase price allocated to the corresponding assets (i.e., goodwill, marketing-related assets, customer-related assets, and technologies) in PPA.

Next, we examine whether soft disclosures provided in M&A press releases are systematically associated with the quality of the deals. Given the competing arguments presented above, disclosures may objectively explain the factors leading management to perceive the deal as creating value or be associated with impression management motives. If press releases are objective, we should observe a positive association between specific terms identified in press releases and the quality of the deal. As explained by Merkl-Davies, Brennan, and McLeay (2011, p. 318) impression management construction can be accomplished by emphasizing positive expectations and/or by obfuscating negative scenarios so as to present a positively biased view of the future (see also Cho et al. 2012). Given the competing arguments, we state our third hypothesis as follows:

H3: The extent of use of terms related to growth, synergies, and other intangible resources in M&A press releases is negatively associated with the quality of the M&A transaction.

3. Research Design

We draw from textual analysis research to investigate the association between soft disclosures in M&A press releases and several attributes of transactions. As explained by Loughran and McDonald (2016, p. 1188), textual analysis is a technology designed to examine textual artifacts to measure the quantity and quality of information in a collection of text, including both the intended message and, importantly, any unintended revelations.

An important stream of research investigates the determinants and consequences of qualitative disclosures provided by firms through 10-K filings, IPO prospectuses or earnings press releases (e.g., Loughran and McDonald 2011; Davis, Piger, and Sedor 2012; Loughran and McDonald 2013; Loughran and McDonald 2014; Bozanic and Thevenot 2015). Several measures have been developed by researchers to capture properties of qualitative disclosures such as the Fog index or the length of reports that aim to capture readability (Li 2008), tone measures relying on dictionaries that aim to capture optimism and pessimism biases in qualitative disclosures (Loughran and McDonald 2015). The literature finds that qualitative characteristics of disclosures are systematically related to several other financial reporting outcomes such as earnings quality, earnings persistence, restatements or economic consequences such as future performance and litigation risks.

In the “bag-of-words” approach of textual analysis, Loughran and McDonald (2016) distinguish between targeted phrases and word lists. Our study belongs to the second category as we create a dictionary based on word counts to identify terms related to: (1) growth, (2) synergies, and (3) the following four specific categories of intangible resources: (3a) brands,

(3b) customer relationship, (3c) technologies, and (3d) human capital. To develop our word lists for each of these categories we first identify the 500 most frequently used words in all our M&A press releases using Nvivo. Next, we identify specific terms and allocate them to our six categories of terms. The advantage of this approach is that it is relatively objective because our categories describe clear concepts, so there is little risk of misclassification of terms. Appendix B provides the terms identified through this approach and our allocation to the six categories.

H1 states that the relative size of the transaction is associated with the terms related to synergies, growth, and other intangible resources used in M&A press releases. Relatively larger transactions are, on average, riskier and may be associated with more terms about growth, synergies and other intangible resources. To test H1, we estimate the OLS model (1):

$$\begin{aligned} Terms_{ni} = & b_0 + b_1Materiality_i + b_2CROSS_i + \text{Industry Fixed Effects} \\ & + \text{Year Fixed Effects} + \varepsilon \end{aligned} \quad (1)$$

where:

$Terms_{ni}$ = Number of times the M&A press release contains terms used about the six categories: (1) growth ($Growth_n$), (2) synergies ($Synergy_n$), (3a) brands ($Brands_n$), (3b) customer relationship ($Customers_n$), (3c) technologies ($Techno_n$), and (3d) human capital ($Human_n$). The specific terms classified in each of these categories are provided in Appendix B.

$Materiality_i$ = Purchase price divided by acquirer's pre-transaction total assets.

$CROSS_i$ = 1 if the acquirer and the target firms are in two different macro industries, and 0 otherwise.

Our main coefficient of interest, b_1 , captures the relation between the relative size of the transaction and the use of terms related to the six categories identified earlier in M&A press releases. According to H1, we expect a positive coefficient b_1 . If management attempts to

positively influence outsiders' perception of lower quality deals than larger deals (that tend to be associated with value destruction) , this should lead to more frequent use of key terms about growth, synergies, and other intangible resources. We control for industry in model (1) because industry is an important determinant of the types of assets owned by target firms. For instance target firms in the consumer products industry are more likely to own brands, and firms in the high tech industry are more likely to possess technologies. We also consider cross-industry transactions (*CROSS*) and include year fixed effects.

H2 posits that managers provide a consistent story across soft disclosures and the identification and valuation of specific assets once the acquisition is completed. Under PPA a number of assets may be identified: marketing-related assets (brands, trademarks, trade names), customer-related assets (customer lists, customer relationships, backlogs), technology-related assets (patents, specific technologies). All other unidentified intangible resources such as future growth, synergies and human capital (the latter do not meet the GAAP definition of an identifiable asset) are included in goodwill. To estimate the consistency between soft disclosures and hard disclosures, we estimate model (2):

$$\begin{aligned}
 ALLOC_{pct_i} = & b_0 + b_1Terms_{ni} + b_2CROSS_i + \text{Industry fixed effects} & (2) \\
 & + \text{Year fixed effects} + \varepsilon
 \end{aligned}$$

where:

ALLOC_{pct_i} = one of the following four assets identified in PPAs after completion of the transaction expressed as a percentage of the purchase price: (1) Percentage of the purchase price allocated to goodwill (*GDWL_{pct}*); (2) percentage allocated to marketing-related intangible assets such as brands, trademarks and other marketing intangible assets (*MARKET_{pct}*); (3) Percentage of the purchase price allocated to customer lists, customer contracts, customer relationships, backlog and other customer intangible assets (*CUSTOMERS_{pct}*); (4) Percentage of the purchase price allocated to patents,

technologies, software, databases, in process research and development, and other technology or other research intangible assets (*TECHNOpct*).

The other variables are as defined above.

In model (2) we relate terms (*Terms_n*) used in press releases to specific assets obtained in PPAs to which they should be related if management is consistent across soft and hard disclosures. In other words, we test the association between *GDWLpct* and *Growth_n*, *Synergy_n* and *Human_n* because growth, synergies and human capital are unidentifiable intangible assets that should result in a greater purchase price allocated to goodwill, all else equal. Consistently, we also test the association between *Brand_n* and *MARKETpct*, *Customers_n* and *CUSTOMERSpct*, and *Techno_n* and *TECHNOpct*. These three intangible assets are identifiable under GAAP so we reason that greater use of words related to them in press releases should lead to a greater percentage of the purchase price allocated to these assets in the acquirers' accounts. We therefore expect a positive coefficient b_1 under H2. We also control for industry (*CROSS*) and year fixed effects.

Drawing from impression management, H3 posits that managers use terms about growth, synergies and other intangible resources more frequently for lower quality deals in an attempt to positively influence market participants' perceptions of the transaction. We test H3 with one ex ante measure of deal quality: the likelihood of negative acquirer abnormal returns upon announcement of the transaction and two ex post measures of deal quality, Tobin's Q and change in the acquirers' operating cash flows, one year after the deal is completed.

First we investigate the association between the terms used in press releases and the acquirers' likelihood of negative cumulative abnormal returns with the following logistic model:

$$\begin{aligned} \Pr(\text{Bad_Deal}_i = 1) = & b_0 + b_1\text{Terms_}n_i + b_2\text{ACQ_ROA}_i + b_3\text{ACQ_LEV}_i + b_4\text{TAR_ROA}_i \quad (3) \\ & + b_5\text{Materiality}_i + b_6\text{CashPc}_i + b_7\text{CROSS}_i \\ & + \text{Industry fixed effects} + \text{Year fixed effects} + \varepsilon \end{aligned}$$

where:

Bad_Deal_i = 1 if the acquirers three day cumulative abnormal returns centered on the announcement date is negative and 0 otherwise.

ACQ_ROA_i = Acquirer EBITDA divided by total assets during the year of announcement of the deal.

ACQ_LEV_i = Acquirer long-term debt divided by total assets during the year of announcement of the deal.

TAR_ROA_i = Last reported EBITDA divided by total assets of the Target.

CashPc_i = Percentage of purchase price paid in cash.

The other variables are as defined above.

Under H3, we expect b_1 to be positive because deals negatively received by market participants ($\text{Bad_Deal} = 1$) would be associated with more frequent use of terms about growth, synergies and other intangible assets that the acquirer purchase in the transaction. We control for a number of acquirer characteristics (ACQ_ROA , ACQ_LEV), target characteristics (TAR_ROA) and deal characteristics (Materiality , CROSS , CashPc). We also include controls for industries and year fixed effects.

To assess the association between the quality of the deal and the terms used in M&A press releases we also use the acquirers' Tobin Q one year after completion of the deal which is an ex post measure of deal quality. We estimate the OLS model (4):

$$\begin{aligned} \text{TQ}_{i,t+1} = & b_0 + b_1\text{Terms_}n_i + b_2\text{CROSS}_i + \text{Industry fixed effects} \quad (4) \\ & + \text{Year fixed effects} + \varepsilon \end{aligned}$$

In model (4) the main coefficient of interest is b_1 , which measures the association of the terms used in M&A press releases with the acquirer Tobin's Q one year following completion of the transaction. We expect a negative coefficient b_1 as it would indicate that acquirers using more frequently terms about growth, synergies and other intangible resources would exhibit lower performance after the deal is completed than acquirers making less frequent use of these terms. We control for cross-industry deals, industries and year fixed effects.

We rely on a second measure of deal quality: the acquirer's change in operating cash flow one year after completing the transaction. We reason that if H3 is true, then deals that present a decrease (or a smaller increase) of operating cash flows may be associated with a more frequent used of terms associated with growth, synergies and other intangible resources. We estimate the following OLS model:

$$\Delta OCF_{i,[t-1;t+1]} = b_0 + b_1 Terms_{ni} + b_2 OCF_{i,t-1} + b_3 CROSS_i + \text{Industry fixed effects} \quad (5)$$

$$+ \text{Year fixed effects} + \varepsilon$$

where:

$\Delta OCF_{i,[t-1;t+1]}$ = Operating cash flows divided by total assets one year after completion of the transaction minus operating cash flows divided by total assets one year before completion of the transaction

$OCF_{i,t-1}$ = Operating cash flows divided by total assets one year before completion of the transaction.

The other variables are as previously defined.

The main coefficient of interest is b_1 . We expect b_1 to be negative, i.e., the frequency of terms about growth, synergies and other intangible resources is expected to be negatively associated with the change in operating cash flows. We control for the level of operating cash flows in t-1, cross-industry deals, and industry and year fixed effects.

4. Sample and results

4.1. Sample selection and descriptive statistics

We obtain deals from Thomson One Banker for transactions completed between 2003 and 2014 by US acquirers purchasing US targets. We focus on post-FAS 141 period which requires purchase price allocation to be disclosed. We exclude deals completed in 2002 because it was a transition year (Beatty and Weber 2006)⁶. We focus on acquisitions of public firms (for a minimum consideration of \$50 million) because the visibility of public acquisitions is higher, which is likely to increase the importance of disclosures provided about these acquisitions. We exclude acquisitions in the following Thomson Financials macro industries due to their specificities: Government and Agencies, Real Estate and Financials. Next we match these transactions with ppanalyser.com, a private data provider that collects information about transactions from regulatory filings (i.e., forms 10-Ks, 10-Qs), including detailed PPAs. To obtain a maximum number of transactions, we complete PPA data with data from Pratt's Stats Public Companies another provider of PPA information. Finally we retrieve M&A press releases for each of these transactions on the internet. Our main sample for which we can find the press releases and at least some PPA information consists of 394 transactions. We obtain other variables from CSR and Compustat.⁷ Our sample selection process is described in Panel A of Table 1.

[Insert Table 1 About Here]

Panel B of Table 1 indicates that transactions are clustered in the High Tech and Healthcare industries that account for 29.2% and 22.6% of all transactions, respectively. The remaining transactions are well distributed across the other industries. Panel C of Table 1 presents the

⁶ However, we include deals announced in 2002 (and completed in a subsequent year) (see Table 1).

⁷ For some tests our sample is smaller than 394 observations because some acquirers disclose partial PPA information (e.g., the value of brands is missing) or due to further data restriction in CSR and/or Compustat.

distribution of acquisition announcements per year. It shows that fiscal years 2007 and 2010 account for 15% and 10.9% of all transactions, respectively. The number of transactions announced in 2002 and 2003 represent only 0.5% and 1.5% of all the transactions.

Table 2 presents descriptive statistics of our sample. Panel A describes terms used in M&A press releases using our six categories of terms (i.e., *Growth_n*, *Synergy_n*, *Brands_n*, *Customers_n*, *Techno_n*, and *Human_n*). The mean (median) number of terms about growth is 3.10 (2) and the mean (median) number of terms about synergies is 2.9 (2). The mean number of terms about brands is 0.9, while managers use, on average, 3.8 terms about customers, 2.6 terms about technologies and 2.5 terms about human capital in press releases.

[Insert Table 2 About Here]

Panel B presents descriptive characteristics about how the purchase price is allocated to intangible assets as well as several dependent and control variables. We find that the mean (median) purchase price allocated to goodwill, *GDWLpct*, is 51.9% (52.1%). The mean (median) purchase price allocated to marketing-related intangible assets is 4.9% (0.0%). The mean (median) purchase price allocated to customers-related intangible assets is 9.5% (4.7%) and technologies account for a mean (median) of 14.7% (6.2%) of the purchase price. In about 52.3% of transactions the acquirer's cumulative abnormal returns are negative (*Bad_Deal*). The acquirer mean (median) change in operating cash flow one year after completing the deal is -1.7% (-1.4%) of total assets ($\Delta OCF_{t-1;t+1}$). The mean (median) *Materiality* of transaction is 34.8% (22.7%) of the acquirers' pre-acquisition total assets and about 19.8% of transactions are completed by an acquirer in a different industry than the target firm (*CROSS*).

4.2. Deal Materiality and Terms Used in M&A press Releases

Table 3 presents the estimation results of model (1) that tests the association between the relative size of the transaction (*Materiality*) and the terms used in M&A press releases.

According to H1, because larger deals tend, more often, to destroy value, managers are likely to use more frequently terms about growth, synergies and other intangible resources for such transactions.

[Insert Table 3 About Here]

Table 3 shows that the relative size of the transaction influences positively the number of times managers use terms about growth and synergies in M&A press releases (significant at less than 1%, two-sided tests). Results are robust to controls for industries and year fixed effects. Larger transactions are more likely to be associated with value destruction which may lead managers to attempt to use impression management to influence investors' views on the transaction by discussing more about synergies and growth. We also find limited evidence that managers employ more frequently terms about customers in their press releases (significant at less than 10%, two-sided test). The relative size of the transaction do not affect the use of terms related to brands, technologies or human capital.

Overall, we find support for H1 for the use of growth and synergy terms which are the least specific terms related to intangible assets.

4.3. Terms used in M&A press releases and subsequent purchase price allocations

Table 4 presents the estimation results of model (2) that tests the association between qualitative disclosures in M&A press releases and the value of assets recognized in PPAs. According to H2, terms used in M&A press releases are positively associated with the percentage of the purchase price allocated to the corresponding assets in PPAs.

[Insert Table 4 About Here]

Table 4 shows that the frequency of terms about growth (*Growth_n*) is positively associated with the percentage of the purchase price allocated to goodwill (significant at less than 10% or better, two-sided tests). All else equal, the use of the term growth should increase goodwill,

because growth is not a separately identified intangible asset. We also find some evidence that terms about human capital is positively associated with *GDWLpct* (significant at less than 5% if controls are excluded, two-sided test). Per GAAP, managers cannot separately identify a human capital asset (mainly because employees are not controlled by the firm), the value of human capital is therefore allocated to goodwill which is a plug in number. We also document that the use of terms about brands (*Brands_n*) and customers (*Customers_n*) are positively associated with the percentage of the purchase price allocated to marketing-related assets (*MARKETpct*) and customers-related assets (*CUSTOMERSpct*), respectively. We fail to find a significant relation at conventional level between the use of terms related to synergies and technologies and *GDWLpct* and *TECHNOpct*, respectively.

Overall, results indicate that qualitative disclosures in press releases and quantitative information in the acquirers' accounts are fairly consistent, supporting H2.

4.4. Terms used in M&A press releases and deal quality

Tables 5 to 7 investigate the association between terms used in M&A press releases and the deal quality. Under H3, managers attempt to influence investors' views regarding the transactions by relying on terms in press releases about growth, synergies and other intangible resources. Managers would use more frequently these terms for lower quality deals. Table 5 shows estimation result of model (3) that examines the relation between our six categories of terms in press releases and the likelihood of negative cumulative abnormal returns surrounding announcement of the acquisition which is an ex ante measure of deal quality.

[Insert Table 5 About Here]

Table 5 presents evidence that more frequent use of terms related to growth is positively associated with the likelihood of a decrease in acquirer's stock price upon announcement of the acquisition (significant at less than 1%, two-sided). The results is robust to inclusion of various

control variables. We also find evidence that terms related to technologies are associated with a greater likelihood of a decrease in the acquirer's stock price upon announcement of the transaction (significant at less than 10% or better, two-sided). We find no evidence that other terms are significantly associated with the likelihood of a decrease in the acquirer's stock price.

Table 6 presents estimation results of model (4) that examines the relation between acquirers' Tobin's Q one year after deal completion and terms disclosed in M&A press releases. Tobin's Q is an ex post measure of acquisition quality.

[Insert Table 6 About Here]

In Table 6, we find that the frequencies of terms about growth, synergies and customer relationship are negatively associated with acquirers' post-acquisition Tobin's Q (significant at less than 5% or better, two-sided tests). We also find more limited evidence that the use of terms about technologies and human capital tend also to be negatively associated with acquirers' Tobin's Q (*Techno_n* is negatively associated with acquirers' Tobin's Q in specification (10), at less than 10%, two sided test, while *Human_n* is negatively associated with Tobin's Q in specification (11) at less than 5%, two-sided test).

Table 7 exhibits estimation results of model (5) that facilitates the investigation of the relation between terms used in M&A press releases and acquirers' change in operating cash flows after completion of the transaction which serves as our second ex post measure of deal quality.

[Insert Table 7 About Here]

We find evidence that terms related to synergies are negatively associated with the change in operating cash flows after completion of the transaction (significant at less than 1%, two-sided test). This result is robust to including the level of operating cash flow before the

transaction and industry and year fixed effects. We do not find that the other categories of terms are statistically associated with change in operating cash flows.

Overall, our analysis of the relation between terms used in press releases and our three measures of deal quality support the argument according to which press releases are used to conduct impression management in an attempt to positively influence investors' views about transaction (H3). We find that several categories of terms about growth, synergies and intangible resources are negatively associated with one or several of our three measures of deal quality. However, we find no supporting evidence that these terms are positively associated with performance suggesting that they are used to promote the deal and not to disclose information about the underlying economics of the transaction.

5. Conclusion

We examine the disclosures provided in M&A press releases about growth, synergies and intangible resources. Managers may objectively communicate to investors the rationale of the deal in which case we should observe a positive correlation between proxies for deal quality and qualitative disclosures in press releases about key value drivers. Conversely, impression management suggests that managers may rely on soft disclosures to attempt influencing investors' views for weaker transactions. If this is the case then we should observe a negative association between deal quality and soft disclosures.

Using a sample of 394 transactions completed by US acquirers purchasing publicly traded US targets between 2003 and 2014 we find evidence consistent with the impression management hypothesis. We document that for six categories of terms related to growth, synergies, customer relationship, brands, technologies and human capital, several exhibit a negative association with various measures of deal quality while none shows a positive association with deal quality. We also find that larger deal are associated with more use of

words such as growth and synergies in press releases. Using PPA data we find that acquirers are consistent across soft disclosures in press releases and assets recognized after completion of the deal.

This study contributes to the M&A literature by exploring how managers use key soft disclosures in M&A press releases. This study is also relevant for investors attempting to assess the performance of M&As.

Appendix A: Excerpts from a M&A press Release

Liberty Interactive M&A press release of zulily

August 17, 2015

Liberty Interactive Announces Definitive Agreement to Acquire zulily

zulily to be Attributed to the QVC Group Tracking Stock QVC Group will have approximately \$5 billion in eCommerce Revenue and 50% Mobile Penetration

Englewood, Colo. & Seattle-(Business Wire)- Liberty Interactive Corporation (“Liberty Interactive”) (Nasdaq: QVCA, QVCB, LVNTA, LVNTB) and zulily, inc. (“zulily”) (Nasdaq: ZU) today announced that they have entered into a definitive agreement (the “Agreement”) under which Liberty Interactive will acquire all outstanding shares of zulily for \$18.75 per share. The acquisition will be attributed to Liberty Interactive's QVC Group tracking stock.

“We are excited for zulily to join the Liberty family,” stated Greg Maffei, Liberty Interactive President and CEO. “Darrell, Mark and their **team** have built an impressive business around entertainment, discovery and value to the **customer**, which fits perfectly with the QVC philosophy. Combined under Liberty, we have an incredible opportunity to delight shoppers from the TV to the Internet.”

“As the world leader in video and eCommerce retail, QVC is dedicated to reimagining shopping, entertainment and community as one,” said Mike George, QVC President and CEO.

“In zulily, we see a like-minded **brand** that shares our passion for discovering great products, for delivering honest value, and for building long term relationships with **customers**. Our teams are committed to learning from and inspiring each other and leveraging our platforms in new ways to **accelerate growth**, serve our customers better, and realize the full potential of both of these extraordinary **brands**.”

“Mark Vadon and I are incredibly excited to announce our partnership with QVC. QVC has built an amazing business with a great culture and incredibly similar understanding for bringing entertainment, discovery and value into the daily **customer** experience,” said Darrell Cavens, President and CEO of zulily. “This combination under Liberty is about investing in our future and providing a tremendous opportunity to accelerate our platform for **growth** of the zulily **brand** through the partnership with QVC.”

Appendix B: Word lists

Growth	Synergy	Brands	Customers	Technology	Human
Growth Grow Growing Grows	Synergies Synergy Accretive Accretion Efficiencies Efficient Efficiently	Brand Branded Branding Brands	Customer Customers Consumer Consumers	Technological Technologically Technologies Technology Innovate Innovation Innovations Innovative Innovator Innovators	Employee Employees Employees team, teamed teaming teams Expertise

Appendix C: Variable Definitions

Variable name	Definition	Source
<i>Growth_n</i>	Number of times the terms mentioned in Appendix B are used in the M&A press release: growth, grow, growing, grows.	M&A press release
<i>Synergy_n</i>	Number of times the terms mentioned in Appendix B are used in the M&A press release: synergies, synergy, accretive, accretion, efficiencies, efficient, efficiently.	M&A press release
<i>Brands_n</i>	Number of times the terms mentioned in Appendix B are used in the M&A press release: brand, branded, branding, brands.	M&A press release
<i>Customers_n</i>	Number of times the terms mentioned in Appendix B are used in the M&A press release: customer, customers, consumer, and consumers.	M&A press release
<i>Techno_n</i>	Number of times the terms mentioned in Appendix B are used in the M&A press release: technological, technologically, technologies, technology, innovate, innovation, innovations, innovative, innovator, innovators.	M&A press release
<i>Human_n</i>	Number of times the terms mentioned in Appendix B are used in the M&A press release: employee, employees, employees, team, teamed, teaming, teams, expertise.	M&A press release
<i>GDWLpct</i>	Percentage of the purchase price allocated to goodwill.	ppanalyser.com or Pratt Stats
<i>MARKETpct</i>	Percentage of the purchase price allocated to brands, trademarks and other marketing intangible assets.	ppanalyser.com or Pratt Stats
<i>CUSTOMERSpct</i>	Percentage of the purchase price allocated to customers' lists, customer contracts, customer relationships, backlog and other customer intangible assets.	ppanalyser.com or Pratt Stats
<i>TECHNOpct</i>	Percentage of the purchase price allocated to patents, technologies, software, databases, in process research and development, and other technology or other research intangible assets.	ppanalyser.com or Pratt Stats
<i>ACQ_ROA</i>	Acquirer EBITDA divided by total assets during the year of announcement of the deal.	Compustat
<i>ACQ_LEV</i>	Acquirer long term debt divided by total assets during the year of announcement of the deal.	Compustat
<i>TAR_ROA</i>	Last reported Target EBITDA divided by total assets.	Thomson One Banker
<i>MATERIALITY</i>	Purchase price divided by acquirer's pre-transaction total assets.	Thomson One Banker
<i>CASH</i>	Percentage of purchase price paid in cash.	Thomson One Banker

<i>CROSS</i>	1 if the acquirer and the target firms are in two different macro industry, and 0 otherwise.	Thomson One Banker
<i>ACQ_CAR</i> _[k-1;k+1]	Acquirer's cumulative (market adjusted) abnormal returns computed over three trading days centered on the announcement date.	CRSP
<i>Bad_Deal</i>	1 if the acquirer three day cumulative abnormal returns centered on the announcement date is negative and 0 otherwise.	CRSP
<i>TQ</i> _{t+1}	Acquirer Tobin's Q one year after completion of the transaction, measured as market value of equity + book value of short and long term debt divided by year-end total assets.	Compustat
<i>ΔOCF</i> _{t-1;t+1}	Operating cash flows divided by total assets one year after completion of the transaction minus operating cash flows divided by total assets one year before completion of the transaction.	Compustat
<i>OCF</i> _{t-1}	Operating cash flows divided by total assets one year before completion of the transaction.	Compustat

References

- Abhayawansa, S., and J. Guthrie. 2012. Intellectual capital information and stock recommendations: Impression management? *Journal of Intellectual Capital* 13 (3): 398-415.
- Ahern, K. R., D. Daminelli, and C. Fracassi. 2015. Lost in translation? The effect of cultural values on mergers around the world. *Journal of Financial Economics* 117 (1): 165-189.
- Ahern, K. R., and D. Sosyura. 2014. Who writes the news? Corporate press releases during merger negotiations. *Journal of Finance* 69 (1): 241-291.
- Amir, E., and B. Lev. 1996. Value-relevance of nonfinancial information: The wireless communications industry. *Journal of Accounting and Economics* 22 (1-3): 3-30.
- Baker, M., R. Ruback, S., and J. Wurgler. 2007. Behavioral corporate finance. In *Handbook of corporate finance*, Vol. 1, eds, Espen Eckbo, B., 145-186. Amsterdam, The Netherlands: North Holland.
- Beattie, V., and M. J. Jones. 1992. The use and abuse of graphs in annual reports: Theoretical framework and empirical study. *Accounting and Business Research* 22 (88): 291-303.
- Beattie, V., and M. J. Jones. 1997. A comparative study of the use of financial graphs in the corporate annual reports of major U.S. and U.K. Companies. *Journal of International Financial Management & Accounting* 8 (1): 33-68.
- Beattie, V., and M. J. Jones. 2008. Corporate reporting using graphs: A review and synthesis. *Journal of Accounting Literature* 27: 71-110.
- Beattie, V. A., and M. J. Jones. 1998. *Graphical reporting choices: Communication or manipulation*. London: ACCA.
- Beatty, A., and J. Weber. 2006. Accounting discretion in fair value estimates: An examination of SFAS 142 goodwill impairments. *Journal of Accounting Research* 44 (2): 257-288.
- Bozanic, Z., and M. Thevenot. 2015. Qualitative disclosure and changes in sell-side financial analysts' information environment. *Contemporary Accounting Research* 32 (4): 1595-1616.
- Bradley, M., A. Desai, and E. H. Kim. 1988. Synergistic gains from corporate acquisitions and their division between the stockholders of target and acquiring firms. *Journal of Financial Economics* 21 (1): 3-40.
- Brennan, N. M., E. Guillamon-Saorin, and A. Pierce. 2009. Impression management: Developing and illustrating a scheme of analysis for narrative disclosures - a methodological note. *Accounting, Auditing & Accountability Journal* 22 (5): 789-832.
- Chakravarthy, J., E. de Haan, and S. Rajgopal. 2014. Reputation repair after a serious restatement. *The Accounting Review* 89 (4): 1329-1363.
- Cho, C. H., G. Michelon, and D. M. Patten. 2012. Impression management in sustainability reports: An empirical investigation of the use of graphs. *Accounting and the Public Interest* 12 (1): 16-37.
- Cho, C. H., R. W. Roberts, and D. M. Patten. 2010. The language of US corporate environmental disclosure. *Accounting, Organizations and Society* 35 (4): 431-443.
- Cicon, J., J. Clarke, S. P. Ferris, and N. Jayaraman. 2014. Managerial expectations of synergy and the performance of acquiring firms: The contribution of soft data. *Journal of Behavioral Finance* 15 (3): 161-175.
- Ciftci, M., M. Darrouh, and R. Mashruwala. 2014. Value relevance of accounting information for intangible-intensive industries and the impact of scale: The US evidence. *European Accounting Review* 23 (2): 199-226.

- Clatworthy, M., and M. J. Jones. 2001. The effect of thematic structure on the variability of annual report readability. *Accounting, Auditing & Accountability Journal* 14 (3): 311-326.
- Clatworthy, M., and M. J. Jones. 2003. Financial reporting of good news and bad news: Evidence from accounting narratives. *Accounting and Business Research* 33 (3): 171-185.
- Clem, A., A. R. Cowan, and C. Jeffrey. 2004. Market reaction to proposed changes in accounting for purchased research and development in R&D-intensive industries. *Journal of Accounting, Auditing & Finance* 19 (4): 405-428.
- Davis, A. K., J. M. Piger, and L. M. Sedor. 2012. Beyond the numbers: Measuring the information content of earnings press release language. *Contemporary Accounting Research* 29 (3): 845-868.
- Devos, E., P.-R. Kadapakkam, and S. Krishnamurthy. 2009. How do mergers create value? A comparison of taxes, market power, and efficiency improvements as explanations for synergies. *Review of Financial Studies* 22 (3): 1179-1211.
- FASB. 2001. *Statement of financial accounting standards (SFAS) No. 141: Business combinations*. Norwalk, CT: Financial Accounting Standards Board.
- FASB. 2007. *Statement of financial accounting standards (SFAS) No. 141: Business combinations - revised*. Norwalk, CT: Financial Accounting Standards Board.
- Fernández, B. C., Y. F. Callén, and J. A. L. Gadea. 2011. Stock price reaction to non-financial news in European technology companies. *European Accounting Review* 20 (1): 81-111.
- Files, R., E. P. Swanson, and S. Tse. 2009. Stealth disclosure of accounting restatements. *The Accounting Review* 84 (5): 1495-1520.
- García Osa, B., and E. Guillamón-Saorín. 2011. Corporate governance and impression management in annual results press releases. *Accounting, Organizations and Society* 36 (4-5): 187-208.
- Gong, G., H. Louis, and A. X. Sun. 2008. Earnings management, lawsuits, and stock-for-stock acquirers' market performance. *Journal of Accounting and Economics* 46 (1): 62-77.
- Grinstein, Y., and P. Hribar. 2004. CEO compensation and incentives: Evidence from M&A bonuses. *Journal of Financial Economics* 73 (1): 119-143.
- Gu, F., and B. Lev. 2011. Overpriced shares, ill-advised acquisitions, and goodwill impairment. *The Accounting Review* 86 (6): 1995-2022.
- Harford, J., and K. A. I. Li. 2007. Decoupling CEO wealth and firm performance: The case of acquiring CEOs. *Journal of Finance* 62 (2): 917-949.
- Healy, P. M., S. C. Myers, and C. D. Howe. 2002. R&D accounting and the tradeoff between relevance and objectivity. *Journal of Accounting Research* 40 (3): 677-710.
- Healy, P. M., and K. G. Palepu. 2001. Information asymmetry, corporate disclosure, and the capital markets: A review of the empirical disclosure literature. *Journal of Accounting and Economics* 31 (1): 405-440.
- Healy, P. M., K. U. Palepu, and R. S. Ruback. 1992. Does corporate performance improve after mergers? *Journal of Financial Economics* 31 (2): 135-175.
- Huang, X., S. H. Teoh, and Y. Zhang. 2014. Tone management. *The Accounting Review* 89 (3): 1083-1113.
- Humphery-Jenner, M., and R. Powell. 2014. Firm size, sovereign governance, and value creation: Evidence from the acquirer size effect. *Journal of Corporate Finance* 26: 57-77.
- Jensen, M. C. 1986. Agency costs of free cash flow, corporate finance, and takeovers. *American Economic Review* 76 (2): 323-329.
- Jones, M. J. 2011. The nature, use and impression management of graphs in social and environmental accounting. *Accounting Forum* 35 (2): 75-89.

- Kimbrough, M. D., and L. Henock. 2011. Voluntary disclosure to influence investor reactions to merger announcements: An examination of conference calls. *The Accounting Review* 86 (2): 637-667.
- Kimbrough, M. D., and I. Y. Wang. 2014. Are seemingly self-serving attributions in earnings press releases plausible? Empirical evidence. *The Accounting Review* 89 (2): 635-667.
- Leary, M. R., and R. M. Kowalski. 1990. Impression management: A literature review and two-component model. *Psychological Bulletin* 107 (1): 34-47.
- Lehavy, R., L. Feng, and K. Merkley. 2011. The effect of annual report readability on analyst following and the properties of their earnings forecasts. *The Accounting Review* 86 (3): 1087-1115.
- Li, F. 2008. Annual report readability, current earnings, and earnings persistence. *Journal of Accounting & Economics* 45 (2/3): 221-247.
- Lo, K., F. Ramos, and R. Rogo. Forthcoming. Earnings management and annual report readability. *Journal of Accounting and Economics*.
- Loughran, T., and B. McDonald. 2013. IPO first-day returns, offer price revisions, volatility, and form s-1 language. *Journal of Financial Economics* 109 (2): 307-326.
- Loughran, T., and B. McDonald. 2015. The use of word lists in textual analysis. *Journal of Behavioral Finance* 16 (1): 1-11.
- Loughran, T. I. M., and B. McDonald. 2011. When is a liability not a liability? Textual analysis, dictionaries, and 10-ks. *Journal of Finance* 66 (1): 35-65.
- Loughran, T. I. M., and B. McDonald. 2014. Measuring readability in financial disclosures. *Journal of Finance* 69 (4): 1643-1671.
- Loughran, T. I. M., and B. McDonald. 2016. Textual analysis in accounting and finance: A survey. *Journal of Accounting Research* 54 (4): 1187-1230.
- Lundholm, R. J., R. Rogo, and J. L. Zhang. 2014. Restoring the tower of babel: How foreign firms communicate with U.S. Investors. *The Accounting Review* 89 (4): 1453-1485.
- Merkel-Davies, D. M., and N. M. Brennan. 2007. Discretionary disclosure strategies in corporate narratives: Incremental information or impression management? *Journal of Accounting Literature* 26: 116-194.
- Merkel-Davies, D. M., and N. M. Brennan. 2011. A conceptual framework of impression management: New insights from psychology, sociology and critical perspectives. *Accounting & Business Research* 41 (5): 415-437.
- Merkel-Davies, D. M., N. M. Brennan, and S. J. McLeay. 2011. Impression management and retrospective sense-making in corporate narrativesa social psychology perspective. *Accounting, Auditing & Accountability Journal* 24 (3): 315-344.
- Moeller, S. B., F. P. Schlingemann, and R. M. Stulz. 2004. Firm size and the gains from acquisitions. *Journal of Financial Economics* 73 (2): 201-228.
- Nakamura, L. 2001. Investing in intangibles: Is a trillion dollars missing from GDP? *Business Review (Federal Reserve Bank of Philadelphia)*: 27.
- Neu, D., H. Warsame, and K. Pedwell. 1998. Managing public impressions: Environmental disclosures in annual reports. *Accounting, Organizations & Society* 23 (3): 265-282.
- Paugam, L., P. André, P. Henri, and R. Harfouche. 2016. *Brand valuation*. New York and Abingdon: Taylor and Francis.
- Paugam, L., P. Astolfi, and O. Ramond. 2015. Accounting for business combinations: Do purchase price allocations matter? *Journal of Accounting & Public Policy* 34 (4): 362-391.
- Pfeffer, J., and G. R. Salancik. 2003. *The external control of organizations: A resource dependence perspective*. New York City, NY: Harper & Row.
- Preston, A. M., C. Wright, and J. J. Young. 1996. Imag[in]ing annual reports. *Accounting, Organizations and Society* 21 (1): 113-137.

- Revsine, L. 1991. The selective financial misrepresentation hypothesis. *Accounting Horizons* 5 (4): 16-27.
- Riley, T. J., G. R. Semin, and A. C. Yen. 2014. Patterns of language use in accounting narratives and their impact on investment-related judgments and decisions. *Behavioral Research in Accounting* 26 (1): 59-84.
- Roll, R. 1986. The hubris hypothesis of corporate takeovers. *Journal of Business* 59 (2): 197-216.
- Schleicher, T., and M. Walker. 2010. Bias in the tone of forward-looking narratives. *Accounting & Business Research (Wolters Kluwer UK)* 40 (4): 371-390.
- Schlenker, B. R. 1980. *Impression management: The self-concept, social identity, and interpersonal relations*. Belmont, CA: Brooks-Cole.
- Seth, A., K. P. Song, and R. Pettit. 2000. Synergy, managerialism or hubris? An empirical examination of motives for foreign acquisitions of U.S. Firms. *Journal of International Business Studies* 31 (3): 387.
- Shalev, R. 2009. The information content of business combination disclosure level. *The Accounting Review* 84 (1): 239-270.
- Shalev, R., I. X. Zhang, and Y. Zhang. 2013. CEO compensation and fair value accounting: Evidence from purchase price allocation. *Journal of Accounting Research* 51 (4): 819–854.
- Smith, T. 1992. *Accounting for growth - stripping the camouflage from company accounts*. London, U.K.: Century Business, 2nd edition 1996.
- UBS Phillips and Drew. 1991. *Accounting for growth*. London: UBS Phillips and Drew.
- Washburn, M., and P. Bromiley. 2014. Managers and analysts: An examination of mutual influence. *Academy of Management Journal* 57 (3): 849-868.
- Watts, R. L., and J. L. Zimmerman. 1986. *Positive accounting theory*. Englewood Cliffs, NJ: Prentice-Hall.
- Watts, R. L., and J. L. Zimmerman. 1990. Positive accounting theory: A ten year perspective. *The Accounting Review* 65 (1): 131-156.
- Weiss, D., H. Falk, and U. B. Zion. 2013. Earnings variability and disclosure of R&D: Evidence from press releases. *Accounting & Finance* 53 (3): 837-865.

Table 1

Panel A: Sample selection

Deals larger than \$50 million completed between 2003 and 2014 acquirer and target publicly traded (excluding finance and regulated industries)	803
Less: transactions not matched with ppanalyser or Pratt's Stats	(404)
Less: transactions with missing press releases	(10)
Final sample	394

Panel B: Distribution of deals by industry

Industry	# of deals	Pct
<i>CPS</i>	25	6.3%
<i>ENERGY</i>	38	9.6%
<i>HEALTH</i>	89	22.6%
<i>HT</i>	115	29.2%
<i>IND</i>	36	9.1%
<i>MATERLS</i>	25	6.3%
<i>MEDIA</i>	17	4.3%
<i>RETAIL</i>	14	3.6%
<i>STAPLES</i>	10	2.5%
<i>TELECOM</i>	25	6.3%
Total	394	100.0%

Panel C: Distribution of deals by year of announcement

Year announcement	# of deals	Pct
2002 ⁸	2	0.5%
2003	6	1.5%
2004	19	4.8%
2005	27	6.9%
2006	40	10.2%
2007	59	15.0%
2008	30	7.6%
2009	38	9.6%
2010	43	10.9%
2011	32	8.1%
2012	42	10.7%
2013	37	9.4%
2014	19	4.8%
Total	394	100.0%

⁸ We exclude deals completed in 2002 because it was a transition year (Beatty and Weber 2006). However, we include deals announced in 2002.

Table 2

Descriptive statistics

Panel A: Terms used in acquisitions' press releases

	N	mean	sd	p25	p50	p75
<i>Growth_n</i>	394	3.089	3.216	1	2	4
<i>Synergy_n</i>	394	2.914	2.974	1	2	4
<i>Brands_n</i>	394	0.896	2.788	0	0	0
<i>Customers_n</i>	394	3.784	3.966	1	3	6
<i>Techno_n</i>	394	2.632	3.326	0	1	4
<i>Human_n</i>	394	2.457	2.242	1	2	3

Panel B: Purchase price allocation and control variables

	N	mean	sd	p25	p50	p75
PPA data						
<i>GDWLpct</i>	394	0.519	0.327	0.318	0.521	0.690
<i>MARKETpct</i>	284	0.049	0.124	0.000	0.004	0.033
<i>CUSTOMERSpct</i>	276	0.095	0.123	0.000	0.047	0.147
<i>TECHNOpct</i>	276	0.147	0.229	0.000	0.062	0.188
<i>Bad_Deal</i>	298	0.523	0.500	0.000	1.000	1.000
$\Delta OCF_{t-1;t+1}$	312	-0.017	0.066	-0.048	-0.014	0.012
<i>MATERIALITY</i>	319	0.348	0.369	0.101	0.227	0.470
<i>CROSS</i>	394	0.198	0.399	0.000	0.000	0.000
<i>ACQ_ROA</i>	319	0.122	0.071	0.075	0.115	0.164
<i>ACQ_LEV</i>	317	0.244	0.182	0.125	0.205	0.361
<i>TAR_ROA</i>	382	0.081	0.174	0.045	0.111	0.160
<i>CASH</i>	315	79.407	28.537	57.428	100.000	100.000
<i>ACQ_CAR</i> _[k-1;k+1]	298	-0.001	0.074	-0.036	-0.003	0.034
<i>TQ</i> _{t+1}	311	1.469	0.808	0.900	1.258	1.833
<i>OCF</i> _{t-1}	321	0.113	0.073	0.074	0.112	0.157

See Appendix C for definition of variables

Table 3

Relative size of the transaction and use of intangible-related terms in press releases

$$Terms_n_i = b_0 + b_1Materiality_i + b_2CROSS_i + \text{Industry fixed effects} + \text{Year fixed effects} + \varepsilon$$

Dep Var.	<i>Growth_n</i>		<i>Synergy_n</i>		<i>Brands_n</i>		<i>Customer_n</i>		<i>Techno_n</i>		<i>Human_n</i>	
<i>Materiality</i>	1.384 *** (2.83)	1.488 *** (2.91)	1.994 *** (3.99)	2.461 *** (4.76)	-0.019 (-0.07)	0.115 (0.34)	0.587 (0.89)	0.983 * (1.68)	0.44 (0.91)	0.845 (1.60)	0.327 (0.87)	0.519 (1.40)
<i>CROSS</i>		-0.203 (-0.42)		-0.154 (-0.37)		0.125 (0.27)		-0.413 (-0.64)		0.611 (1.29)		-0.148 (-0.44)
Industry fixed effects	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes
Year fixed effects	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes
Constant	2.578 *** (11.20)	6.43 ** (2.11)	2.084 *** (9.37)	1.232 (1.57)	0.731 *** (4.24)	3.11 *** (3.45)	3.633 *** (11.70)	6.209 ** (2.29)	2.568 *** (10.60)	2.057 (0.94)	2.291 *** (13.20)	2.564 (1.37)
N	319	319	319	319	319	319	319	319	319	319	319	319
Adj. R ²	0.022	0.097	0.057	0.126	-0.003	0.294	0.000	0.078	-0.001	0.075	0.000	0.026

***, **, * Denote significance at the 1 percent, 5 percent, and 10 percent levels, respectively, using a two-tailed test.

See Appendix C for definition of variables.

Table 4

Association between soft disclosures in press releases in intangible assets recognized in subsequent purchase price allocations

$$ALLOCPct_i = b_0 + b_1Terms_n_i + b_2CROSS_i + \text{Industry fixed effects} + \text{Year fixed effects} + \varepsilon$$

Dep Var:	<i>GDWLpct</i>		<i>GDWLpct</i>		<i>GDWLpct</i>		<i>MARKETpct</i>		<i>CUSTOMERSpct</i>		<i>TECHNOpct</i>	
	Coeff.	Coeff.	Coeff.	Coeff.	Coeff.	Coeff.	Coeff.	Coeff.	Coeff.	Coeff.	Coeff.	Coeff.
<i>Growth_n</i>	0.009 **	0.009 *										
	(2.35)	(1.95)										
<i>Synergy_n</i>			0.007	0.008								
			(1.33)	(1.48)								
<i>Human_n</i>					0.016 **	0.011						
					(2.11)	(1.55)						
<i>Brands_n</i>							0.022 ***	0.016 ***				
							(7.38)	(5.75)				
<i>Customers_n</i>									0.009 ***	0.008 ***		
									(4.25)	(3.47)		
<i>Techno_n</i>											0.001	-0.003
											(0.35)	(-0.81)
<i>CROSS</i>		-0.006		-0.005		-0.004		0.002		-0.004		-0.016
		(-0.17)		(-0.15)		(-0.13)		(-0.13)		(-0.18)		(-0.65)
Industry fixed effects	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes
Year fixed effects	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes
Constant	0.484 ***	0.648 ***	0.492 ***	0.688 ***	0.473 ***	0.679 ***	0.027 ***	0.017	0.061 ***	0.055	0.142 ***	0.047
	(26.59)	(4.97)	(25.90)	(6.17)	(21.80)	(7.36)	(7.00)	(0.54)	(6.67)	(1.13)	(8.08)	(1.61)
N	394	394	394	394	394	394	284	284	276	276	276	276
Adj. R ²	0.012	0.060	0.004	0.057	0.016	0.058	0.420	0.507	0.082	0.121	-0.003	0.321

***, **, * Denote significance at the 1 percent, 5 percent, and 10 percent levels, respectively, using a two-tailed test.

See Appendix C for definition of variables.

Table 5

Association between disclosures about intangibles resources in press releases and likelihood of a decrease in the acquirer stock price upon announcement of the acquisition

$$\Pr(\text{Bad_Deal}_i = 1) = b_0 + b_1\text{Terms_n}_i + b_2\text{ACQ_ROA}_i + b_3\text{ACQ_LEV}_i + b_4\text{TAR_ROA}_i + b_5\text{Materiality}_i + b_6\text{CashPc}_i + b_7\text{CROSS}_i + \text{Industry fixed effects} + \text{Year fixed effects}$$

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
<i>Growth_n</i>	0.126 *** (2.66)	0.144 *** (2.59)										
<i>Synergy_n</i>			-0.004 (-0.08)	-0.097 (-1.41)								
<i>Brands_n</i>					-0.033 (-0.47)	-0.082 (-0.99)						
<i>Customer_n</i>							0.002 (-0.04)	-0.020 (-0.46)				
<i>Techno_n</i>									0.099 ** (2.01)	0.107 * (1.90)		
<i>Human_n</i>											0.105 (1.54)	0.106 (1.29)
<i>ACQ_ROA</i>		0.211 (0.09)		-0.897 (-0.37)		-0.202 (-0.09)		-0.542 (-0.23)		-0.243 (-0.10)		-0.414 (-0.18)
<i>ACQ_LEV</i>		-1.746 * (-1.75)		-1.621 * (-1.65)		-1.487 (-1.52)		-1.598 (-1.63)		-1.627 (-1.63)		-1.638 * (-1.65)
<i>TAR_ROA</i>		-0.635 (-0.80)		-0.148 (-0.18)		-0.34 (-0.42)		-0.31 (-0.37)		-0.612 (-0.74)		-0.446 (-0.54)
<i>Materiality</i>		0.278 (0.48)		0.669 (1.09)		0.367 (0.66)		0.334 (0.60)		0.278 (0.49)		0.321 (0.58)
<i>CashPc</i>		-0.012 * (-1.76)		-0.016 ** (-2.17)		-0.015 ** (-2.14)		-0.015 ** (-2.09)		-0.015 ** (-2.08)		-0.014 ** (-2.02)
<i>CROSS</i>		-0.080 (-0.21)		-0.030 (-0.08)		-0.046 (-0.12)		-0.042 (-0.11)		-0.09 (-0.24)		-0.034 (-0.09)
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Constant	13 *** (13.60)	14.07 *** (10.10)	14.1 *** (16.00)	14.71 *** (10.50)	13.95 *** (15.40)	15.2 *** (10.80)	14.08 *** (16.00)	15.79 *** (10.30)	13.81 *** (15.90)	15.62 *** (11.10)	13.8 *** (15.10)	15.01 *** (10.50)
N	294	224	294	224	294	224	294	224	294	224	294	224
Pseudo R ²	0.153	0.157	0.136	0.145	0.136	0.141	0.136	0.139	0.15	0.156	0.141	0.144

***, **, * Denote significance at the 1 percent, 5 percent, and 10 percent levels, respectively, using a two-tailed test.

See Appendix C for definition of variables.

.

Table 6

Association between disclosures about intangibles resources in press releases and acquirers' Tobin's Q one year after completion of the acquisition

$$TQ_{i,t+1} = b_0 + b_1 Terms_ni + b_2 CROSS_i + \text{Industry fixed effects} + \text{Year fixed effects} + \varepsilon$$

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
<i>Growth_n</i>	-0.030 ** (-2.33)	-0.034 ** (-2.43)										
<i>Synergy_n</i>			-0.057 *** (-4.24)	-0.054 *** (-4.05)								
<i>Brands_n</i>					-0.003 (-0.22)	-0.001 (-0.10)						
<i>Customer_n</i>							-0.028 ** (-2.29)	-0.027 ** (-2.54)				
<i>Techno_n</i>									0.002 (0.22)	-0.020 * (-1.91)		
<i>Human_n</i>											-0.049 ** (-2.46)	-0.029 (-1.55)
CROSS		-0.052 (-0.54)		-0.056 (-0.61)		-0.045 (-0.46)		-0.056 (-0.57)		-0.033 (-0.34)		-0.05 (-0.51)
Industry fixed effects	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes
Year fixed effects	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes
Constant	1.561 *** (24.90)	1.622 *** (5.53)	1.629 *** (24.70)	1.516 *** (6.19)	1.471 *** (31.00)	1.375 *** (5.93)	1.578 *** (21.90)	1.555 *** (6.13)	1.462 *** (24.00)	1.424 *** (6.06)	1.587 *** (23.80)	1.456 *** (5.86)
N	311	311	311	311	311	311	311	311	311	311	311	311
Adj. R ²	0.011	0.214	0.043	0.236	-0.003	0.196	0.017	0.213	-0.003	0.203	0.014	0.202

***, **, * Denote significance at the 1 percent, 5 percent, and 10 percent levels, respectively, using a two-tailed test.

See Appendix C for definition of variables.

Table 7

Association between disclosures about intangibles resources in press releases and acquirers' change in operating cash flows after completion of the acquisition

$$\Delta OCF_{i,[t;t+1]} = b_0 + b_1 Terms_ni + b_2 OCF_{i,t-1} + b_3 CROSS_i + \text{Industry fixed effects} + \text{Year fixed effects} + \varepsilon$$

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
<i>Growth_n</i>	-0.001 (-1.16)	-0.001 (-0.87)										
<i>Synergy_n</i>			-0.002 *** (-3.23)	-0.002 *** (-2.83)								
<i>Brands_n</i>					-0.001 * (-1.88)	-0.001 (-0.88)						
<i>Customer_n</i>							-0.001 (-1.07)	-0.001 (-1.53)				
<i>Techno_n</i>									0.000 (-0.45)	-0.001 (-0.90)		
<i>Human_n</i>											0.001 (0.74)	0.001 (0.99)
<i>OCF_{t-1}</i>	-0.665 *** (-12.7)	-0.677 *** (-13.3)	-0.673 *** (-13.0)	-0.685 *** (-13.5)	-0.662 *** (-12.7)	-0.676 *** (-13.2)	-0.663 *** (-12.8)	-0.681 *** (-13.3)	-0.661 *** (-12.7)	-0.675 *** (-13.3)	-0.659 *** (-12.4)	-0.671 *** (-12.9)
<i>CROSS</i>		-0.005 (-0.91)		-0.006 (-1.00)		-0.005 (-0.86)		-0.006 (-0.96)		-0.005 (-0.81)		-0.005 (-0.83)
Industry fixed effects	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes
Year fixed effects	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes
Constant	0.061 *** (8.71)	0.084 *** (4.88)	0.066 *** (9.12)	0.086 *** (5.37)	0.0588 *** (9.17)	0.081 *** (4.46)	0.061 *** (8.57)	0.086 *** (4.27)	0.059 *** (8.65)	0.080 *** (4.66)	0.056 *** (7.30)	0.074 *** (4.27)
N	312	312	312	312	312	312	312	312	312	312	312	312
Adj. R ²	0.541	0.542	0.551	0.551	0.541	0.542	0.541	0.544	0.539	0.542	0.54	0.542

***, **, * Denote significance at the 1 percent, 5 percent, and 10 percent levels, respectively, using a two-tailed test.

See Appendix C for definition of variables.