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The Effects of the Media on the Discrepancy Between GAAP and Pro Forma Earnings

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CLAREMONT McKENNA COLLEGE

**THE EFFECTS OF THE MEDIA ON THE DISCREPANCY BETWEEN GAAP AND
PRO FORMA EARNINGS**

SUBMITTED TO

PROFESSOR GEORGE BATTA

AND

DEAN GREGORY HESS

BY

PETER SCHOCK

FOR

SENIOR THESIS

SPRING 2012

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I: INTRODUCTION

The advent of the national media age has had a profound effect on the proliferation of information. The development of the 24-hour news cycle, created as a function of the relatively recent establishment of cable news and the internet as a primary means of news media consumption, has sharply increased the volume of media stories and information available. This has had a profound effect on business and investment, colloquially noted by the growing national significance of media entities such as CNBC, The Wall Street Journal, and other similar outlets.¹ The creation of this new media in the early 1980's, interestingly, coincided with a large spike in the number of publicly traded companies that released special items, and accompanying pro forma earnings estimates to compensate for them. See Exhibit 1 for a graph depicting this trend.

As has been demonstrated by previous research, media attention has a significant effect on corporate behavior, providing an extra level of regulation as the “watchdog” of policy. However, what has not been determined is the level to which the volume of media scrutiny affects earnings expectation management practice. Given the almost identical chronology which the trend of media growth and pro forma earnings share, it seems relevant that any possible relationship should be investigated.

¹ (Meschke 2004)

This study seeks to find if there is a significant relationship between the amount of media coverage focused on public companies in the United States and the difference between GAAP financial performance and analyst-adjusted estimates of financial performance. I will answer this question by testing this difference among S&P 500 companies, as well as companies within that index as identified by a certain industry.

II: LITERATURE REVIEW

Through my research, I was not able to find any study linking the difference between pro forma earnings releases and GAAP earnings to media attention. However, there have been many studies that suggest that media attention has a statistically significant effect on corporate policy and behavior.

First, it was necessary to establish that the media itself played a significant role in the business world, rather than simply acting as a conduit of relayed information. In “What Determines Corporate Transparency,” a study finds that financial transparency is primarily related to political economies with low state ownership of enterprise, banks, and low risk of expropriation of private assets.² Corporate transparency is defined as “the joint output of multifaceted systems whose components collectively produce, gather, validate, and disseminate information to market participants outside of the firm.”³ They use three informative mechanisms to determine its relevance: the corporate reporting regime,⁴ the intensity of private information acquisition,⁵ and information dissemination.⁶ Of primary interest here, though, is their use of media penetration in addition to these factors.^{7, 8} In the study of information dissemination, media is found to be positively correlated with disclosure intensity⁹ and the prevalence of proprietary disclosures¹⁰ among the same sample.

² (Robert M. Bushman 2004)

³ (Robert M. Bushman 2004)

⁴“measures of intensity, principles, timeliness, and audit quality of financial disclosures.” 208

⁵ Measures of analyst following and the prevalence of pooled investment schemes and insider trading activity, 208

⁶ The extent of media penetration in an economy.

⁷ Defined as the average rank of countries’ per capita number of newspapers and televisions from 1993-1995

⁸ Although these transparency measures are used to examine business conditions on a country-by-country basis, the paper argues that the same measures conceptually apply at the firm level.

⁹ Defined as the number of accounting and non-accounting items disclosed in a sample of large firm annual reports

¹⁰ Defined as research and development expenses, capital expenditures, product and geographic segment data, subsidiary information, and accounting methods.

With the importance of media attention as it relates to corporate transparency established, the study finds that investor demand for financial transparency increases with the protection of rights, and as such countries with a legal system rooted in English common law (such as the United States) have the strongest cultures of corporate transparency. These countries are also more likely to have a higher relative importance of market financing to bank financing, further contributing to the widespread demand for information.

But how do the media act in a way that determines corporate transparency? “The Corporate Governance Role of the Media” argues that the media compels corporate managers to act in a way that is considered to be “socially acceptable.”¹¹ The primary role of the media, for both consumer and investor, is to “reduce the costs of collecting and evaluating information,” and as a consequence, it plays “a major role in the shaping the creation and accumulation of reputation.”¹² It achieves this through three primary means. First, media attention can influence lawmakers to create corporate law reform, as their inaction on an issue which the media portrays as a problem creates public embarrassment for the politician in question and reduces his chance for reelection.¹³ The second way is drawn through the traditional understanding of how managers are compensated: as managers are entrusted by shareholders to oversee activities of the business that cannot be monitored by investors, a monetary or even criminal penalty assessed as a consequence of executive impropriety discovered by the media dissuades managers from taking advantage of self-dealing opportunities.¹⁴ Finally, the paper argues that an equally discouraging eventuality of socially unacceptable corporate policy is the embarrassment that managers feel

¹¹ (Alexander Dyck 2002)

¹² (Alexander Dyck 2002)

¹³ (Alexander Dyck 2002)

¹⁴ (Alexander Dyck 2002)

when challenged by their friends and family members on the issue, who have learned of the policy through the media.¹⁵

Using corporate environmental policy as a proxy for firm behavior, the study finds that countries with a wider newspaper circulation have better environmental responsiveness, controlling for regulatory factors. The study finds a strong correlation between the diffusion of the press and corporate response to environmental issues; the media pressure that arises as a function of its proliferation incentivizes managers not just to act in the interests of shareholders, but in a way that is deemed to be publicly acceptable¹⁶ vis-à-vis the media itself.¹⁷ Indeed, the norms communicated by the media can even controvert shareholders' interests, and impel managers to actively work against maximizing value.¹⁸ This effect is variable depending on the diffusion of corporate shares: firms with consolidated ownership are less likely to be affected by media attention than those with broad ownership.¹⁹

A critical distinction made by the study, as explored further in “The Press as a Watchdog for Accounting Fraud,” is that the relative usefulness of media information as it relates to corporate policy is intrinsically related to the medium of consumption.²⁰ Trade newspapers and other financial publications are much more likely to uncover significant corporate malfeasance than their counterparts in mainstream media; such information is the primary demand of their consumers.²¹ Relayed and repeated information, according to the study, is of little use. Therefore, this study will only use print journalism indicators, as they are much more likely to carry new

¹⁵ (Alexander Dyck 2002)

¹⁶ This was found to be true even in the absence of legal requirement or liability.

¹⁷ (Alexander Dyck 2002)

¹⁸ (Alexander Dyck 2002)

¹⁹ (Alexander Dyck 2002)

²⁰ (Miller 2006)

²¹ (Miller 2006)

information rather than to relay that which has already been reported (the effective role of television journalism). Regardless of the medium, the tone of the media has been shown to actually report (or project) investor sentiment before it is fully incorporated into an equity price, accelerating the process of inclusion.²²

The specific nature of the tone and spin of earnings releases has also been found to be significant. In “The Impact of Spin and Tone of Stock Returns and Volatility,” a study finds that positive tone of an earnings release has a positive impact on stock returns and decreases volatility, while negative tone decreases returns and increases volatility.²³ The tone of spin emanating from the firm should be of prime importance to this study. A positive or negative earnings surprise could have a substantial effect on the difference between pro forma earnings and GAAP earnings and the volume of media scrutiny directed towards the firm.

Pro forma earnings formed by analysts are created in large part by amending GAAP financial data to conform to disclosures made by the company as to the business realities it foresees stemming from any possible event. As such, it is important to note whether these disclosures materially contribute to analyst predictions. In “Disclosure Practices, Enforcement of Accounting Standards, and Analysts’ Forecast Accuracy: An International Study,” the study finds that the quantity of firm-level annual report disclosures is positively correlated to analyst forecast accuracy, giving credence to the notion that such information is of material importance to analysts.²⁴ The level of analyst following for a particular firm, however, is negatively correlated to analyst forecast accuracy.²⁵ Large corporations with a high level of analyst following typically have a wider array of information available than what is printed in annual

²² (Paul C. Tetlock 2008)

²³ (Shibley Sadique 2008)

²⁴ (Hope 2003)

²⁵ (Hope 2003)

report disclosures, and therefore analyst projections of those companies may be more prone to noise generated by the media. Whether this skews the data in my study will be explored further.

The importance of the difference between “Street” (pro forma) and GAAP earnings, however, has not always been clear. In “The Debate over GAAP versus Street Earnings Revisited” attempts to reconcile whether firms are “using Street earnings to manipulate investor beliefs in a manner that leads to inflated stock prices” or that “Street earnings are generally more informative than GAAP earnings, and thus rational investors prefer to rely on [street earnings] to make their investment decisions.”²⁶

The study finds this argument flawed in two ways. First, observations of a positive difference between street earnings and GAAP earnings disproportionately support the argument for investor reliance on such measures.²⁷ Second, the observations of a negative difference between Street earnings and GAAP earnings similarly inflate statistical support for the earnings inflation argument. In fact, the effect of such a difference is actually the opposite of what is argued by both sides: “when Street earnings are less than GAAP earnings, the measured market response for the Street earnings surprise is greater than the GAAP earnings-based surprise,” and vice versa.²⁸ Overall, the study does not find one measure to be substantively more useful than the other, and that any attempt to standardize them would “not be a particularly fruitful exercise because the choice of reported earnings will likely depend on the specific hypothesis and context under consideration.”²⁹

²⁶ (Jeffrey S. Abarbnell 2010)

²⁷ (Jeffrey S. Abarbnell 2010)

²⁸ (Jeffrey S. Abarbnell 2010)

²⁹ (Jeffrey S. Abarbnell 2010)

There have also have been several studies which suggest the opposite. In “Assessing the Relative Informativeness and Permanence of Pro Forma Earnings and GAAP Operating Earnings,” a three year study found that abnormal returns on a firm’s equity is more responsive to pro forma earnings, as investors find these estimates provide a more accurate picture of actual earnings value.³⁰ A subsequent study, “Who Trades on Pro Forma Earnings Information,” found that retail investors are much more likely to trade based on pro forma earnings than institutional investors.³¹ As such, “Do Managers Use Pro Forma Earnings to Exceed Analyst Forecasts?” finds that managers often define and issue pro forma earnings in such a way as to beat quarterly estimates.³² This should be compensated for by using analyst pro forma estimates, the implications of which will be discussed later.

³⁰ (E. L. Nilabhra Bhattacharya 2003)

³¹ (E. L. Nilabhra Bhattacharya 2006)

³² (Jeffrey T. Doyle 2002)

III: THEORY

Derived from my research as noted above, I propose the following testable propositions:

Media scrutiny has been shown to be a force in determining corporate policy, both in how a firm makes strategic decisions and sets the tone of its press releases and interaction. The volume of disclosures in financial statements which firms choose to include (from which, among other inputs, analysts construct pro forma estimates) is a significant corporate policy decision, one which managers have a variety of considerations to make before including them. Given what is known about the importance of media both in the formation of corporate policy itself and specifically regarding the way in which it releases their own pro forma estimates, it stands to reason that the volume of media scrutiny placed upon a firm would have a significant effect on the way it manages expectations.

This relationship could be positive or negative. On the one hand, firms with large volumes of press coverage are likely to have variable events that necessitate the use of pro forma estimates to normalize expectations. As the media tends to follow news that is both positively and negatively unusual, a firm with a high volume of media coverage may be more likely to have a large difference between their “normalized” and GAAP earnings. Firms that experience a special earnings-related event may be more likely to want to curry favor with investors by being honest about the impermanence of that quarter’s earnings situation.

Alternatively, firms with large media following may be disinclined to have a large difference between their GAAP and “normalized” earnings for a variety of reasons. The volume of media scrutiny could have a negative impact in the sense that firms that attract more media attention are less likely to be affected by one time earnings events. The probability that a

negative earnings event would have a significant effect on a firm's profitability going forward could grow smaller as the firm grows larger, as the firm's related risk is spread over a larger asset base. In contrast, a firm with a large media following may have disincentives to make negative pro forma adjustments, as the increase in volume of media scrutiny caused by a negative event could put unwanted pressure on management. A rebutting notion could be that the company could be so large that the volume of media coverage has little effect on corporate policy, and therefore has a correspondingly small effect on how the firm manages the expectations of its investors. Regardless of how these decisions are made, we must assume that industry and period conditions have a significant effect on corporate policymaking, with earnings expectation management being no exception.

The ambiguity of the relevance of the usefulness of pro forma earnings as discussed in the literature review would seem to throw the applicability of my study into question. However, my hypothesis takes no particular stance on the root of particular motivations for the release of pro forma earnings. The fact that the motive exists is enough, and here I attempt to find whether or not media attention affects that motive whether it be to inflate earnings or to provide useful information to investors. However, this disagreement over their respective values to investors still provides applicable suggestions for the research method of my study. Given that firms with zero pro forma-GAAP difference likely have different characteristics than those who do not, it is worthwhile to explore whether or not the "modal" firm data should be included in the test.³³ Additionally, it is suggested that tests should account for differences in firms past accounting performance in addition to current data.³⁴ As this study is interested in establishing the

³³ (Jeffrey S. Abarbnell 2010)

³⁴ (Jeffrey S. Abarbnell 2010)

importance of media attention over a given time period, this suggestion is naturally taken into account.

To test this hypothesis, we must control for the variables that have an effect of the corporate conditions and policy considerations listed above, namely the effects of industry, period, firm size, abnormal returns, and the effect of negative abnormal returns on media scrutiny.

IV: DATA DESCRIPTION

Data and Variable Construction

The final sample (Table 1) consists of data over 44 quarters from 2000 to 2011 with 324 S&P 500 firms, resulting in 10,876 observations. This period was used due to the regulatory changes that occurred in 2000 regarding the use of pro forma and GAAP earnings statements, which affects the type of spin that firms implement.³⁵ Calendar quarterly media volume data is provided by a Bloomberg story count search, which identifies individual stories printed in online and print sources where the name of the firm is mentioned. The data is filtered so that the number provided by the query does not repeat based on multiple mentions in one story. This data could not be matched to the respective firm's fiscal period, therefore only S&P 500 firms whose fiscal periods coincides with calendar quarters could be used.

To find the difference between earnings as provided by GAAP quarterly releases and pro forma earnings estimates, the data points over the periods were provided by Compustat and IBES respectively, sourced from WRDS. IBES analyst estimates are a commonly used proxy for official pro forma earnings releases.³⁶ The IBES data point for the quarter was the most recent interim estimate provided. Earnings per share estimates were used as the marker for earnings, as EPS provided the most available data to maximize the size of the sample. The difference between the two was calculated as:

$$|GAAPEPS - PFEPS|$$

³⁵ (Shibley Sadique 2008)

³⁶ (W. Bruce Johnson 2005)

The absolute value is calculated to find the raw difference between the two numbers to compensate for the varying positive and negative values of GAAP relative to pro forma.

To control for firm size, quarterly prices and share outstanding found in CRSP (sourced from WRDS) were multiplied to find the market capitalization for that period. To normalize the data, the operation $\log(\text{marketcap})$ was performed.

As the effect of bankruptcy risk and, indirectly, financial health is likely to be significant on the difference between GAAP and pro forma earnings, I decided to include the Altman Z-Score in the regression. The score uses financial data to determine bankruptcy risk for a firm within two years. The Z-Score formula is defined as

$$z = .012 \left(\frac{\text{Working Capital}}{\text{Total Assets}} \right) + .014 \left(\frac{\text{Retained Earnings}}{\text{Total Assets}} \right) + .033 \left(\frac{\text{EBIT}}{\text{Total Assets}} \right) \\ + .006 \left(\frac{\text{Market Value of Equity}}{\text{Total Liabilities}} \right) + .009 \left(\frac{\text{Sales}}{\text{Total Assets}} \right)$$

The required data to calculate the score was provided by CRSP, sourced from WRDS. When the Z-Score is greater than 2.6, the firm is not considered to be at risk of bankruptcy. When the Z-Score is greater than 1.1 but less than 2.6, the firm is considered to be in a “grey zone” where its financial health implies that it is at increased risk of bankruptcy within the next two years. When the Z-Score is less than 1.1, the firm is likely to declare bankruptcy within the next two years. While it is typically normal practice to scale this variable, I have not as a high Z-Score is an indirect indicator of financial health.

A scatter plot constituted of story count and market capitalization data shows that there is a concave trend, indicating that larger firms (particularly financial institutions and large consumer product producers) receive a disproportionate amount of news coverage. See Exhibit 3.

This dilutes the importance of media coverage for large firms, as previously discussed. I created a quadratic term, where

$$Storycountsq = (Storycount)^2$$

in order to compensate for the edge outliers in the data that could negatively bias the importance of media scrutiny for the rest of the sample.

Research suggests that managers in publicly held firms issue equity in anticipation of negative market returns.³⁷ This suggests that firms make financial decisions based on how they expect to perform given an anticipated imminent market condition, a strategy that could be interpreted as another method of expectations management. In that vein, it seems prudent to control for any abnormal earnings effect on the GAAP-pro forma difference. To achieve this control, the three-month moving return of the S&P 500 was subtracted from each firm's equity price. I then created a dummy variable indicating abnormal negative return on stock investments, of the form:

$$Returnsign = 1 \text{ if abnormal returns} < 0, = 0 \text{ otherwise}$$

The further application of this dummy, therefore, is to indicate a story volume that could be affected by an event that causes a negative abnormal return. To indicate this, return sign was multiplied by *storycount* to indicate raw negative effect and by *storycountsq* to indicate quadratic negative effect.

A set of dummy variables based on the quarter period was created to control for temporal conditions, as the rate of media attention has increased over the period as a function of the development of the internet. An additional set of dummy variables were created to compensate

³⁷ (Malcolm Baker 2000)

for industry conditions, as certain industries are more likely to attract media attention than others. These dummies were generated by Standard Industrial Classification (SIC) codes, provided by CRSP and sourced from WRDS.

See Table 2 for summary statistics of these explanatory variables.

Methodology

The empirical analysis consists of a simple regression of the winsorized absolute value of the difference between GAAP EPS and pro forma EPS estimates on the volume of stories mentioning the firm, the returns on the firm's stock, the effect of stock returns on story volume, and the financial health of the firm. The regression is of the form:

$$|epsdiff| = \alpha_0 + \beta_1 storycount + \beta_2 returnsign + \beta_3 returnsign * storycount + \beta_4 storycountsq + \beta_5 returnsign * storycountsq + \beta_6 \log(mktcap) + \beta_7 zscore + \varepsilon_i$$

where *storycount* is the volume of media coverage, *returnsign* is the binomial marker of positive or negative abnormal returns, *storycountsq* is the volume of media coverage squared, $\log(mktcap)$ is the log of market capitalization, and *zscore* is the firm's Altman Z-Score. *Returnsign* was multiplied by both *storycount* variables to provide information about the volume of media coverage when the firm experiences a negative abnormal return on its stock. The media volume data was staggered so as to compensate for the media coverage events that occur towards the end of the period that could not be captured in the lag time before earnings estimates were released.

Additionally, to determine the applicability of the theory that the distribution of the volume of media attention and firm size is concave and has a significant effect on the model, an additional regression was run of the form:

$$|\textit{epsdiff}| = \alpha_0 + \beta_1 \textit{storycount} + \beta_2 \textit{returnsign} + \beta_3 \textit{returnsign} * \textit{storycount} + \beta_4 \log(\textit{mktcap}) + \beta_5 \textit{zscore} + \varepsilon_i$$

The significance of the remaining coefficients should determine if the concavity of media attention and firm size is relevant to the original model.

V: EMPIRICAL FINDINGS

According to a study, panel data financial studies often incorrectly adjust standard errors for possible dependence in the residuals as they relate to firm specific effects.³⁸ The study found that “only clustered standard errors are unbiased as they account for the residual dependence created by the firm effect.”³⁹ As such, standard errors were clustered by the firm-level identifier provided by CRSP (*permno*) to correctly address any possible dependence in the residuals. The *lepsdiff*, *storycount*, *storycountsq*, $\log(\text{marketcap})$, and *zscore* data was winsorized at the 1st and 99th percentiles to limit extreme values in the data and control for spurious outliers that could affect coefficient estimates.

After observing the empirical results found in the study, I conclude that the volume of media coverage on a firm has a significant impact of the difference between GAAP EPS and pro forma EPS estimates.

Table 3 gives a correlation matrix of the dependent variables used in the study. Negative abnormal returns are negatively correlated with both the volume of stories written about the firm and the $\log(\text{mktcap})$, indicating the volume of stories about a firm decreases when a firm’s stock price underperforms. It also is positively correlated with the firm’s Altman Z-Score, indicating that a negative abnormal return decreases as the likelihood of bankruptcy decreases (this does not seem important or appropriate, given that abnormal return does not indicate a loss). Story count is positively correlated with $\log(\text{mktcap})$ and Altman Z-Score, indicating that firms’ media scrutiny increases as the firms increase in scale and suffer lower levels of bankruptcy risk. The negative abnormal earnings effect variable multiplied by both story count variables are positively

³⁸ (Petersen 2008)

³⁹ (Petersen 2008)

correlated with $\log(mktcap)$ and Altman Z-Score, further indicating that the media will follow larger, more stable firms even if a negative abnormal earnings event occurs. $\log(mktcap)$ is positively correlated with Altman Z-Score, indicating that bankruptcy risk decreases as firm size increases.

Table 4 reports the results of both regressions previously outlined. The regression that compensates for the concavity of media scrutiny and firm size finds that the volume of *storycount*, has a significant negative effect on the difference between GAAP earnings per share and pro forma earnings estimates. That is, firms with a large amount of media scrutiny in a period are likely to have a smaller difference between earnings measures. Further, negative abnormal stock returns have a similar significant negative effect on the earnings measure difference. It follows, then, that the media volume abnormal return variable would have a significant effect, and my regression finds that it does. However, the result is positive, indicating that stories that occur in the same period the negative returns cause the earnings measurable difference to be larger. Interestingly, the *storycountsq* variables have an opposite function than the *storycount* variables. The effect of *storycountsq* on the earnings measure difference is positive, indicating that larger firm's expectations management is likely to be greater than small firms. The negative abnormal earnings *storycountsq* variable has a negative effect on expectations management, indicating that the earnings measurable difference is not affected by sub-standard stock returns. Firm-level control variables indicate that larger companies have a larger difference between GAAP and pro forma earnings, as suggested by the positive effect $\log(mktcap)$ has on the difference. The Altman Z-Score, by contrast, did not have a significant effect on the difference. The regression yielded an adjusted R^2 of 0.2.

The regression that does not compensate for the concavity of media scrutiny and firm size confirms the importance of the compensation to the model. Story volume, abnormal stock returns, the story volume during a period of negative abnormal return, and Altman Z-Score were all statistically insignificant. The only significant relationship is $\log(mktcap)$, which is not related to story volume.

VI: CONCLUSION

This study empirically examines whether the volume of media scrutiny placed upon a firm affect the difference between GAAP earnings and pro forma earnings projections. Specifically, I examine the effect of the number of print news stories that mention or concern a broad swath of S&P 500 companies have on their normalized earnings expectations as they relate to GAAP earnings. In other words, I ask whether the pressure of a large amount of media attention can have an effect on a firm's financial reporting policy. This study is unique in that, as of yet, there has not been a study that has investigated the ability of the media to affect this specific method of earnings expectation management.

My findings show that the media does affect this difference negatively generally, but this effect is steadily diluted and made positive as the firm increases in size. I find that smaller firm's earnings expectation management is more likely to be affected by negative abnormal stock returns, while large firms are less likely to be affected. Finally, I find that the size of the firm has a positive effect on the difference between GAAP and pro forma earnings, while bankruptcy risk has no effect on the difference. Put simply, media scrutiny becomes much more important in how it affects a firm's earnings expectation management policies as the firm becomes larger. It also implies that poor stock performance influences smaller firms to manage their earnings expectations more carefully, while compelling larger firms to engage in less expectations management. In contrast, the fact that Altman Z-Scores are insignificant indicates that positive news has no effect on expectation management. The Z-Score, while used primarily as a bankruptcy indicator, was not scaled, and therefore indicates that a firm is liquid and experiencing success as scaled by the formula.

This study, however, likely suffers from a lack of direct variables as a function of the limited research tools available to me. To start with, the generalized nature of the story volume variable likely contains a substantial amount of relayed information – that is, print media stories that simply are a reprinting of broad scale news wire services, like Reuters or the Associated Press. While this is somewhat compensated for by eliminating the inclusion of television media mentions, the problem likely still exists. A study that uses aggregates of original or exclusively financial reporting regarding an earnings-related event to further explore the relationship I have established could shed light on what specific media sources have an effect on earnings management expectations. My controls for negative media attention are similarly blunt. While negative abnormal stock returns may be a sign of a negative earnings related surprise, the estimator does not directly imply a negative event. A better method of signifying the effects of positive and negative stories on expectation management would be to use software that recognizes the positive or negative tone of specific articles. Finally, as noted, official pro forma earnings releases are sometimes manipulated to beat analyst estimates.⁴⁰ A study could find a clearer picture of earnings expectation management by using the firm-issued pro forma earnings estimates rather than analyst estimates.

However, that the existence of a relationship between media exposure and firms' financial reporting policy is empirically demonstrated by the study. A further refinement of the parameters of variables should serve to illuminate the specificity of the relationship.

⁴⁰ (Jeffrey T. Doyle 2002)

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VIII: TABLES AND GRAPHS

Exhibit 1 (Hanna 1996)

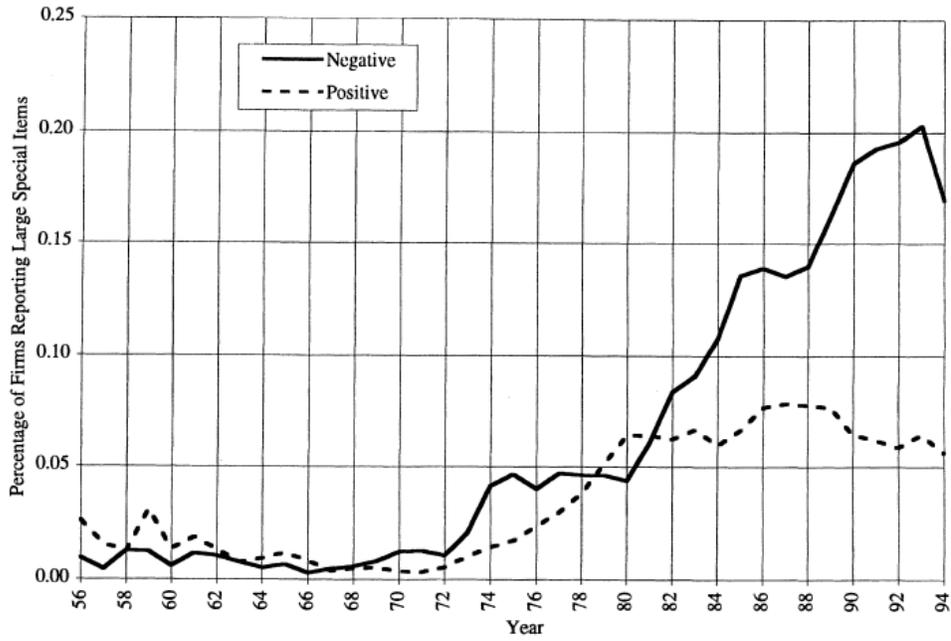


FIG. 1.—Graph of the percentage of firms reporting large negative and positive special items during the period 1956–94. (A large special item is an amount greater than 1% of beginning-of-period total assets.)

Exhibit 2

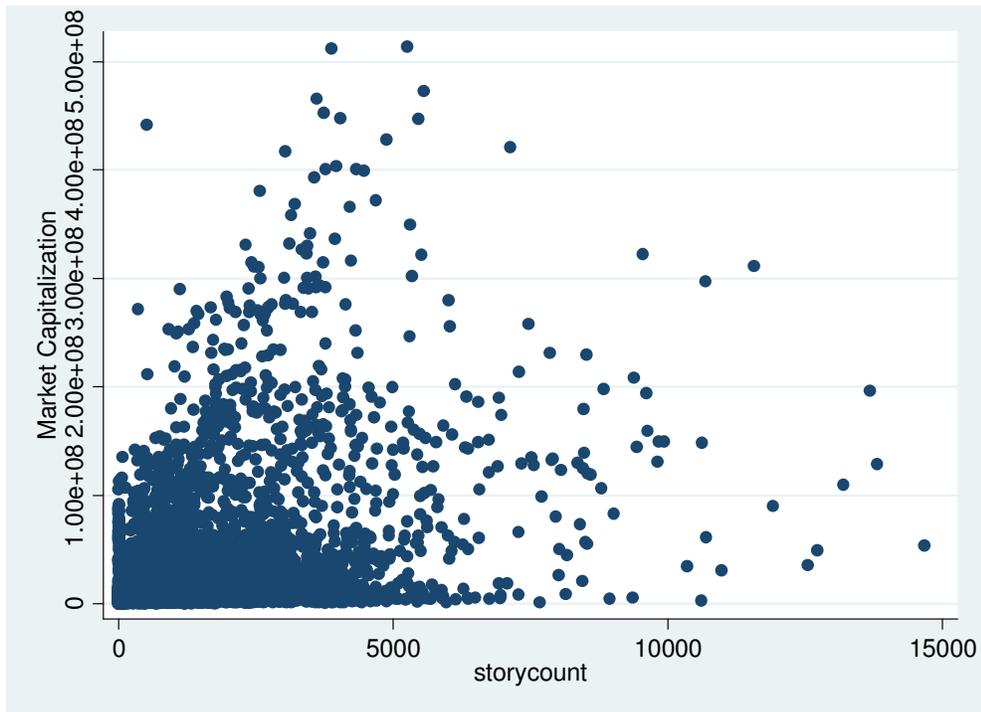


Table 1

<u>Sample Selection Criteria</u>	
	<u>Number of Firms</u>
Initial sample	500
Firms dropped because of data matching	163
Final Sample	337
Final number of observations	10876

Table 2

Summary Statistics

Variable	Mean	S.D.	Min	Max
absdiff	1.09	1.354	0	7.65
ireturns	0.45	0.498	0	1
storycount	906.156	1090.673	3	5569
ireturns*storycount	384.253	820.463	0	5569
storycountsq	2010575	4824544	9	3.10e+07
ireturn*storycountsq	820747.7	3242338	0	3.10e+07
log(mktcap)	16.055	1.176	13.212	19.18
zscore	26.51	44.23	1.18	288.13

Table 3

Correlation Matrix

	ireturns	wstorycount	product	wstorycountsq	productsq	wlog(mktcap)	zscore
ireturns	1						
storycount	-0.0441	1					
ireturns*storycount	0.5173	0.5281	1				
storycountsq	-0.0354	0.9299	0.4928	1			
ireturn*storycountsq	0.2796	0.5598	0.9052	0.6096	1		
log(mktcap)	-0.0324	0.4166	0.2283	0.3423	0.2122	1	
zscore	0.0287	0.1385	0.1142	0.1536	0.1352	0.1239	1

Table 4

Regression					
Staggered Story Count					
Dependent Variable: absepsdiff					
Compensating for Concavity			Not Compensating for Concavity		
Variable	Coefficient (SE)	t-statistic	Variable	Coefficient	t-statistic
ireturns	-0.1314 (.039)	3.36	ireturns	-0.058 (.033)	1.75
storycount	-0.00022 (.0001)	2.33	storycount	-9.57e+-06 (.00004)	0.25
ireturns*storycount	0.00017 (.000055)	3.08	ireturns*storycount	-1.31e+-06 (.00002)	0.07
storycountsq	5.17e+-08 (2.38e+-08)	2.17	log(mktcap)	.1192 (.0357)	3.34
ireturn*storycountsq	- 4.1e+-08 (1.11e+-08)	3.69	zscore	- .0007 (.0007)	1.09
log(mktcap)	0.1206 (.035)	3.47	-	-	-
zscore	-.0079 (.00065)	1.2	-	-	-
Adjusted R ²	0.2		Adjusted R ²	0.2	
f-statistic	20		f-statistic	19	
Observations	10876		Observations	10876	