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The Predictive Value of Abnormal Positive Tone in Earnings Conference Calls

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Abstract

Tone in qualitative firm disclosures has increasingly caught the academic interest. Earnings conference calls are however a form of firm communication that largely have been overlooked in accounting research. This paper investigates the predictive properties of tone on the initial market reaction (IMR), as well as the 60 day delayed market reaction (DMR). To investigate management's strategic use of tone, we construct a variable of abnormal positive tone, ABTONE, which is the residual of a tone model controlled for firm fundamentals. We find that ABTONE in the preparing remark section of the earnings conference calls predicts positive abnormal returns in both the IMR and DMR windows, which indicates that managers use tone to sincerely inform investors. To test if earnings information uncertainty affects the predictive value of tone, we compose a sample consisting of biotechnological and pharmaceutical firms as well as a corresponding sample with firms in more traditional industries. We find that the predictive value of ABTONE is considerably stronger for firms with higher earnings information uncertainty.

Keywords: *Qualitative disclosures, tone, earnings conference calls, market efficiency, abnormal returns, earnings information uncertainty*

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I Introduction

What distinguishes qualitative information in financial reports, in comparison with the always-present quantitative information, is the flexibility in the manner it can be expressed. Tone is a component of qualitative disclosures, which can express both optimism and pessimism. Being written or spoken directly by the company representative, it can be used to sincerely describe or highlight certain information, but also for serving the purposes of that company representative. In line with Huang, Teoh, & Zhang (2014), we call these choices tone management. Previous studies have concluded mixed results regarding the manner in which tone can predict future firm performance (Davis, Piger, & Sedor 2012; Huang et al. 2014) and market reactions (Huang et al. 2014; Henry 2008; Price, Doran, Peterson, & Bliss 2012). This paper will focus on the predictive value of tone on abnormal returns.

Studies have for decades investigated the quantitative, often regulated, information in annual and quarterly reports and found anomalies, which the capital markets have had problems pricing correctly (Bernard & Thomas 1989; Abarbanell & Bushee 1998; Xie 2001). These studies have in different ways indicated that investors have had opportunities to predict abnormal returns by using publicly available information, which is difficult to explain within the boundaries of the of the efficient market hypothesis. What has not been investigated to the same extent is the non-regulated qualitative information that is disclosed in connection to the quantitative information, and how the capital market has incorporated this kind of information. Stock price movements are generally larger in connection to the release of earnings information, why this paper chooses to investigate the cumulated abnormal returns (CAR) for the initial market reaction (IMR) as well as the delayed market reaction (DMR) in the time following earnings announcement.

Information released by firms in the forms of earnings press releases, CEO letters and earnings conference calls are mostly qualitative and non-regulated. While quantitative information first and foremost informs investors of past performance, the qualitative information can help to inform investors of factors and events that cannot be explained strictly by quantitative information. It offers a communication channel where management can provide investors with interpretations of regulated quantitative information, context, as well as an opportunity for a forward-looking perspective. Prior literature has shown that optimistic tone in various financial documents has been significant in predicting stock returns as well as future firm performance (Henry 2008; Davis et al. 2012; Price et al. 2012). However, results have also indicated that earnings press releases have not solely been used to provide sincere information to investors for the purpose of filling knowledge gaps, but have instead been used to misinform investors about future performance (Huang et al. 2014).

The field of text analysis within accounting studies has gained popularity in recent years, and the number of studies examining relations between lexical properties, firm performance and security returns has grown steadily. To some extent, earnings press releases have previously been studied in the context of stock price prediction and market behaviour (see e.g. Davis et al. 2012; Huang et al. 2014). A document that has not yet received the same attention in research papers, at least not in recent time and with the help of computer aided text analysis, is that of earnings call transcripts.

Earnings conference calls are essentially telephone conference calls between company representatives and analysts covering the firm. Usually, the CEO and the CFO attend these calls, occasionally joined by the investor relations manager, sales executives and other company representatives. Normally, the conference calls consist of two sections, namely the *preparing remarks (PR)* section and the *question-and-answer (Q&A)* section. A PR starts the call with management informing analysts and listeners with a scripted statement concerning matters such as reported earnings, detailed information not covered in formal reports as well as forward-looking statements (Kimbrough 2005). Following that, the analysts get the chance to ask company representatives concerning factors not concluded for in the financial statements. In prior literature, it has been argued that these sections include different information content given their differences in structure (Kimbrough 2005; Price et al. 2012). Given this, we have chosen to divide the transcripts into a PR part, as well as a Q&A part.

Earnings conference calls in connection to quarterly reports have increasingly been used by firms to widen the analysts' and investors' understanding of earnings announcements (Kimbrough 2005; Sunder 2002; Irani 2004). The informativeness of earnings conference calls have been highlighted by prior studies showing increased trading volumes and stock price responses as an effect of earnings conference calls (Bushee, Matsumoto, & Miller 2003). Additionally, as acknowledged by Li (2008), managers are more restrained from expressing their thoughts in formal reports than other communication channels, such as earnings conference calls, hence this information source may provide more interesting information to examine.

It is expected that various factors, both fundamental and others, will affect the tone of the earnings conference calls. Naturally, positive fundamentals should render in positive tone, which is also found throughout earlier research (see e.g. Davis et al. 2012; Price et al. 2012). In order to control for present and predicted future performance, risk, size, growth expectations and complexity, these factors are included in the testing model, which builds on that of Huang et al. (2014). This allows for ascertaining the component of positive tone that cannot be explained by fundamentals, called abnormal positive tone (ABTONE), thus highlighting information where managers describe matters not distinguished in quantitative information. Theoretically, this component of tone could be used to sincerely insinuate the direction of future firm performance based on information that does not meet regulatory accounting requirements, private information of management etc., or to misinform investor for opportunistic reasons.

Price et al. (2012) are one of the few who has looked at tone in earnings conference calls. They found that linguistic tone is a predictor of abnormal returns in both the initial and delayed market reaction window. In addition, Price et al. (2012) examined how the level of cash flow uncertainty affected this predictive value, with results showing that it was especially prominent for firms not paying dividends.

The uncertainty factor that Price et al. (2012) introduces, raises an interesting implication, namely that investor behavior is affected by earnings and cash flow uncertainty. Accordingly, investors find it more difficult to assess the correct value of certain types of firms based on solely qualitative information. In these cases, the properties of qualitative information like tone could potentially be used to fill these gaps, or be used to indulge in opportunistic behavior from managers.

In this paper, industries that are characterized by the importance of non-earnings

information have been chosen to analyze to further examine the implications of earnings information uncertainty. Mui-Siang Tan & Yeow Lim (2007) who look at a sample of biotechnological firms find that the value relevance of earnings information is lower for these firms, who seldom have a long history of earnings or revenues. In order to create an alternative proxy for earnings information uncertainty, a sample of biotechnological and pharmaceutical firms has been chosen to analyze, as well as a corresponding same-size sample group of firms from more traditional industries such as manufacturing, retail and energy for whom earnings information should be more relevant (hereafter called "traditional firms").

Previous research has concluded mixed results regarding how future firm performance and security returns are predicted by the tone of company communication. However, both method and choice of financial document to analyze differ between studies. Given that we use the method created by Huang et al. (2014), we predict that abnormal positive tone in earnings conference calls as well, will (1) predict positive abnormal returns in the initial market reaction window, but with an (2) offsetting effect in the delayed market reaction window in both sections. Further, we predict that (3) these effects will be even more significant for firms with larger earnings information uncertainty.

To investigate this, 400 conference call transcripts have been hand collected for 100 firms for the consecutive quarters of 2014. The sample is split equally between firms active in the pharmaceutical and biotechnological industry, and the sample consisting of traditional firms. All conference call transcripts have been divided between preparing remarks and question-and-answer sessions, where the questions from analysts and statements from moderators have been removed by hand in order to only investigate tone of company representatives. Researchers have found that business documents analyzed with general word lists (e.g. Harvard IV-4 Psychological Dictionary), tend to categorize financial words as negative. In order to mitigate this problem, a word list designed for accounting reports and business documents, compiled by Loughran & McDonald (2011), is used.

We find that ABTONE in the preparing remark section positively predicts abnormal returns in the initial market reaction period following an earnings conference call. The initial market reaction to the ABTONE of the preparing remark section is in line with our prediction. For this time span, firm communication no matter the form has shown the same effect in previous studies (see e.g. Henry 2008; Price et al. 2012; Huang et al. 2014). Subsequent to this, the abnormal returns for the tone of the preparing remark section does not reverse in the DMR window, contradicting our predictions. Seeing that ABTONE is constructed to reflect management's strategic choice of tone, results indicate that company representatives are sincere in the PR section. Results for the Q&A section are insignificant, however they indicate the opposite effect of misinforming.

By regressing our sample groups separately, we find that ABTONE is a significant predictor of abnormal returns in the delayed market reaction window for pharmaceutical and biotechnological firms, while this relation cannot be found in the corresponding sample group. This indicates that tone as predicted is more relevant for investors in firms where there is a larger earnings information uncertainty present.

Overall, this paper makes three explicit contributions to the literature of predictive

properties of textual tone. First, this paper examines the IMR and DMR windows in relation to abnormal positive tone in earnings conference calls and finds that tone can be used to predict abnormal returns. Second, we divide the earnings conference call into two distinctive sections and find that the two give indication of opposing implications on the use of tone for predicting abnormal returns. Third, we construct a proxy for earnings information uncertainty based on specific industry characteristics and find that ABTONE is more significant in explaining abnormal returns in the DMR window. These implications can be interesting for investors as well as for researchers within the field.

The scope of this study has prevented us from re-testing the implication of management intent in the ABTONE model. Since ABTONE merely represents tone that is not anchored in fundamentals, it is free to use for both sincerely informing or misinforming investors about the future. In order to test the model in relation to events like seasoned equity offerings and stock option grants, which could bias tone, a much larger sample would be required in order to find enough observations for these variables. Because this paper uses the model of Huang et al. (2014), we have presumed that since it has been controlled for the aforementioned factors, it should be applicable for earnings conference calls as well.

In the following section, previous research within the field as well as contribution and hypotheses will be discussed. In section III the sample and descriptive statistics will be described and discussed as well as the main model for this paper, ABTONE. In section IV, results for the IMR and DMR windows will be presented and discussed. Additionally, our results for earnings information uncertainty will be tested and analyzed. Section V concludes.

II Prior literature

Market anomalies & event studies

The prevailing paradigm in capital market research has close ties to the efficient market hypothesis (EMH). Developed in the late 1960's, the model has become immensely popular within economic theory, despite receiving much critique. Accounting researchers have for decades tested the assumptions of the EMH, often through event studies. A common approach by researchers has been to study the robustness of market efficiency by investigating market anomalies, such as for example studying fundamental accounting information, discretionary accruals, delayed market reactions and post-earnings-announcement drifts (Bernard & Thomas 1989; Ball & Kothari 1991; Abarbanell & Bushee 1998; Xie 2001). Longer event studies, like Abarbanell & Bushee (1998) and Ou & Penman (1989) looking at predictive value of key information in financial statements, and Xie (2001) who studied the markets' pricing of abnormal accruals, has found market pricing inefficiencies.

Researchers have also studied shorter time spans, often around earnings announcements. These event studies usually include two return windows, one short window that typically includes the day prior the event, the day of the event as well as the day following the event. The long window usually spans over 30 or 60 days following the

short window (Kothari 2001). The rational for dividing this period into two windows is that the market might not be able to incorporate all value relevant information immediately, but that it will correct these potential mispricings over time. Results from numerous event studies has shown that the market either under- or overreacts to information announcements in the short windows, while correcting these reactions in the long windows (Bernard & Thomas 1989; Francis, Lafond, Olsson, & Schipper 2007; Huang et al. 2014).

Researchers have also examined post-earnings-announcement drift in the longer window. PEAD can be explained as a product of the market anomaly that investors are slow in incorporating certain information, leading to gradually increasing or decreasing returns over a period (often 30-60 days). Francis et al. (2007) investigated how earnings information uncertainty affected post-earnings-announcement drift after unexpected earnings. The uncertainty component was proxied as discretionary accruals ability to explain change in earnings, and results showed that stocks associated with earnings information uncertainty drifted more.

Text analysis & the predictive value of tone

An accounting area that has received intensified attention recently, is that of studying firm performance and company communication, from a content analysis perspective. Content analysis techniques, originally used in social sciences (see e.g. Krippendorff 2004), has developed and become more sophisticated through the introduction of computer based textual analysis with a growing number of software solutions as well as tailor-made dictionaries (see e.g. Henry 2008; Loughran & McDonald 2011). Both Huang et al. (2014) and Price et al. (2012) showed that more specific dictionaries used for analyzing financial texts had more explanatory power compared to more general dictionaries (e.g. Harvard IV-4 Psychological Dictionary). Loughran & McDonald (2011) found that these general dictionaries tend to classify certain financial words as negative, which could explain the difference in explanatory power.

One of the first papers to examine company communication in the aforementioned way in a large scale was written by Li (2008). He looks at annual report readability and firm level performance, and finds that firms with annual reports that are easier to read have more persistent earnings, and that firms who perform badly have annual reports that are harder to read. Similar findings (highlighting the difficulty associated with analyzing qualitative information) can be found in Lehavy, Li, & Merkley (2011), who look at the variables analyst following and properties of analysts' earnings forecasts. The authors find that firms who have less readable 10K's have higher analyst following, longer average analyst time spent before the issuance of forecasts, as well as larger errors in forecasts and more dispersion between analysts. Lehavy et al. (2011) also find that investors place larger reliance on analysts' forecasts for firms whose reports are more difficult to read.

Several accounting and finance studies have also studied the tone of firm communication as a predictor of returns, firm performance and market behaviour. Henry (2008) looks at how earnings press releases are written, and if this affects market participants. She finds that positive tone results in positive market reactions and that the length of earnings press releases offsets earnings surprises. Davis et al. (2012) looks at tone

of earnings press releases and finds tone to be a significant predictor of future firm performance and that tone, on average, is used to inform investors. On the contrary, Huang et al. (2014) show that tone (in the form of abnormal positive tone) is used to misinform investors. Huang et al. (2014) do this by constructing a new variable for tone that differs from earlier studies, by creating a variable based on the residuals of a tone model that is controlled for firm fundamentals, thus representing a discretionary tone component, called ABTONE. By separating and measuring the discretionary positive tone, Huang et al. (2014) argue that they create a more accurate indication of if management informs or misinforms investors in earnings press releases. Even though the variable is called *abnormal* positive tone, which could be negatively connotated, it only represents the tone that is not explained by fundamentals. This tone could theoretically be used to both sincerely inform investors through signaling implications about the future based on private information or clarifying interpretations of regulated information, as well as using the tone to misinform investors for opportunistic reasons. The researchers test this by highlighting that ABTONE, which in their study of earnings press releases indicates that managers misinform, is more prominent before events that require the investors' capital, such as seasoned equity offerings and M&A's, and the opposite when management wants to hold the stock price down, such as grants for stock options. More specifically, Huang et al. (2014) finds that ABTONE has a predictive value in both the short and long market reaction window. In the initial market reaction window, ABTONE is positively associated with abnormal returns, but that effect is reversed in the delayed market reaction window when the market has had time to correct mispricings.

While Henry (2008), Davis et al. (2012) and Huang et al. (2014) all look at tone, they all also look at earnings press releases, a format which is quite narrow (Price et al. 2012). One source of firm communication that perhaps could be even more informative is that of earnings conference calls. Frankel, Johnson, & Skinner (1999) argue that earnings conference calls function as a complement to earnings press releases and that they "provide color" to the earnings press releases by helping to explain e.g. the persistence of any extraordinary items. In 2000 the SEC passed a regulation which made earnings conference calls available to the public (Sunder 2002). Since then, Sunder (2002) argues that more value relevant information is released by firms through the earnings conference calls. Also, Irani (2004) shows that the conference calls have been increasingly used to inform market partakers since the regulation passed.

Earnings conference calls usually contain two main sections, the prepared remarks where company managers comment recent performance and outlooks, and a question-and-answer session where analysts are allowed to ask the managers for further explanations or introduce new questions. Kimbrough (2005) states that since the question-and-answer session is unscripted, it facilitates managers to speak more freely. Since analysts choose the topics and details to discuss in this section, it also differs from the prepared remarks when the speaking manager exhibits full control of the communication.

Price et al. (2012) is one of quite few studies that explores tone in earnings conference calls. They find tone to be a significant predictor of abnormal returns in both the IMR and DMR windows. Also, Price et al. (2012) splits the call into the two parts of prepared remarks and question-and-answer sessions. Like Kimbrough (2005), they argue that these two components of the earnings conference calls differ substantially.

Price et al. (2012) also add a factor of cash flow uncertainty to their regression. They argue that it reveals how much emphasis investors put on various kinds of earnings signals. Price et al. (2012) choose to use dividend as a proxy for this, with results indicating that investors rely more heavily on earnings conference calls when firms are not paying dividends, and therefore becoming more prone to be subject to post-earnings-announcement drift rooted in uncertainty.

The method created by Huang et al. (2014) will be used in this paper in order to facilitate the distinction between managers' tone related to current fundamentals and not, in order to attempt implicating if tone is used to inform or misinform investors. Huang et al. (2014) looked at the tone of earnings press releases, while this paper treats earnings conference calls. Since the format of conference calls is less narrow (Price et al. 2012), especially when regarding the question-and-answer session (Kimbrough 2005), earnings conference calls are a form of firm communication which are interesting to examine with the method of abnormal positive tone.

Hypotheses development

Based on previous literature, three hypotheses have been developed. First, we predict that ABTONE is positively associated with abnormal returns in the initial market reaction window. The abnormal returns for the initial market reaction has been shown to be positive for both tone in conference calls and ABTONE in earnings press releases (Huang et al. 2014). Naturally, we predict that this is the case for ABTONE in earnings conference calls as well.

H1: ABTONE is positively associated with CAR in the IMR window for both the PR and Q&A sections

The prediction for the delayed market reaction window is however covered by more uncertainty. On the one hand, this form of communication differs from earnings press releases. Earnings conference calls are more detailed and influenced by different managers speaking. Additionally, the Q&A section offers a two-way communication that is more free flowing and cannot be scripted. On the other hand, previous research into this matter has only been made with tone as the main independent variable, as opposed to ABTONE used in this paper. In the DMR window we expect the market to correct potential mispricings from the IMR window as a consequence of the expanded time to interpret the information released. Additionally, new information gradually being released to the market (non-recurring information between quarterly reports) affects firm fundamentals and thus abnormal returns. Based on the results of Huang et al. (2014) and the vast difference between regular positive tone and ABTONE, we expect that the intent of management is to misinform, and that the market will recognize this in the DMR window. Thus, the negative reaction will exceed only correcting for the potential initial overreaction.

H2: ABTONE is negatively associated with CAR in the DMR window for both the PR and Q&A sections

Furthermore, we add the component of earnings information uncertainty to the analysis. Using dividend as proxy, as Price et al. (2012) did for investors' earnings and cash flow uncertainty, has its shortcomings. First of all, many firms use share repurchases instead of dividends to shift capital to their owners. Secondly, carrying out dividends is a capital allocation decision, which does not necessarily concern a firm's ability to earn returns for its investors in a longer perspective. Dividend policy is first and foremost connected to strategy and reinvestment opportunities. Therefore, in order to extend the research of Price et al. (2012) and create a deeper understanding of the uncertainty component present when analyzing earnings conference calls of different firm types, industries that are characterized by the importance of non-earnings information has been chosen to analyze. Biotechnological and pharmaceutical firms are in many cases characterized by a large relative portion of R&D costs, long business cycles and raison d'etre based on future research breakthroughs. Mui-Siang Tan & Yeow Lim (2007) who look at earnings relevance in biotechnology firms argue that since many of the firms in this industry are heavy investors with little or no historical revenue or earnings, the relevance of quantitative financial report information should be lower for the firms in question. With this in mind, we predict that ABTONE, whatever the sign of the coefficient, will have stronger predictive power for firms with more earnings information uncertainty in the delayed market reaction window.

H3: The predictive value of ABTONE for the DMR window is more prominent for firms with higher earnings information uncertainty

III Sample data & Research design

Sample data

Company fundamentals (e.g. earnings, cash flows and debt) as well as market values, SIC company codes, segment data and shareholders equity data have been collected from Compustat North America. Quarterly returns, stock price and number of shares outstanding have been collected from CRSP. The composition of the two sample groups (pharmaceutical & biotechnological firms and traditional firms) have been decided by SIC company codes. In the sample group consisting of biotechnological and pharmaceutical firms, only firms with SIC codes ranging from 2834-2836 have been included. In the corresponding sample group, firms in industries with similar characteristics as the former sample group (longer business cycles, high RD, uncertainty in future cash flows) have been excluded to facilitate comparison. Example of this is that firms in the IT-sector (SIC 3670-3679) have been excluded because of these similarities (Mui-Siang Tan & Yeow Lim 2007), as well as prospecting firms in mining and drilling industries (SIC 1000-1499). Companies in the financial sector (SIC 6000-6799) have also been excluded from the sample due to vast differences in business models, as well as companies having incomplete data. Observations for 2014 have been collected in order obtain the single most recent and complete fiscal year. With these alterations accounted for, the sample consists of 405 firms in the primary sample and 2084 firms in the corresponding sample, all listed on the NYSE and NASDAQ. From these samples, 50 companies have been selected for each sampling group. The sample has been

semi-randomly selected, in order to enable the creation of quartiles of matching sizes.

Table 1 - Sample overview

Total no. of firm quarter observations	**399**
Tone regression	
Missing fundamentals	*-28*
Total no. of observations for regression	371
CAR regressions	
Missing fundamentals	-14
Missing transcripts	-7
Total no. of observations for regression	350

Quarterly earnings call transcripts for the selected companies have been collected for the fiscal year of 2014. The transcripts have then been divided into two groups: prepared remarks (PR) and question-and-answer session (Q&A). The rationale for this distinction is that these two sections differ in characteristics (Kimbrough 2005). This allows us to test the effects of ABTONE separately.

Research design

Abnormal positive tone in earnings conference calls

The main independent variable used is abnormal positive tone, ABTONE, developed by Huang et al. (2014). First, in accordance with the method, TONE is constructed by calculating the net of positive and negative words in relation to the total number of words. The word lists *positive* and *negative* created by Loughran & McDonald (2011) are used to define the words in the different parts of the transcripts. Examples of positive words are *better, excellent, outperform* and *stable*, while negativity can be represented by words such as *bad, conflict, damaged* and *hazard*. The software WordStat is used to obtain a word count, which returns the number occurrences of words for each word list respectively.

$$TONE_j = \frac{Positive\ words_j - Negative\ words_j}{Total\ words_j} \tag{1}$$

It has been argued that tailor made dictionaries are better suited for financial studies, since words like *tax, board* and *liability* are considered negative in more general dictionaries such as the Harvard IV-4 Psychological Dictionary, despite these word seldom implicating outright negative events in a corporate setting. The word lists compiled by Loughran & McDonald (2011) have been argued to mitigate these problems,

since the words contained in these lists are extracted from commonly used words in 10-K's. The word lists of Loughran & McDonald (2011) also contain multiple times more words than the tailor made dictionaries created by Henry (2008), used by for example Price et al. (2012). In comparison, the negative word list of Henry (2008) contains 85 negative words, while the list of Loughran & McDonald (2011) include 2355 negative words.

There are numerous potential reasons for why positive tone is expressed by managers. The simplest, perhaps, would be that managers try to reflect good current and future performance. However, if fundamentals cannot show this positive performance, perhaps due to the fact that regulations do not allow for such disclosures in financial statements, tone could be positively skewed in order to insinuate this to investors. This positive skew in tone can however also be used by managers to shift focus from weak performance and/or signal to a brighter financial future than what can be expected from current fundamentals as well as private information held by firm managers, thus using tone as a tool to manipulate investors.

The variable ABTONE is obtained by extracting the positive tone that is not related to current fundamentals. Thus, ABTONE is a variable for tone that is solely related to company representatives' tone management from a strategic perspective, to either inform or misinform investors. ABTONE is consequently the residual of the tone regression controlled for fundamentals, specifically defined as:

$$\text{TONE}_{jt} = \alpha + \beta_0\text{RET}_{jt} + \beta_1\text{STD.RET}_{jt} + \beta_2\text{MCAP}_{jt} + \beta_3\text{PB}_{jt} + \beta_4\text{ROA}_{jt} + \beta_5\Delta\text{ROA}_{jt} + \beta_6\text{STD.ROA}_{jt} + \beta_7\text{LOSS}_{jt} + \beta_8\text{BUSSEG}_{jt} + \beta_9\text{GEOSEG}_{jt} + \epsilon_{jt} \tag{2}$$

RET = Annualized return twelve trailing month

MCAP = Logarithm of quarterly market value of equity

PB = Quarterly price-to-book ratio

ROA = Quarterly earnings before extraordinary items scaled by total assets

LOSS = 1 if net income is negative, = 0 otherwise (quarterly)

BUSSEG = No. of business segments

GEOSEG = No. of geographic segments

A number of variables are included in the model to explain tone correlated to current fundamentals. Economic factors that should influence tone, such as returns (RET) and return on assets (ROA) are included. Market to book values (PB) are used to control for expected future firm growth (Patelli & Pedrini 2015). The dummy variable for loss-making firms (LOSS) controls for information related to financial distress as well as if firms are self-sufficient. The number of business segments (BUSSEG), as well as geographic segments (GEOSEG), are also included to control for firm complexity (Huang et al. 2014). Standard deviation of stock returns and return on assets control for business and operating risk (Huang et al. 2014).

Table 2 shows the results of equation (2). The results for the PR section show that tone is more positive for growing firms, and indicates that tone is more positive for firms with higher return on assets and profit making firms. The results for the Q&A section show that tone is more positive for firms with a larger return on assets. The regression also indicates that smaller firms and firms with less geographic segments have a more positive tone. The coefficient of determination is low, much like Huang et al. (2014).

Table 2 - Regression for the creation of ABTONE

TONE - PR

Indp. Varb.	*Coefficient*	*Test stat*
α	0.0129***	3.99
RET	0.0021	1.48
STD.RET	-0.0033	-0.78
MCAP	0.0000	0.06
PB	0.0000**	2.21
ROA	0.0174*	1.72
ΔROA	-0.0030	-0.60
STD.ROA	-0.0047	-1.04
LOSS	-0.0018	-1.53
BUSSEG	0.0001	0.36
GEOSEG	0.0002	0.88

TONE - Q&A

Indp. Varb.	*Coefficient*	*Test stat*
α	0.0105***	4.83
RET	0.0009	0.56
STD.RET	-0.0072	-1.60
MCAP	-0.0005*	-1.85
PB	-0.0000	-0.27
ROA	0.0188**	2.42
ΔROA	0.0019	0.42
STD.ROA	-0.0033	-0.88
LOSS	-0.0001	-0.10
BUSSEG	0.0004	1.60
GEOSEG	-0.0003*	-1.84

This table shows the regression for the creation of ABTONE. ABTONE is the residuals that cannot be explained by this regression, that is, the part of TONE that is not related to current fundamentals. TONE is calculated as (positive words - negative words) / total number of words for the preparing remark and question-and-answer sections respectively. RET is the annualized return twelve trailing months. STD.RET is the standard deviation of RET. MCAP is the logarithm of market capitalization. PB is the market to book ratio. ROA is quarterly earnings before extraordinary items scaled by total assets. ΔROA is the return on assets of quarter t minus the return on assets t-1. STD.ROA is the standard deviation of the return on assets in the five years prior to t, minimum three years observations needed. LOSS is a dummy variable taking the number of 1 if it is a loss-making firm, otherwise 0. BUSSEG is the number of business segments at each firm observation. GEOSEG is the number of geographical segments at each firm observation.

, **, * indicates p<0.10, p < 0.05 and p < 0.01, respectively.*
R-sq = 3.26%, 1.94%, respectively
No. of observations: 371

Descriptive statistics

Descriptive statistics for all variables used in this paper's regressions are presented in Table 2. The average values for mean, median, standard deviation, 1st 25th, 75th, and 99th percentile over the four quarters are accounted for.

Table 3 - Descriptive statistics

Variable	Mean	Median	Std. Dev.	P1	P25	P75	P99
TONE.PR (%)	1.17	1.20	0.86	-0.90	0.63	1.69	3.26
TONE.QA (%)	0.56	0.51	0.65	-1.04	0.14	0.96	2.25
ABTONE.PR (%)	0.00	0.00	0.79	-1.77	-0.5	0.5	1.98
ABTONE.QA (%)	0.00	0.00	0.61	-1.47	-0.38	0.36	1.59
MCAP	6171.94	761.05	20839.75	39.04	345.05	2157.41	161178.00
PB	8.28	2.99	73.64	-64.87	1.52	5.75	134.25
LOSS	0.53	1.00	0.50	0.00	0.00	1.00	1.00
ROA	-0.04	0.00	0.12	-0.31	-0.07	0.01	0.10
STD.ROA	0.05	0.02	0.11	0.00	0.01	0.06	0.54
ΔROA	0.01	0.00	0.13	-0.32	-0.01	0.02	0.34
RET	0.05	0.02	0.31	-0.55	-0.11	0.15	0.88
STD.RET	0.10	0.08	0.11	0.01	0.04	0.08	0.41
BUSSEG	1.68	1.00	1.40	1.00	1.00	1.00	9.00
GEOSEG	2.61	2.00	2.65	1.00	1.00	3.00	17.00
SUE.E	0.02	0.00	0.24	-0.61	-0.03	0.03	1.32
CAR[-1, +1]	0.00	0.00	0.10	-0.28	-0.05	0.04	0.29
CAR[+2 ,+60]	0.02	0.01	0.22	-0.66	-0.08	0.12	0.76

This table provides the descriptive statistics for selected variables. TONE is calculated as (positive words - negative words) / total number of words for the preparing remark and question-and-answer sections respectively. ABTONE is the residual of the TONE regression in equation 1. TONE and ABTONE is divided into the two sections PR, prepared remark and QA, question-and-answer. MCAP is the logarithm of market capitalization. PB is the market to book ratio. LOSS is a dummy variable taking the number of 1 if it is a loss-making firm, otherwise 0. ROA is quarterly earnings before extraordinary items scaled by total assets. STD.ROA is the standard deviation of the return on assets in the five years prior to t, minimum three years observations needed. ΔROA is the return on assets of quarter t minus the return on assets t-1. RET is the annualized return twelve trailing months. STD.RET is the standard deviation of RET. BUSSEG is the number of business segments at each firm observation. GEOSEG is the number of geographical segments at each firm observation. SUE is the quarterly earnings in t minus the quarterly earnings in t-1 scaled by market value at the beginning of the year. CAR[-1+,1] is the cumulated abnormal return for the period beginning one day before the earnings conference call and ending one day after the call. CAR[+2,+60] is the cumulated abnormal return for the period beginning two days after the earnings conference call and ending 60 days after the call. CAR is calculated as the difference between individual stock return and the return for the S&P composite index, cumulated for the period concerned.

The mean values of tone in both the PR and Q&A sections of the earnings conference calls are positive (.01117 and .0056, respectively), indicating that managers' tone is generally positive. These findings are consistent with Huang et al. (2014) who find net positive tone for earnings press releases, but stands in contrast to Loughran & McDonald (2011) who find a higher average number of negative words than positive words. Like Huang et al. (2014) mentions, this is expected for a form of firm communication that does not undergo auditing or is regulated, which is true for both earnings call transcripts and earnings press releases, compared to 10-K's that Loughran & McDonald (2011) study. The mean of ABTONE for both sections are by definition 0 (being residuals of a regression). Variance in MCAP is large within the sample, why the logarithm of MCAP has been used in our regressions. Variables such as PB, ROA and STD.ROA have large discrepancies between mean and median, showing why winsorizing some of the variables is preferable, which has been done for all financial variables on 1.25 and 98.75 level respectively. A difference between this paper and others within the same field, is that of the mean and median values of LOSS (see e.g. Davis et al. 2012; Huang et al. 2014). Generally, the mean is considerably closer to 0, which could be explained by that half of the sample in this study consists of firms who, as Mui-Siang Tan & Yeow Lim (2007) point out, often have no or little history of earnings or revenues.

Table 4 - Spearman test

Variables	TONE.PR	TONE.QA	ABTONE.PR	ABTONE.QA
IND	**-0.3386**	**-0.342**	**-0.1871**	**-0.1692**
MCAP	0.0637	-0.0519	-0.0387	-0.0057
PB	0.0776	-0.0713	0.075	-0.0065
LOSS	**-0.3189**	**-0.1484**	-0.0671	-0.0034
ROA	**0.3629**	**0.2082**	**0.0955**	0.0179
STD.ROA	**-0.3437**	**-0.2413**	**-0.148**	-0.0837
ΔROA	**0.1177**	0.0376	**0.0976**	-0.0138
RET	**0.1316**	-0.0177	0.087	-0.012
STD.RET	**-0.1395**	**-0.0885**	0.0105	0.0413
BUSSEG	**0.1352**	**0.1247**	-0.0129	0.0148
GEOSEG	**0.1655**	0.0643	0.0432	0.0752
SUE	**0.1025**	0.039	0.0647	0.0043

This table provides the Spearman correlation between main independent variables and the control variables. TONE is calculated as (positive words - negative words) / total number of words for the preparing remark and question-and-answer sections respectively. ABTONE is the residual of the TONE regression in equation 1. TONE and ABTONE is divided into the two sections PR, prepared remark and QA, question-and-answer. IND is a dummy variable taking the value of 1 if the firm is in either the pharmaceutical or biotechnological industry, otherwise 0. MCAP is the logarithm of market capitalization. PB is the market to book ratio. LOSS is a dummy variable taking the number of 1 if it is a loss-making firm, otherwise 0. ROA is quarterly earnings before extraordinary items scaled by total assets. STD.ROA is the standard deviation of the return on assets in the five years prior to t, minimum three years observations needed. ΔROA is the return on assets of quarter t minus the return on assets t-1. RET is the annualized return twelve trailing months. STD.RET is the standard deviation of RET. BUSSEG is the number of business segments at each firm observation. GEOSEG is the number of geographical segments at each firm observation. SUE is the quarterly earnings in t minus the quarterly earnings in t-1 scaled by market value at the beginning of the year.

Bold numbers imply a significant correlation at 0.10 level

Table 4 shows the Spearman correlation results. Much like Huang et al. (2014), we find that the majority of the control variables are significantly correlated to regular tone, while the number of significan correlations are fewer for ABTONE.

IV Results

ABTONE and the initial stock price reaction

As for ABTONE's ability to predict stock market reactions following earnings conference calls, the initial market reaction is first examined. If the coefficients for ABTONE are positively associated with the initial market reaction, this suggests that investors believe that company representatives provide color regarding future performance that current fundamentals cannot envision, hence reacting accordingly. If however the coefficients would prove to be negative, this would indicate that the market reacts negatively to ABTONE, and therefore believe that managers' ABTONE is over-optimistic in relation to fundamentals and potential private information. To investigate how management uses ABTONE, a comparison must be made against a future time period, since

the security prices should move towards the intrinsic value as information is processed and understood over time.

Overall, we predict that ABTONE will be positively associated with abnormal returns during the initial market reaction period, which is consistent throughout earlier research (see e.g. Price et al. 2012; Huang et al. 2014).

$$\text{CAR[-1, +1]} = \alpha + \beta_0\text{ABTONE.PR}_{jt} + \beta_1\text{ABTONE.QA}_{jt} + \beta_2\text{IND}_{jt} + \beta_3\text{RET}_{jt} + \beta_4\text{STD.RET}_{jt} + \beta_5\text{ROA}_{jt} + \beta_6\text{STD.ROA}_{jt} + \beta_7\text{MCAP}_{jt} + \beta_8\text{PB}_{jt} + \beta_9\text{SUE}_{jt}\epsilon_{jt} \tag{3}$$

The dependent variable CAR[-1,+1] measures the initial market reaction calculated as the cumulative abnormal return from one day before the earnings conference call to one day after the earnings conference call. CAR is calculated as the deviated return for each individual stock in comparison to S&P Composite index on a daily basis and accumulated for the current period. The main independent variable is ABTONE, divided into the different sections PR and Q&A. The variable IND is a dummy variable that takes the value of 1 if it is a firm in either the pharmaceutical or biotechnological industry, and 0 otherwise. Also added to this equation is the variable SUE, which measures the unexpected earnings at the announcement, calculated as the difference between this years quarterly earnings and last year's quarterly earnings scaled by market value at the beginning of the quarter. SUE controls for the market reaction following an earnings surprise (Huang et al. 2014).

$$CAR[-1,+1] = \sum_{t=-1}^{1} Return_{jt} - S\&P\ Return_t \tag{4}$$

Table 5 - Regression for the initial market reaction
CAR(-1,+1)

Indp. Varb.	*Coefficient*	*Test stat*
α	0.0002	-0.15
ABTONE.PR	1.1375*	1.74
ABTONE.QA	0.2407	0.02
IND	-0.0213**	-2.32
RET	-0.0104	-0.39
STD.RET	-0.1333*	-1.64
STD.ROA	0.0257	1.04
MCAP	0.0009	0.73
PB	0.0003	0.90
SUE	0.0605**	2.27

This table provides the regression results for the initial market reaction. ABTONE is the residual of the TONE regression in equation 1. IND is a dummy variable taking the value of 1 if the firm is in either the pharmaceutical or biotechnological industry, otherwise 0. RET is the annualized return twelve trailing months. STD.RET is the standard deviation of RET.STD.ROA is the standard deviation of the return on assets in the five years prior to t, minimum three years observations needed. MCAP is the logarithm of market capitalization. PB is the market to book ratio. SUE is the quarterly earnings in t minus the quarterly earnings in t-1 scaled by market value at the beginning of the year.

,, *** indicates p<0.10, p < 0.05 and p < 0.01, respectively.*

R-sq = 2.86%

No. of observations: 350

Our main independent variable ABTONE for the PR section of the earnings conference call is significant and displays a positive sign for the initial market reaction period. This indicates that investors react positively to ABTONE in this period, and points towards that investors price this positively. For the Q&A part of the earnings conference call, the variable is highly insignificant, indicating that it does not provide explanatory power for the initial market reaction period. Theoretically, this could be explained by the fact that this type of information takes time to interpret compared to more forthright qualitative and quantitative information sources. Also noticeable is that SUE and STD.RET are significantly positive and negative respectively, showing that firms who have earnings surprises, and firms with less volatile stock returns, are rewarded with more positive abnormal return in the initial market window.

ABTONE and the delayed market reaction window

Next, the DMR is investigated. A positive association between ABTONE and CAR would indicate that management sincerely inform investors about future performance. The reasoning behind this is derived from the market's correction of price as new information is gradually released as well as more time is given to thoroughly comprehend and interpret earlier information compared to the initial window. However, if the association is negative, this would indicate that managers use tone to misinform investors, in accordance to the findings of Huang et al. (2014). That is, management use an abnormal positive tone opportunistically for their self-interest, for example to hype investors before seasoned equity offerings or mergers and acquisitions.

For this regression, we predict that the initial market reaction to ABTONE will be

reversed, as the market incorporates the information better, correcting an exaggerated initial market reaction because ABTONE is believed to be used opportunistically.

$$\text{CAR}[+2, +60] = \alpha + \beta_0\text{ABTONE.PR}_{jt} + \beta_1\text{ABTONE.QA}_{jt} + \beta_2\text{IND}_{jt} + \beta_3\text{RET}_{jt} + \beta_4\text{STD.RET}_{jt} + \beta_5\text{ROA}_{jt} + \beta_6\text{STD.ROA}_{jt} + \beta_7\text{MCAP}_{jt} + \beta_8\text{PB}_{jt} + \beta_9\text{SUE}_{jt} + \epsilon_{jt} \tag{5}$$

The dependent variable measures cumulative abnormal returns in the time window from day 2 to 60 following the earnings call. Earlier research has shown that management's tone in earnings press releases is related to abnormal returns in the time period of 60 days after the announcement (Bernard & Thomas 1989; Demers & Vega 2008).

$$CAR[+2, +60] = \sum_{t=2}^{60} Return_{jt} - S\&P\ Return_t \tag{6}$$

Table 6 - Regression for the delayed market reaction

CAR(+2,+60)

Indp. Varb.	*Coefficient*	*Test stat*
α	0.0049	0.09
ABTONE.PR	2.1044*	1.95
ABTONE.QA	-2.6809	-1.59
IND	0.0944***	3.34
RET	0.0467	-1.07
STD.RET	0.09667	0.58
STD.ROA	0.0265	0.14
MCAP	-0.0049	-0.72
PB	-0.0010	0.79
SUE	-0.0290	-0.74

This table provides the regression results for the delayed market reaction. ABTONE is the residual of the TONE regression in equation 1. ABTONE is divided into the two sections PR, prepared remark and QA, question-and-answer. IND is a dummy variable taking the value of 1 if the firm is in either the pharmaceutical or biotechnological industry, otherwise 0. RET is the annualized return twelve trailing months. STD.RET is the standard deviation of RET.STD.ROA is the standard deviation of the return on assets in the five years prior to t, minimum three years observations needed. MCAP is the logarithm of market capitalization. PB is the market to book ratio. SUE is the quarterly earnings in t minus the quarterly earnings in t-1 scaled by market value at the beginning of the year.

, **, * indicates p<0.10, p < 0.05 and p < 0.01, respectively.*
R-sq = 4.23%
No. of observations: 350

Again, our main independent variable ABTONE for the PR section of the earnings conference call is a significant positive predictor of abnormal returns by displaying a positive sign, this time for the DMR period. The results indicate that the market cannot

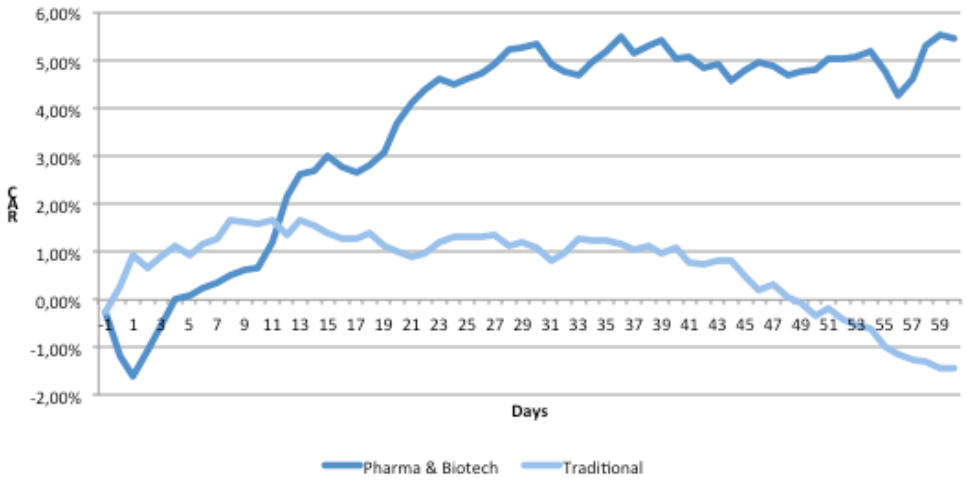
fully incorporate the tone in earnings conference calls initially, thus indicating market inefficiencies. The sign of the coefficient however contradicts our initial predictions that managers would use tone to mislead investors and that the coefficient of ABTONE would be negative as investors realize this over time. Thus, our evidence point in the direction that the ABTONE in the PR part of earnings conference calls is used to inform investors about future firm performance. On the other hand, the ABTONE for the Q&A part, while being slightly less than significant on 0.1 level, shows a negative coefficient and thus indicates that managers on average would use ABTONE in this section of the conference call to misinform investors. This could be explained by the difference in characteristics between the two sections, where the Q&A part is a two-way communication, as well as being unscripted and thus allowing managers to speak more freely, hence giving the managers more opportunities to act opportunistically if intending to do so. These interpretations however depend on that the model of ABTONE in itself captures the strategic management of tone from firm representatives. If this is not assumed to be true, intent from managers to inform or misinform would not be given, and therefore, alternate explanations to why ABTONE is used would be up for discussion. Explanations could for example be that the managers simply believe that future performance will be better than it turns out to be, or that different forms of communication (in this case the PR and Q&A section) differ in characteristics that effect tone without the speaker necessarily intending to exploit these potential differences. With this said, there is to our knowledge no other model that attempts to capture the abnormal positive tone in qualitative disclosures, thus allowing proxying for the intent of managers use of tone. In fact, the model applied in this paper has been subject to robustness controls aiming to control for events that should bias managers tone and passed these controls well. With this said, we choose to assume that ABTONE reflects intent.

As for the *IND* variable, the result is highly significant and positively associated with abnormal returns during the DMR window. This result shows that for companies where non-earnings information is more important, the abnormal returns are higher in this period. Further, this result could implicate a larger post-earnings-announcement drift for these firms, which in turn could suggest that tone is more relevant for investors in these kinds of firms. Consequently, two regressions dividing the two groups into separate samples to test if ABTONE has more predictive value for firms with more earnings information uncertainty will be presented below.

ABTONE and earnings information uncertainty

To determine that our sample group of pharmaceutical and biotechnological firms is valid for proxying earnings and cash flow information uncertainty, a plot of the PEAD for the respective sample groups is shown in figure (1). Prior research has implicated that earnings information uncertainty explains a larger drift (Francis et al. 2007). Bloomfield (2002) also states that post-earnings-announcement drifts (PEAD) should be larger for industries where non-earnings information is more relevant. Thus, a larger and more distinct drift should be observed for the sample group of biotechnological and pharmaceutical firms than for the traditional firms for it to be support these assumptions.

Figure 1



Above, results indicate that our proxy for earnings information uncertainty is valid. The drift for the biotechnological and pharmaceutical firms is clear while no apparent drift can be observed for the traditional firms. In the following section, two separate regressions will be presented where one sample includes pharmaceutical and biotechnological firms and the other sample includes a group of traditional firms. By doing this, we investigate if ABTONE predicts abnormal returns better for firms where earnings information uncertainty is higher.

We predict that ABTONE has more explanatory power for firms with higher earnings information uncertainty. The reasoning behind this lies in the absence of valuation relevant earnings information from traditional financial documents for these firms. Thus, tone could help to fill these potential gaps and provide color to the quantitative information disclosed.

Table 7 - Regressions for delayed market reaction with earnings information uncertainty

Pharmaceutical and biotechnological firms

CAR(+2,+60)		
Indp. Varb.	***Coefficient***	***Test stat***
α	0.0612	0.63
ABTONE.PR	2.9402*	1.74
ABTONE.QA	-4.5008	-1.46
RET	-0.0592	-0.90
STD.RET	0.1697	0.83
STD.ROA	0.0085	0.07
MCAP	-0.0003	-0.03
PB	-0.0009	-1.20
SUE	0.0067	0.09

,, *** indicates p<0.10, p < 0.05 and p < 0.01, respectively.*
R-sq = 6.31%
No. of observations: 156

Traditional firms

CAR(+2,+60)		
Indp. Varb.	***Coefficient***	***Test stat***
α	0.0127	0.22
ABTONE.PR	0.6137	0.42
ABTONE.QA	-1.1228	-0.55
RET	-0.0924	-1.86
STD.RET	0.0106	0.03
STD.ROA	0.4541	0.56
MCAP	-0.0065	-0.91
PB	-0.0010	-0.60
SUE	0.0182	0.37

,, *** indicates p<0.10, p < 0.05 and p < 0.01, respectively.*
R-sq = 5.08%
No. of observations: 194

These tables provide the regression results for the delayed market reaction for the two corresponding sample groups charachterized by the level of earnings information uncertainty. ABTONE is the residual of the TONE regression in equation 1. ABTONE is divided into the two sections PR, prepared remark and QA, question-and-answer. RET is the annualized return twelve trailing months. STD.RET is the standard deviation of RET.STD.ROA is the standard deviation of the return on assets in the five years prior to t, minimum three years observations needed. MCAP is the logarithm of market capitalization. PB is the market to book ratio. SUE is the quarterly earnings in t minus the quarterly earnings in t-1 scaled by market value at the beginning of the year.

Results are in line with our predictions. For the PR section of the call, the regressions show that ABTONE is more positively associated to CAR in the DMR window for pharmaceutical and biotechnological firms than for traditional firms. No significant relation can be established between ABTONE and DMR for traditional firms, while the coefficient for our other group is both clearly positive and significant. For the Q&A section, none of the relations are statistically significant, though the result indicates that for this section too, tone has more predicting power in the DMR window for pharmaceutical and biotechnological firms than for traditional firms.

These findings confirm that the predictive power of ABTONE in the DMR window is mainly attributable to firms with higher earnings information uncertainty. Given that our results indicate that ABTONE in the PR section is sincere, this suggests that management uses tone to communicate relevant information concerning future performance not explained by fundamentals. Thus, investors should use this information source in their analysis to better understand the value of the company, as it provides color to reported fundamentals.

Additional tests

As a robustness test additional regressions have been conducted (see table 8 below). First, the divided parts of the earnings conference calls are replaced with the full transcript, rendering insignificant results for ABTONE in both the IMR and DMR window. This strengthens the notion that the call should be divided into separate sections based on the differing characteristics between the two (Kimbrough 2005; Price et al. 2012). Second, we run the main regression without the dummy variable

IND. The results for ABTONE in the IMR are slightly more significant for the PR section with no other apparent difference. For the DMR however, the Q&A part of the earnings conference calls becomes significant at the 0.05 level, while the PR section becomes insignificant. If one could argue that controlling for industry is irrelevant, this result would more clearly indicate that management use tone to misinform investors in the Q&A section of the call. However, results in table 7 indicate that the predictive power of tone is mainly attributable to firms in industries where earnings information is larger. Based on our strict sampling method where we indeed want to test the industry specific effects, as well as common academic accounting research procedure, leaving out industry as a control variable would not be appropriate.

Third, results show that while SUE is significantly associated with CAR in the IMR window, the association becomes insignificant in the DMR window. In contrast, tone does not lose predictive ability in the DMR window, implying that qualitative earnings information is incorporated into security prices faster than tone. That is consisted with the findings of (Demers & Vega 2008; Engelberg 2008; Price et al. 2012), that tone has greater predictive ability for returns on longer time periods than earnings information.

In addition to these regressions, similar tests have been conducted on the corresponding sample groups for the test of earnings information uncertainty. Since no apparent differences from the regressions in table (8) were obtained, they are not visually disclosed. In short, ABTONE for the full transcripts show no significant relation to CAR in either market reaction window for these regressions. The declining explanatory power of SUE from the IMR to DMR window is still present, while the ABTONE in the PR section keeps its significant predictive ability into the DMR window for pharmaceutical and biotechnological firms.

Table 8 - Additional test for full sample

Variables	CAR(-1,+1)	CAR(-1,+1)	CAR(-1,+1)	CAR(+2,+60)	CAR(+2,+60)	CAR(+2,+60)
α	-0.0033	0.0002	0.0049	0.0052	-0.0119	-0.0251**
	(-0.15)	(0.01)	(0.96)	(0.10)	(-0.23)	(-2.25)
ABTONE.FULL	0.7163			1.3085		
	(0.94)			(0.88)		
ABTONE.PR		1.1375**	0.9107 *		1.3494	1.9395*
		(2.00)	(1.74)		(1.23)	(1.85)
ABTONE.QA		0.2407	0.0390		-3.6635**	-2.4809
		(0.29)	(0.05)		(-2.00)	(-1.44)
IND	-0.0217**		-0.0196**	0.0982**		0.0953***
	(-2.32)		-2.33	(3.45)		(4.55)
RET	-0.0128	-0.0104		-0.0387	-0.0431	
	(-0.50)	(-0.42)		(-0.90)	(-0.95)	
STD.RET	-0.0998	-0.1333**		0.0913	0.2454	
	(-1.57)	(-2.31)		(0.54)	(1.58)	
STD.ROA	0.0871	0.0257		0.0150	0.2665	
	(1.16)	(0.35)		(0.08)	(1.58)	
MCAP	0.0019	0.0009		-0.0050	-0.0003	
	(0.74)	(0.35)		(-0.75)	(-0.04)	
PB	0.0003	0.0003		-0.0010	-0.0010	
	(0.89)	(0.88)		(-0.81)	(-0.87)	
SUE	0.0601**	0.0605**	0.0505**	-0.0274	-0.0412	0.0027
	(2.32)	(2.29)	(2.27)	(-0.71)	(-1.10)	(0.07)
Obs	357	350	350	357	350	350
R-sq	3.63%	2.86%	2.75%	3.00%	2.33%	0.71%

This table provides the regression results for the initial market reaction and the delayed market reaction in a couple of different settings as a robustness test. ABTONE is the residual of the TONE regression in equation 1. ABTONE is divided into the two sections PR, prepared remark and QA, question-and-answer, as well as the variable FULL where both parts are included. IND is a dummy variable taking the value of 1 if the firm is in either the pharmaceutical or biotechnological industry, otherwise 0. RET is the annualized return twelve trailing months. STD.RET is the standard deviation of RET.STD.ROA is the standard deviation of the return on assets in the five years prior to t, minimum three years observations needed. MCAP is the logarithm of market capitalization. PB is the market to book ratio. SUE is the quarterly earnings in t minus the quarterly earnings in t-1 scaled by market value at the beginning of the year.

V Conclusion

Qualitative firm disclosures offer a flexibility in the manner that they can be expressed compared to quantitative disclosures, in the way that they are shaped by the person expressing them. Research within the area of qualitative firm disclosures has increased, and has showed that not only quantitative information is important in explaining the effect which accounting information has on security prices, but that qualitative information also plays a decisive role in this. Earnings conference calls are a type of firm communication that has not yet received much attention, and that conceptually offers stronger qualitative characteristics compared to shorter and more static documents like 10-K's and earnings press releases. This paper treats the predictive role of tone in earnings conference calls. The conference calls have been divided into the two parts prepared remarks (PR) and question-and-answer (Q&A) sections, since these differ in several characteristics.

Using the model of ABTONE created by Huang et al. (2014), we attempt to investigate the intent of managers communication in earnings conference calls, by creating a variable that reflects abnormal positive tone, i.e. positive tone that cannot be explained by current quantitative fundamentals.

We find that ABTONE for the PR section in the initial market response period following an earnings call predicts positive cumulated abnormal returns. Contrary to our predictions, this relation does not reverse over the delayed market reaction window, it rather increases, indicating that ABTONE in the PR section of earnings conference calls is used to sincerely inform investors about information not disclosed in financial statements. On the contrary, the ABTONE for the Q&A-part of the call shows, while not significant, a prediction of negative cumulated abnormal returns in the DMR period. These results could indicate that this portion of the call is used to misinform investors, while caution should be used drawing outright conclusions due to the level of significance.

Our results also show that predictive value of ABTONE in earnings conference calls is mainly attributable to firms in industries whose particular characteristics imply that there is a larger information uncertainty concerning earnings and cash flows. Since results indicate that tone is used to inform investors about near future performance, investors should incorporate the predictive value of tone when analyzing securities, especially those covered by a larger earnings information uncertainty.

Some caveats have to be disclosed for this paper. First, the sample size is quite small, mainly due to the time consuming measures of hand collecting and categorizing the actual earnings call transcripts, as well as processing data to a quarterly basis. Partially, this has rendered the decision to use 0.1 significance level as statistical threshold. Second, this paper relies on a model which has been shown to indicate managers intent in disclosing abnormal positive tone. However, due to the small sample size, no meaningful amount of data for specific robustness checks controlling for intent, such as seasoned equity offerings and mergers and acquisitions, can be obtained. These limitations somewhat impede our ability to draw absolute conclusions. Additionally, this paper does not distinguish between the tone of different managers in different managerial roles. Also, the tone which investor perceive can be affected by factors such as intonation and pitch, which this paper does not address. Future research treating potential differences between managerial roles, as well as an extended definition of tone, could help develop the understanding of the predictive abilities of tone in earnings conference calls.

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