Strategic Secrecy or Managerial Shielding: Examining the Motives Behind Confidential Advertising Expenditures

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Abstract

We examine the common practice of non-disclosure of corporate advertising expenditures. While some firms explicitly disclose these figures, others do not, suggesting that their expenditures are insignificant or that the firm prioritizes strategic secrecy. Theoretical and empirical research suggests that non-disclosure is consistent with maximizing shareholder value. However, non-disclosure may also reflect managerial self-interest and the desire to manage investor expectations, especially by unproven CEOs. We seek to understand the scenarios in which shareholder value maximization or the pursuit of managerial self-interest might lead firms to keep their advertising expenditures confidential. Using a unique dataset from the Kantar Group, we classify firms into three categories: those that report it, those that keep these expenditures confidential, and those with minimal advertising expenditures. Our results indicate that non-disclosure often appears detrimental to firm value, suggesting that a complex interplay of both competitive strategy and managerial incentive influence the disclosure of advertising expenditures.

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1. Introduction

The interplay between advertising spending and public disclosure is controversial in corporate circles. Some companies practice transparency in their advertising expenditures, choosing to make these figures public. On the other hand, others avoid such disclosure, pointing to its intangible nature and proprietary costs. Theoretically, it is argued that non-disclosure is consistent with maximizing shareholder value by preventing competitors from gaining a strategic advantage and safeguarding future profits (Dye, 1985; Wagenhofer, 1990). Empirical studies support this view, suggesting that investors' preference for accurate information is balanced against the competitive advantage of strategic opacity (Bernard et al., 2020; Shi et al., 2021). However, the propensity for non-disclosure may extend beyond shareholder interests and into managerial self-preservation (Berger and Hann, 2007).

Our research explores why firms with large advertising budgets choose to keep such expenditures under wraps. Keeping these expenditure estimates could be seen as a strategy to enhance current value and protect future profits, especially for firms whose brands are integral to shareholder wealth. Intense advertising competition could further incentivize secrecy (Liang, 2023).

Yet, a complex web of corporate strategy and managerial incentives could be at play. Advertising is a growth engine that influences investors' expectations about a firm's future. The high failure rate of ad campaigns (Lodish et al., 1995; Hu et al., 2009) adds a layer of unpredictability that could lead managers, particularly new ones, to err on the side of caution and manage expectations to ensure job security amid high turnover rates. This cautious approach could be perceived as creating information asymmetry that reduces firm value by restricting the flow of relevant data (Aboody and Lev, 2000), leading investors to undervalue firms that withhold such

important advertising data (e.g., Williams, 2015).

We address the question: Is non-disclosure of substantive advertising expenditures a tactic to maximize shareholder value, or is it also a shield for managerial self-interest? Using the Kantar Group database, we examine the patterns of firms that choose to keep their advertising spending confidential. We contrast these with firms that are open about advertising spending and analyze the financial metrics and market valuations that might reflect the impact of such disclosure practices. Recognizing that strategic secrecy and managerial shielding are not mutually exclusive, we also examine specific contexts where one rationale may have a more substantial interpretive strength.

Our results suggest that non-disclosure may not be a mere competitive tactic to mitigate proprietary costs but also an indication of managerial self-interest (an agency cost). The market appears to discount firms that keep advertising expenditures confidential, as evidenced by their lower valuation metrics compared to their more transparent counterparts. This challenges the proprietary cost rationale and tends toward an agency cost rationale, where self-serving motives may drive managerial discretion in disclosure.

Our findings also indicate that the propensity to withhold advertising spending details is related to CEO power. Specifically, companies led by relatively unproven CEOs tend to avoid disclosing advertising expenditures, suggesting that agency costs, rather than competitive concerns, explain this decision in such firms. Conversely, in firms with more proven CEOs, the strategic need to conceal information from competitors appears to take precedence in explaining this disclosure decision, consistent with Liang (2023). The consequences of these confidentiality practices to investors are tangible, manifesting as greater dispersion in analysts' forecasts and a notable increase in probing yet inadequately addressed inquiries during conference calls. We

conclude that non-disclosure is sometimes done to protect shareholder interests, but often, it is a protective measure for managers against the volatile nature of advertising success[1].

Our study advances the understanding of corporate disclosure practices in three important dimensions. First, it substantiates the theory that firms treat advertising expenditures as proprietary, supporting the notion that such secrecy may theoretically be beneficial to shareholders. On the other hand, our evidence also suggests that this secrecy lowers firm valuation, challenging the assumption that non-disclosure of advertising expenditures always benefits outside investors. Second, we examine the role of financial analysts in filling the information gap created by firms' non-disclosure. While analysts search for undisclosed advertising data, their efforts do not fully compensate for the lack of transparency, as evidenced by the inaccuracies and deviations in their earnings forecasts for firms with confidential advertising expenditures. Finally, we examine managers' motivations for withholding information and find that managers' self-interest and job security concerns may drive advertising expenditure secrecy in addition to investors' interests. This evidence suggests a complex dynamic in which managers' interests may influence disclosure practices, potentially at the expense of shareholder value. Our analysis aims to enrich the discourse on disclosure practices by examining the nuances behind advertising expenditure reporting, the implications for firm valuation, and the interplay between competitive strategy and managerial motives.

[1] In situations where there is suspicion of undisclosed material advertising by a company, institutional investors and analysts have the ability to obtain brand data from sources such as Kantar. This would allow them to take a deep dive into the company's actual spending. Moon et al. (2022) finds that the real value of such data emerges when investigating firms that do not report advertising expenditures, as opposed to those that do, where the disclosures themselves are more meaningful to the capital markets. However, this investigative advantage is skewed away from smaller and retail investors who may lack the resources to access and synthesize this data, thereby exacerbating information asymmetry in scenarios where firms choose not to disclose their advertising expenditures.

2. Who does Confidential Advertising Benefit?

2.1 Proprietary costs and keeping advertising confidential

The importance of advertising in cultivating brand equity and customer loyalty is well documented, and its impact on sales and market share is critical (Srivastava et al., 1999; Thompson et al., 2006). Firms must allocate their budgets wisely to outperform competitors' advertising efforts and thereby secure a competitive advantage (Joshi and Hanssens, 2010; Kurt and Hulland, 2013). Strategic discretion in spending on intangible capital is particularly important for firms rich in intellectual property, where keeping such investments confidential is a common practice to maintain competitive advantage (Koh and Reeb, 2015). However, the flip side of this is the potential trust and value that can be built through transparency with stakeholders (Verrecchia, 1983). Managers face a delicate balance between protecting competitive strategies and enriching shareholder knowledge (Dedman and Lennox, 2009).

Proprietary costs provide a strong incentive for firms to guard the details of their advertising expenditures to protect their market strategies and prevent competitors from using these insights to their advantage (Simpson, 2008; Bernard et al., 2020; Shi et al., 2021). If competitors know how much a firm spends on advertising, they can infer the types of campaigns, channels, and messages it uses to reach its target audience (Danaher and Dagger, 2013). Keeping advertising expenditures confidential arguably helps protect a firm's marketing strategy from being matched by competitors. Confidentiality may also protect firms from price wars, thereby safeguarding profits and brand integrity (Heil and Helsen, 2001). This leads to the hypothesis that shareholders may assign higher values to firms that keep their advertising expenditures confidential.

H1: Shareholders place higher values on confidential-expenditure firms than on transparent-expenditure firms.

The veil of secrecy surrounding advertising expenditures presents a significant obstacle to investors seeking to discern a firm's financial health and future direction (Lev, 1992). Financial analysts strive to pierce this veil through rigorous independent research, dissection of competitors' financial disclosures, and the use of private data and industry contacts (Easley et al., 1998). Their efforts are critical to providing investors with insights that counterbalance the drawbacks of undisclosed advertising costs.

Prior literature documents the critical role of financial analysts in providing insights beyond the scope of public financial statements, thereby mitigating information asymmetry and the associated cost of capital (Beyer et al., 2010; Mansi et al., 2011). Their specialized acumen and privileged access to information counterbalance the strategic ambiguity fostered by firms (Klein et al., 2020). Despite the complexity introduced by corporate opacity, analysts' contributions can significantly demystify it and enrich their forecasts with deep knowledge (Mola et al., 2013).

Moreover, financial analysts stand as potential harbingers of clarity amidst the opacity of undisclosed ad spending. The accuracy of their forecasts, and the errors and variances therein, reflect the complexity of analyzing firms shrouded in informational darkness (Lee et al., 2013; Duru and Reeb, 2002). If analysts can neutralize the effects of unreported advertising, their forecast accuracy should be consistent across firms with different levels of spending disclosure. This ability of analysts to mitigate the impact of non-disclosure on investor perceptions is hypothesized to result in similar forecast dispersion and errors for both confidential and transparent spending firms.

H2: Analysts have similar forecast dispersion for confidential-expenditure and transparent-expenditure firms.

H3: Analysts have similar forecast errors for confidential-expenditure and transparent-expenditure firms.

2.2. Materiality, conference calls, and financial analysts

The rationale for firms not disclosing their advertising expenditures may be based on the assumption that such information is not material to investors, leading to its omission or aggregation with other expenses deemed more relevant. Earnings conference calls are a critical arena in which analysts and investors can explore such materiality, allowing firms to communicate strategically important information without sacrificing competitive advantage (Bushee et al., 2003; Jung et al., 2018). These calls facilitate a nuanced form of disclosure, soft disclosure, that mitigates investor uncertainty without conceding competitive insights or inviting excessive public scrutiny (Matsumoto et al., 2011; Skinner, 1997).

The influence of information shared during conference calls on capital markets is well established; these interactions can significantly mitigate the information gap created by non-disclosure (Brown et al., 2004; Gow et al., 2021). Through these dialogues, managers can subtly illuminate corporate strategies and investments, enriching the informational landscape beyond what is available in public disclosures (Frankel et al., 1999; Soltes, 2014).

The calculus behind analysts' questions on conference calls is driven by their assessment of the relevance of the information to firm performance and valuation (Mayew, 2008). Their queries serve to reduce information asymmetries, refine the accuracy of market forecasts, and shape the investor narrative about a firm's trajectory (Mayew et al., 2013). Suppose financial analysts can effectively assess a firm's advertising expenditures without explicit reporting. In that case, it stands to reason that such undisclosed expenses should not affect the volume or nature of questions during earnings calls. This leads to the hypothesis that the immateriality of advertising expenditures to investors is reflected in the limited questioning of such expenses on conference calls for firms with confidential advertising practices.

In addition, these calls serve as a platform for firms to clarify and contextualize undisclosed information, which can influence capital market dynamics (Bushee et al., 2003; Brown et al., 2004). Analysts' questions during these calls are strategically aimed at reducing information asymmetry, and their ability to infer advertising expenditures without explicit disclosure is central to this process (Mayew, 2008). Therefore, we hypothesize that there will be no significant difference in the number of advertising-related questions between confidential and transparent spenders during conference calls.

H4: Analysts ask similar numbers of advertising-related questions in conference calls for confidential-expenditure and transparent-expenditure firms.

Managers' responses in conference calls are equally important in shaping investors' understanding and perceptions. The strategic decision to provide or withhold information during these calls by managers of confidential-expenditure firms is thought to be more informative than their counterparts at transparent-expenditure firms to compensate for higher opacity and align with shareholder interests (Allee and DeAngelis, 2015). This forms the basis of our hypothesis that confidential- and transparent-expenditure firm managers disclose differential 'soft information' in conference calls.

H5: Managers of confidential-expenditure firms provide more soft information about advertising in conference calls than managers of transparent-expenditure firms.

2.3. Do managers receive private benefits from confidential advertising?

Corporate opacity serves as a strategic veil that can shield new CEOs from the immediate repercussions of market reactions, allowing them the latitude to acclimate to their roles, forge stakeholder relationships, and develop strategic visions away from the glare of market scrutiny (Anderson et al., 2009; Copeland and Dolgoff, 2006). Managers may opt to keep advertising expenditures confidential due to a complex interplay of factors related to corporate strategy and

managerial incentives. At its core, advertising is seen as a key driver of firm growth and increases investor expectations about the company's prospects. However, this positive aspect is countered by the high failure rate of advertising campaigns. The unpredictable nature of these campaigns could make it difficult for managers, especially unproven ones, to report this expenditure and later take responsibility for the corresponding output. These unproven managers could be particularly cautious, aiming to manage investor expectations conservatively to maintain job security. The high turnover rate among new CEOs and top management further influences this conservative approach. The disclosure of advertising spending could raise investor expectations disproportionately, a risk that new CEOs might prefer to avoid as they establish their credibility and stability within the firm.

In the early stages of their tenure, new CEOs are often at the forefront of experimental initiatives that require a buffer from market pressures to focus on long-term strategy over short-term market appeasement (Ferreira and Rezende, 2007; Martin and Davis, 2010). This may extend to avoiding disclosure of high-risk ventures, such as intangible investments, which, if unsuccessful, could be seen as wasteful (Bereskin et al., 2016).

The transition period for new CEOs is fraught with heightened scrutiny and expectations. Evidence suggests that a new CEO's ability to improve firm performance is related to their ability to operate without the constraints of immediate market pressures (Daniel, 1992). Confidentiality of advertising expenditures may provide a tactical buffer that protects new CEOs during this vulnerable period.

A decision by managers to withhold information about advertising expenditures can also be seen as a strategic move. It reflects an attempt to balance the positive perception of advertising as a growth strategy against the risks associated with its unpredictable outcomes and the potential impact on their professional standing and investor expectations. While potentially limiting investor

insights, this approach protects managers against the volatile nature of advertising success and its impact on their tenure and the firm's performance. As corporate figureheads, CEOs significantly influence a firm's image and financial standing through their public communications. Their disclosure decisions are also affected by stakeholder pressures and job security concerns (Fee and Hadlock, 2004; Men, 2012). Research suggests that strategic opacity may respond to these career concerns (Oh and Park, 2023), suggesting that new CEOs may choose non-disclosure as a protective measure.

On the other hand, if confidential advertising expenditures are immaterial and analysts can decipher unreported advertising, new CEOs should receive no private benefits from keeping advertising expenditures private. Thus, we expect similar CEO tenure for confidential and transparent spending firms. This argument leads to Hypothesis (6):

H6: CEO tenure is unrelated to whether a firm keeps advertising expenditures confidential.

Finally, we examine whether the benefits of non-disclosure extend beyond the CEO, particularly in the context of insider trading. Corporate opacity can be a fertile ground for insiders to reap profits by trading on non-public information (Aboody and Lev, 2000; Cheng and Lo, 2006). Limited disclosure obscures the firm's financial condition from outsiders, potentially facilitating insider profits (Badertscher et al., 2011).

Nevertheless, undisclosed advertising expenditures may either be immaterial or can be efficiently comprehended by analysts. In that case, there should be no ground for insiders to gain profits for firms keeping advertising expenditures secret. This perspective leads to the hypothesis that the profitability of insider trading does not depend on whether a firm's advertising expenditures are disclosed or kept confidential.

H7: Insider trading is equally profitable in confidential-expenditure and transparent-expenditure firms.

3. Sample Construction

To construct our sample, we merged data sets from various sources. The base data comes from CRSP/Compustat Merged, which provides financial reports and stock prices for North American companies, supplemented by analyst forecasts from IBES and earnings call transcripts from Capital IQ. Compustat's XAD is our measure of a company's reported advertising expenditures, which we juxtaposed with Kantar Group's meticulously compiled advertising expenditure dataset, a cornerstone of marketing and finance research for its accuracy and comprehensiveness (e.g., Robinson et al., 2015; Kaniel and Parham, 2017).

Kantar's data covers a wide range of advertising opportunities from television to online platforms and is closely aligned with Compustat's XAD categories. To ensure seamless integration, we manually matched Kantar's brand-specific data to Compustat's company listings using advanced fuzzy matching techniques, focusing on resolving discrepancies such as name variations and spelling errors. After rigorous testing and a meticulous verification process involving research assistants, we established a high confidence threshold for matching.

Our aggregated measure of a company's observed advertisement spend is then derived, representing the sum of spending across all brands and outlets per year. Within our sample period of 1995 to 2019, a substantial subset of Compustat firms had corresponding advertising expenditures in the Kantar data.

With respect to the delineation of advertising expenditure disclosures and their materiality, we referenced SEC Staff Accounting Bulletin 99 (SAB 99), eschewing a rigid quantitative benchmark in favor of a more contextual approach. However, we identified a 5 percent pre-tax

income threshold as a common practice for determining materiality in audits of public firms (e.g., Choudhary et al. 2019), which we adopted to classify companies with confidential advertising expenses. Our analysis, further supported by robustness checks at higher thresholds (10% and 15%), found that a significant proportion of companies fell into this category, with observed spending from Kantar often exceeding reported spending from Compustat, reflecting undisclosed marketing-related costs not captured by traditional accounting measures.

Table 1, Panel A, summarizes the aggregate data on advertising expenditures as tracked by the Kantar Group across 48,905 firm-year instances. The average expenditure in this cohort is documented as $26.6 million. Firm-year observations are segmented into three spending categories: reported, confidential, and immaterial. For analytical clarity, reported and immaterial expenditures are often combined under the umbrella of transparent spending firms. Given that Kantar's figures tend to be more conservative than Compustat's disclosures, our approach to identifying confidential spenders is inherently cautious.

Digging deeper, 48% of Compustat's firm-year observations are classified as reporting firms, with an average observed expenditure of $43.0 million, compared to a much higher average reported expenditure of $132.8 million. This discrepancy is primarily due to Kantar's scope, which captures less of the unobservable marketing-related expenditures. Panel B confirms the strong correlation between observed and reported spending, echoing the findings of similar studies.

Within this dataset, firms with confidential expenditures amount to 3,598 firm-year observations, or 7.36% of the total. These firms exhibit substantial average expenditures on advertising of $53.4 million. Conversely, firms with insignificant expenditures have significantly lower observed average and median expenditures, rounding to $4.3 million.

4. Main Analyses

4.1. The magnitude and distribution of unreported advertising expenditures

In our annual aggregation of advertising expenditures for companies with confidential expenditures, we plot the time course of such expenditures in Figure 1. These substantial but undisclosed expenditures - ranging from $5 billion to $10 billion annually - highlight a notable omission in financial disclosures. Firm-year observations are grouped into quintiles based on their advertising spending, and a visual representation of the average spending per quintile is presented with a red border (referenced to the right vertical axis). In contrast, the prevalence of firms with confidential spending is presented with bars (referenced to the left vertical axis) in Figure 2. A pronounced trend is evident, showing an escalation in the percentage of confidential spenders that correlates with increasing observed spend. The top quintile, representing the 95th to 99th percentiles, has the highest concentration of such firms, with approximately 18% of these firms spending large amounts of money on advertising but not disclosing it.

In addition, Figure 3 contrasts the distributions of observed advertising expenditures (logarithmically transformed) for confidential spenders (marked in yellow) with transparent spenders (marked in green), which include both reporters and non-reporters. Many companies choose to disclose even small advertising expenditures, yet a significant number of firms opt to keep their large-scale advertising expenditures, which often run into hundreds of millions of dollars, confidential. To illustrate this idea, consider Capital One, whose observed annual advertising expenditures consistently exceed $400 million, a non-disclosed amount representing approximately 11% of its pre-tax income. The juxtaposition of confidential and transparent spenders in Figure 3 supports the observations in Figure 2 and confirms that firms with confidential spending tend to invest significantly in advertising.

4.2. Firm values for confidential-expenditure firms and transparent firms

To test Hypothesis (1), we examine the relation between firm type (confidential-expenditure firms vs. transparent-expenditure firms) and stock valuation in the current period by estimating the following equation:

$$Firm\ Value_t = \alpha_1 + \beta_1\ Confidential\text{-}expenditure_t + \Sigma\ Control_t + Firm\ \&\ Year\ effects + \varepsilon_t \quad (1)$$

where $Firm\ Value_t$ represents the firm's value measured by $\text{Log}(P/B)_t$ or $\text{Log}(Tobin's\ Q)_t$. The price-to-book equity ratio (*P/B*) and *Tobin's Q* are commonly used in various contexts by analysts to evaluate the value of a firm (e.g., Nezlobin et al. 2016). The detailed variable definitions and descriptive statistics for all variables in Equation (1) are shown in Panel A of Table A1 in the Appendix. The mean (median) of the shareholder value measures, *P/B*, and *Tobin's Q* are 3.257 (2.149) and 1.828 (1.431), respectively. $Confidential\text{-}expenditure_t$ is an indicator variable that equals 1 if a firm's observed advertising expenditures are over or equal to 5 percent of pre-tax earnings, where the firm does not report advertising expenditures, and zero otherwise. About 6% of observations are confidential-expenditure firms since the mean of *Confidential-expenditure* is 0.059. The control variables follow prior literature (e.g., Rao et al. 2004) and are defined in Table A1. We include year- and firm-fixed effects and cluster the standard errors by firm. Continuous variables are winsorized at 1 percent and 99 percent.

We report the estimation results for Equation (1) in Table 2. In column (1) for P/B_t, the coefficient on $Confidential\text{-}expenditure_t$ is -0.075 with statistical significance at the 5% level. These estimates suggest that confidential-expenditure firms, compared with transparent-expenditure firms, have a 7.5% lower price-to-book equity ratio in the current period. In column (2), we present the results from regressing Tobin's Q on the indicator variable $Confidential\text{-}expenditure_t$. The estimated coefficient on $Confidential\text{-}expenditure_t$ is -0.038 in column (2) for

Tobin's Q, with statistical significance at the 5% level and indicating that confidential-expenditure firms have a stock valuation of about 4% lower than transparent firms. These results suggest that confidential-expenditure firms have lower firm values and do not support Hypothesis (1). In untabulated results, we examine how the relation above varies by advertising intensity. As some firms/industries are more advertising-intensive than others, we split our sample into two groups based on observed advertising expenditures scaled by sales. The significant coefficients on *Confidential-expenditure* only exist for the high group.

Moreover, the lower firm value associated with confidential-expenditure status in the current period does not easily clarify managerial motives for concealing investment details. Therefore, we extend our investigation to the longitudinal value trajectory of firms that persistently conceal their advertising investments over three to five years. These untabulated results reveal an increase in firm value over time, as reflected in metrics such as price-to-book and Tobin's Q. This progressive increase in firm value suggests that prolonged non-disclosure of advertising expenditures may, paradoxically, predict an increase in the firm's perceived future value. It implies that while immediate non-disclosure may obscure the external valuation of a firm, the eventual realization of benefits from such advertising investments becomes increasingly evident. Thus, a long-term strategy of confidential advertising may ultimately align with managerial interests and prospectively enhance firm valuation.

4.3. Analyst forecasts for confidential-expenditure and transparent-expenditure firms

Financial analysts serve as information intermediaries that could lower information asymmetry (Bowen et al., 2002). Hypothesis (2) examines whether analysts face more information uncertainty and are less likely to reach a consensus for confidential-expenditure firms' earnings per share (EPS). Hypothesis (3) assesses whether analysts' forecasts are more optimistic or

pessimistic for confidential-expenditure firms than transparent firms. To explore these research questions, we estimate the following regression for all firm-year observations in our sample period:

$$Analyst\ Forecast_t = \alpha_1 + \beta_1 Confidential\text{-}expenditure_{t\text{-}1} + \Sigma Control_t + Firm\ \&\ Year\ effects + \varepsilon_t \quad (2)$$

where $Analyst\ Forecast_t$ represents analysts' forecast property variables, including *Overestimation #M* (*Mean/Median*)$_t$ and *Forecast Dispersion #M* (*Mean/Median*)$_t$. *Overestimation #M* (*Mean*/*Median*) denotes analysts' overestimation in EPS forecasts, measured as forecasted EPS minus actual EPS each year. Since forecast horizon might affect the magnitude of forecast errors (Gu and Wu, 2003), we construct *Overestimation #M* (*Mean*/*Median*) by using the mean or median of overestimation in EPS from forecasts made by analysts in 1, 2, or 3 month(s) before the annual earnings announcements. For instance, *Overestimation 3M* (*Mean*) denotes the mean overestimation in EPS of forecasts made by analysts 3 months before the announcement. We then measure the dispersion of analyst forecasts, *Forecast Dispersion #M* (*Mean/Median*), as the standard deviation of analyst forecast errors scaled by the absolute value of mean/median forecast errors. We include year- and firm-fixed effects and cluster standard errors by firm. Continuous variables are winsorized at 1 percent and 99 percent.

We provide the variable definitions and descriptive statistics for all regression variables in Equation (2) in Panel B of Appendix Table A1. *Confidential-expenditure's* sample mean value is 0.061, indicating that 6% of the sample firm-year observations should report advertising expenditures but do not. We also incorporate an extensive list of control variables with distributions similar to those reported by prior studies (e.g., Gu and Wu, 2003; Lobo et al., 2017).

We estimate Equation (2) using *Forecast Dispersion #M* (*Mean*/*Median*) and *Overestimation #M* (*Mean*/*Median*) as the dependent variable in Table 3 and Table 4, respectively. In Table 3, for forecast dispersion, the coefficient on $Confidential\text{-}expenditure_{t\text{-}1}$ is positive and

significant across different specifications at the 1% level. These results suggest that analysts' forecasts diverge more when covering confidential-expenditure firms, rejecting Hypothesis (2).

Analysts have substantially greater consensus when they observe the advertising expenditures in the financial reports than when it is unreported. For example, in column (2), where the dependent variable is *Forecast Dispersion* $2M_t$ (*Median*), the coefficient is 0.050, suggesting that the average standard deviation of forecast errors increases by 5 percent for confidential-expenditure firms compared with transparent firms. Such an increase is economically substantial as it is about 70 percent of the mean of *Forecast Dispersion* $2M_t$ (*Median*).

In Table 4, we use overestimation in EPS as the dependent variable to examine if analysts take an optimistic (pessimistic) view of confidential-expenditure firms, corresponding to a significantly positive (negative) coefficient on *Confidential-expenditure*$_{t\text{-}1}$. The results show that for 1- and 2-month ahead forecasts, the coefficients on *Confidential-expenditure*$_{t\text{-}1}$ are negative and significant at the 5% level, suggesting that analysts make more pessimistic forecasts on confidential-expenditure firms. When we use the estimated coefficients in column (2), the confidential-expenditure firms have an estimated downward forecast error of 0.004, which means that the average difference between forecasted and actual earnings is about -0.4% of the lagged stock price.

Overall, Table 4 suggests that analysts take a more pessimistic view of confidential-expenditure firms. We interpret this pattern as analysts underestimating those firms' future earnings. Our results show that analysts have different perceptions regarding the future profitability of confidential-expenditure and transparent-expenditure firms, causing us to reject Hypothesis (3).

Such pessimistic estimates can be attributed to investors' difficulties in evaluating confidential-expenditure firms. To understand the role of financial analysts in price discovery for

confidential advertising firms, we further investigate whether undervaluation in confidential-expenditure firms results from pessimistic forecasts of analysts and report the results. We construct an indicator variable, *Underestimation by Analysts*$_t$, to identify firms with opposing views on future profitability from their analysts. Untabulated results reveal that the coefficients on the interaction of *Confidential-expenditure* and *Underestimation by Analysts* are negative across almost all regression specifications, which suggests that the undervaluation of firm value significantly increases with analysts' downward forecast errors. This result enables us to directly connect confidential-expenditure firms' undervaluation to analysts' pessimistic forecasts of these firms.

4.4. Analyses of earnings calls for confidential- and transparent-expenditure firms

Although managers exercise discretion and choose to be confidential-expenditure firms, financial analysts may still obtain that information through other channels, such as actively participating and raising related questions in earnings conference calls. We examine whether and to what extent analysts choose to ask about undisclosed advertising. Analysts' questions and executives' answers about advertising-related information in confidential-expenditure firms (as opposed to transparent-expenditure firms) can reveal knowledge about advertising without giving competitors precise expenditure data.

We use Python to identify advertising-related words (i.e., marketing, brand, advertising, branding, and promotion) in transcripts of annual earnings conference calls between 2007 and 2019 from Capital IQ. We limit our analyses to the earnings calls held on the same day as the announcement of the annual report because analysts are more likely to pose a question based on

financial statements rather than other news.[2] Our analysis relies on 14,754 earnings calls. Table 5 reports the summary statistics of advertising-related words analysts use to ask questions in earnings calls. Table 6 gives the same analysis for executives' answers.

Panel A of Table 5 presents the frequency of all advertising-related words mentioned by analysts in the Q&A section. Among the 14,754 calls, reported-expenditure firms have 8,337 earnings calls, confidential-expenditure firms have 617 earnings calls, and immaterial-expenditure firms have 5,800 earnings calls. We find that 50.6% of earnings calls of confidential-expenditure firms contain advertising-related questions by analysts, which is significantly higher than those of reported-expenditure firms (45.8%). We find that only 17.1% of earnings calls of immaterial-expenditure firms contain advertising-related questions from analysts, indicating that disclosure of advertising expenditures is less relevant.

Panel B of Table 5 presents the frequency of each advertising-related word (marketing, brand, advertising, branding, and promotion) cast by analysts in the Q&A section. Analysts mention "marketing" and "brand" 1.04 and 1.3 times per call. Then, we examine the magnitude of advertising-related words mentioned by analysts in Panel C of Table 5. Specifically, we calculate the ratio of advertising-related terms mentioned by analysts, defined as the number of advertising-related words mentioned by analysts, to the total number of words spoken by analysts. The results show that, on average, 1.1% and 1.0% of words spoken by analysts are advertising-related for confidential-and reported-expenditure firms, respectively. Importantly, we find analysts use advertising-related words more often when asking questions of confidential-expenditure firms than for transparent-expenditure firms.[3]

[2] Our results do not change when we include earnings calls within 3 days, 10 days, or 15 days after the announcement of annual reports.

[3] Immaterial-expenditure firms are asked advertising-related questions about 1 out of 300 words spoken by analysts,

Next, we use a linear probability regression with firm-fixed effects to examine whether analysts are likelier to use advertising-related words in their questions to confidential-expenditure firms. In particular, we estimate the following Equation using 12,006 firm-year observations from merging earnings calls data with the Compustat sample:

$$Mentioned\ by\ Analysts_t = \alpha_1 + \beta_1\ Confidential\text{-}expenditure_t + \Sigma\ Control_t + Firm\ \&\ Year\ effects + \varepsilon_t, \quad (3)$$

where *Mentioned by Analysts*$_t$, including *Mentioned by Analysts* (*Dummy*) and *Mentioned by Analysts* (*Ratio*), refers to whether financial analysts mention advertising-related words and how often they mention them. Specifically, *Mentioned by Analysts*$_t$ (*Dummy*) equals 1 if an analyst says any advertising-related words such as marketing, brand, advertising, branding, and promotion, and 0 otherwise. *Mentioned by Analysts*$_t$ (*Ratio*) is the ratio of the number of advertising-related words mentioned by analysts to the total number of words spoken by analysts. We include year- and firm-fixed effects and cluster the standard errors by firm.

In the untabulated results, the coefficients on *Confidential-expenditure* are positive and significant, and the practical difference between them is substantial. Our interpretation of these results and those in Table 5 is that analysts request substantially more advertising-related questions in earnings conference calls from firms whose advertising expenditures are private, causing us to reject Hypothesis (4).

Next, in Table 6, we explore whether executives of confidential-expenditure firms exhibit a higher tendency to respond to analysts' advertising-related questions or if they provide extra advertising-activity elaborations. Panel A of Table 6 shows the frequency of advertising-related

(3 times less than for confidential-expenditure firms), further indicating that disclosure of advertising expenditures is less relevant for those firms.

words mentioned by executives in earnings calls. About 68%, 71%, and 36% of executives in reported-expenditure, confidential-expenditure, and immaterial-expenditure firms use advertising-related words in their earnings calls. Executives of confidential-expenditure firms have the highest frequency of using advertising-related terms, albeit not statistically significant at the univariate level compared to reported-expenditure firms. Panel B of Table 6 indicates that the terms `marketing' and 'brand' appear most frequently in the Q&A transcripts of executives.

When we examine the magnitude of advertising-related words relative to all terms mentioned by executives, Panel C of Table 6 indicates that 0.78% (0.75%) of executives of confidential-expenditure firms (reporting firms) are advertising-related. The *t*-test shows statistically insignificant differences between the ratio of advertising-related terms mentioned by executives of reporting firms and that by executives of confidential-expenditure firms at the univariate level. Panels A and C in Table 6 collectively suggest that executives of confidential-expenditure firms do not spend significantly more time answering questions on advertising activities from interested analysts.

Again, we employ a linear probability regression model with firm fixed effects to examine whether executives of confidential-expenditure firms are more likely to mention advertising-related activities in the Q&A section of earnings calls. We estimate the following equation using 12,006 firm-year observations from merging earnings calls data with the Compustat sample:

$$Answered\ by\ Executives_t = \alpha_1 + \beta_1\ Confidential\text{-}expenditure_t + \Sigma\ Control_t + Firm\ \&\ Year\ effects + \varepsilon_t \quad (4)$$

where *Answered by Executives*$_t$, including *Answered by Executives* (*Dummy*) and *Answered by Executives* (*Ratio*), refers to whether executives mention advertising-related words and how often they mention them. Specifically, *Answered by Executives* (*Dummy*) equals 1 if an executive says

any advertising-related words such as marketing, brand, advertising, branding, and promotion, and 0 otherwise. *Answered by Executives* (*Ratio*) is the ratio of the number of advertising-related words mentioned by executives to the total number of words spoken by executives. We include year- and firm-fixed effects and cluster the standard errors by firm. The coefficient estimates on *Confidential-expenditure* are not statistically significant, indicating that executives of confidential-expenditure firms do not reveal more advertising-related information than transparent-expenditure firms, even in the earnings calls, leading us to reject Hypothesis (5).

Our evidence from Table 5 and Table 6 offers three significant implications. First, analysts of confidential-expenditure firms consider their marketing and promotion information as material. Second, compared with transparent-expenditure firms, confidential-expenditure firms receive more questions about advertising/marketing activities from analysts. Still, executives are not inclined to discuss such activities more during earnings calls. Third, managers leave conference call participants in the dark by not providing the corresponding information, leading financial analysts to form a negative interpretation (Hollander et al., 2010).

4.5 CEO tenure and the choice of being confidential- and transparent-expenditure firms

CEOs are subject to high turnover risk. Each year, roughly 9.7% of firms in the Compustat universe replace their CEOs. Hundreds of CEOs only keep their job for 2 to 3 years, with many executives becoming CEOs yearly but only a few surviving in the long run. Because of the uncertain benefits of investing in intangible assets, managers often hesitate to disclose this spending and create entry barriers for competitive managerial teams (Koh and Reeb, 2015). Therefore, we estimate the following regression:

$$Confidential\text{-}expenditure_t = \alpha_1 + \beta_1\, Short\ CEO\ Tenure_t + \Sigma\, Control_t + Firm\ \&\ Year\ effects + \varepsilon_t \quad (5)$$

where $Confidential\text{-}expenditure_t$ has been defined earlier. *Short CEO Tenure* includes *Short CEO*

Tenure 3 Years and *Short CEO Tenure 4 Years*, which are indicator variables that equal 1 if CEO tenure is less than 3 and 4 years, respectively, and zero otherwise. Since industry competitiveness, firm accounting performance, and firm characteristics could cause the incidence of being a confidential-expenditure firm (Simpson 2008), we include Herfindahl-Hirschman Index (*HHI*), returns on assets (*ROA*), firm size (*Size*), firm age (*Firm Age*), and leverage ratio (*Leverage*) as our control variables. We include year- and firm-fixed effects and cluster standard errors by firm. Continuous variables are winsorized at 1 percent and 99 percent.

The descriptive statistics in Panel D of Appendix Table A1 show that CEO tenure is less than 3 years in about 1/3 of the observations. CEOs exhibit substantial turnover, with many having short stints in the top spot (Jenter and Lewellen, 2021). The estimation results of Equation (5) are presented in Panel A of Table 7. The coefficients on *Short CEO Tenure 4 Years*$_t$ and *Short CEO Tenure 3 Years*$_t$ are both significantly positive, suggesting that CEOs with shorter tenure choose not to report material advertising expenditures, leading us to reject Hypothesis (6).

In Panel B of Table 7, we investigate the division within the CEO labor market, specifically focusing on industries where a subset of CEOs is more prone to being replaced. We explore how the dynamics of this segmented market contribute to variations in the decision-making process regarding the concealment of information characterized by high levels of uncertainty. Our findings indicate that CEOs with shorter tenures in industries characterized by high CEO turnover are inclined to keep advertising expenditures confidential. At the same time, we do not observe a similar pattern among short-tenure CEOs in industries with lower CEO turnover rates. Such results align with existing literature that highlights how CEO job security concerns can lead to a deterioration in the quality of information (Fudenberg and Tirole, 1995; DeFond and Park, 1997; Hazarika et al., 2013).

5. Robustness Tests

5.1. Alternative proprietary cost approaches

In Section 4, we found a potential match between managers' decision to withhold advertising expenditure data and the pursuit of self-interest, a concept commonly associated with agency costs. However, a recent study by Liang (2023) presents a different view. Liang found a negative correlation between the intensity of advertising competition and disclosure, suggesting that proprietary costs may significantly influence disclosure practices.

Given these contrasting perspectives, we revisit our initial conclusions, explicitly focusing on advertising competition. Using the fluidity metric developed by Hoberg et al. (2014), we measure the ease with which a firm's competitors can replicate its products, which is a proxy for advertising market competitiveness. We define a "high fluidity indicator," which indicates a firm's fluidity above the mean. In Panel A of Table 8, we examine the effects of CEO tenure and advertising rivalry on being a confidential advertiser. Notably, we also find that both new CEOs and intense advertising rivalry increase the likelihood that firms keep advertising costs confidential. As for the economic significance, the coefficients of Short CEO tenure 4 Years and High Fluidity Indicator are 0.009 and 0.010, respectively, in model (1), indicating that our agency costs consideration is still economically viable even if we control for proprietary costs.

We further analyze the interplay between agency and proprietary costs in Panel B of Table 8 by examining how they function under industries with high and low CEO turnover ratios. For firms in the high CEO turnover group, their likelihood of non-disclosure is significantly related to short CEO tenure. Still, it is unrelated to the High Fluidity Indicator, which supports the agency costs for CEOs who are subject to greater replacement risk. In contrast, for firms in the low CEO turnover group, their likelihood of non-disclosure is significantly related to the High Fluidity

Indicator but not to shorter CEO tenure, supporting the proprietary costs concerns. Our empirical evidence thus indicates that both proprietary and agency costs significantly influence advertising expenditure disclosure, with the impact varying by CEO market position, providing valuable considerations for market participants and regulators alike.

5.2. DiD: Financial Reporting Release No.44

We employ a difference-in-differences methodology to examine the impact of the SEC's 1994 amendment to the advertising expense disclosure rule, specifically Financial Reporting Release No. 44 (FRR44). Before FRR44, managers were required to disclose advertising expenditures exceeding 1% of sales; after the amendment, disclosure was required only for expenditures that managers deemed materially significant. Heitzman et al. (2010) found that after FRR44, about 20% of firms discontinued their previous practice of disclosing advertising expenditures. This trend is particularly striking given the steady increase in advertising costs prior to FRR44, suggesting that the change acted as an exogenous shock rather than a reflection of changing economic realities.

For our analysis, we use the Kantar Group's database, taking the enactment of FRR44 in December 1994 as the point of regulatory change. We separate firms into those that ceased reporting within three years of FRR44 and had significant advertising expenditures, creating a five-year window of analysis around each firm's transition.

Our untabulated results suggest that for some firms, post-FRR44 non-disclosure led to increased agency costs, while others appeared to benefit from reduced disclosure requirements. These offsetting effects result in an insignificant impact on firm value. In contrast, we observe a significant increase in analyst forecast dispersion and more pessimistic outlooks for firms that

switched to non-disclosure.

We also examined the influence of CEO tenure on the likelihood of switching to non-disclosure after FRR44. The positive, significant coefficients for short CEO tenure suggest that newer CEOs were more inclined to adopt non-disclosure practices following the regulatory change, a finding consistent with our broader research.

Finally, we examine insider trading patterns to assess whether non-disclosure provides informational advantages. Our analyses test whether CEO net purchases in confidential-exposing firms increased after FRR44, and whether such purchases are correlated with higher firm values. Notably, CEOs in confidential-expenditure firms exhibit more net purchases, with our prior findings suggesting that insiders potentially capitalized on private information following the FRR44 policy change. These findings underscore the complexity of managerial discretion in financial reporting and its implications for market transparency.

6. Conclusion

The usefulness of financial reporting in informing investors and facilitating their decision-making processes is well established (FASB, 2018; IASB, 2018), with decision usefulness heralded as the primary objective of accounting policy (Dechow et al., 2010). However, the literature on discretionary disclosure has consistently shown that managers' decisions to withhold information are influenced by competitive threats and other proprietary costs (e.g., Verrecchia, 1983). Despite this, empirical research on how the omission of material information affects investor decision-making remains scarce. Our research contrasts reported with observed advertising expenditures to identify firms that maintain the confidentiality of such data, and to assess the economic significance and implications of this non-disclosure.

Using Kantar Group data on advertising spending across media channels and brands, we

focus on companies that spend at least 5% of pre-tax income on advertising. These firms often choose not to break out these expenditures in their reports, even when they exceed standard materiality thresholds. Our results suggest that firms with confidential expenditures are consistently undervalued. Such firms are also subject to higher forecast dispersion among financial analysts, indicating the increased uncertainty analysts face due to the withholding of material information. In addition, financial analysts tend to underestimate the future earnings of confidential spending firms, underscoring the critical link between material advertising expenditures that, when omitted, has a significant impact on outside investors.

Examination of earnings conference call transcripts reveals that analysts are more inclined to inquire about advertising in the context of confidential-expenditure firms. In contrast, executives of these firms reciprocate with less advertising-related disclosure. This imbalance illustrates that rational investors are at a disadvantage, unable to obtain relevant information through either financial reports or informal channels. In addition, our analysis suggests that CEOs with shorter tenures tend to be more inclined to withhold advertising information, a tendency we think stems from concerns about their job security. More importantly, we present separate evidence for the agency cost rationale when CEOs are more subject to replace risk and for Liang's (2023) proprietary cost rationale when CEOs have better job security. Our analyses thus highlight two different rationales behind the non-disclosure of advertising expenditures.

In further analyses exploiting the regulatory shift embodied in FRR44 and employing a difference-in-differences approach, we continue to observe an increased information asymmetry analysts face in forecasting for confidential spending firms. Moreover, firms that switch to this non-disclosure practice often have short-tenured CEOs. Our findings suggest that corporate insiders may use undisclosed advertising expenditures for personal gain.

This research has several implications for regulators, corporate managers, and investors. First, while the SEC has posited that voluntary disclosure of advertising costs could reduce regulatory burdens without depriving investors of critical information, FRR44 acknowledges analysts' concerns that the benefits of such disclosure outweigh the associated costs and that relaxing this mandate could increase investor uncertainty - our empirical results lend credence to this perspective.

Second, the secrecy cost motive, which suggests that managers avoid full disclosure to avoid competitive pressures (e.g., Verrecchia 1983; Wagenhofer 1990), could serve as an excuse to avoid external scrutiny. This is supported by our finding that short-tenured CEOs, in particular, tend to withhold information about advertising costs.

Finally, our findings are relevant to the FASB's project to disaggregate income statement expenses. Despite longstanding calls for such disaggregation, it was not until February 2022 that the FASB improved decision usefulness by requiring the separate reporting of expenses. Our results confirm that access to detailed expense information, such as advertising costs, is invaluable to investors.

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Figure 1: Unreported Advertising Yearly Aggregate

The following table depicts confidential-expenditure total yearly aggregate advertising spending, in billions as observed by Kantar Group, and begins in 1995 due to data availability. Confidential-expenditure firms are firms whose advertising expenditure is missing on Compustat while appearing in Kantar, advertising at least 5% of their pre-tax income.

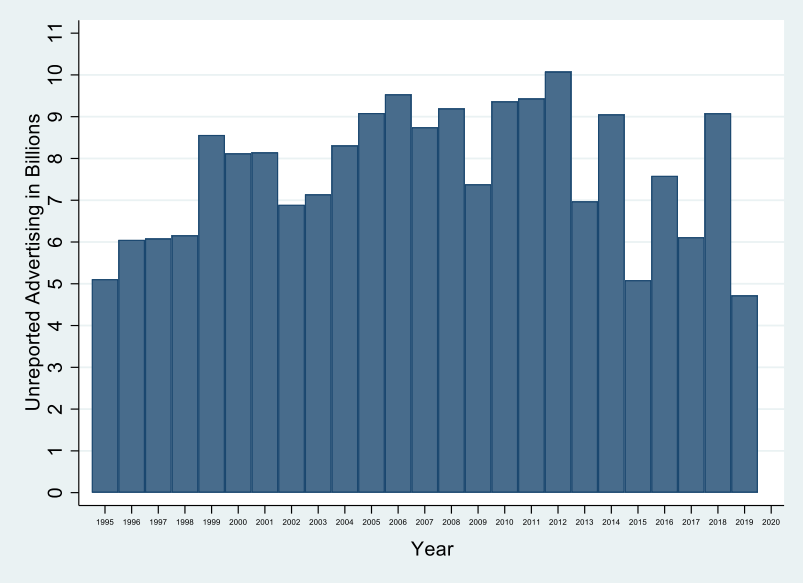

Figure 2: Confidential-expenditure Ratios by Observed Advertising Quantiles

This figure depicts the confidential-expenditure ratio by twenty quantiles of observed advertising reported by Kantar Group, sorted by spending amount. The left-hand Y-axis reports the proportion of confidential-expenditure firms, while the right-hand Y-axis depicts the natural log of the mean observed advertising per quantile. We define confidential-expenditure firms as firms whose advertising expenditures are unreported while appearing in Kantar with advertising of at least 5% of pre-tax income.

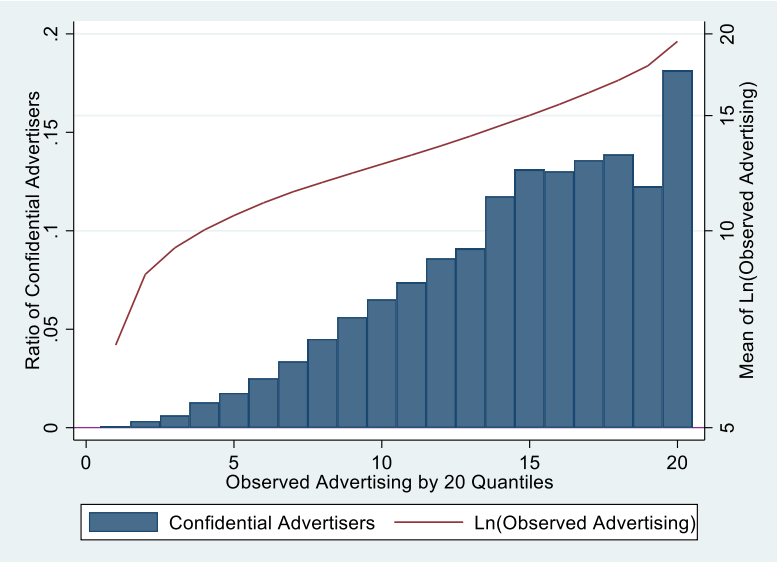

Figure 3: Transparent and Confidential-Expenditure Firms Histograms

This figure plots the density histograms of confidential-expenditure firms compared with transparent-expenditure firms (other firms). We define confidential-expenditure firms as firms whose advertising expenditures are unreported while appearing in Kantar with advertising of at least 5% of pre-tax income. Transparent-expenditure firms include reported- and immaterial-expenditure firms. Before taking its natural log, we provide the raw number of observed advertisements for each tick on the X-axis.

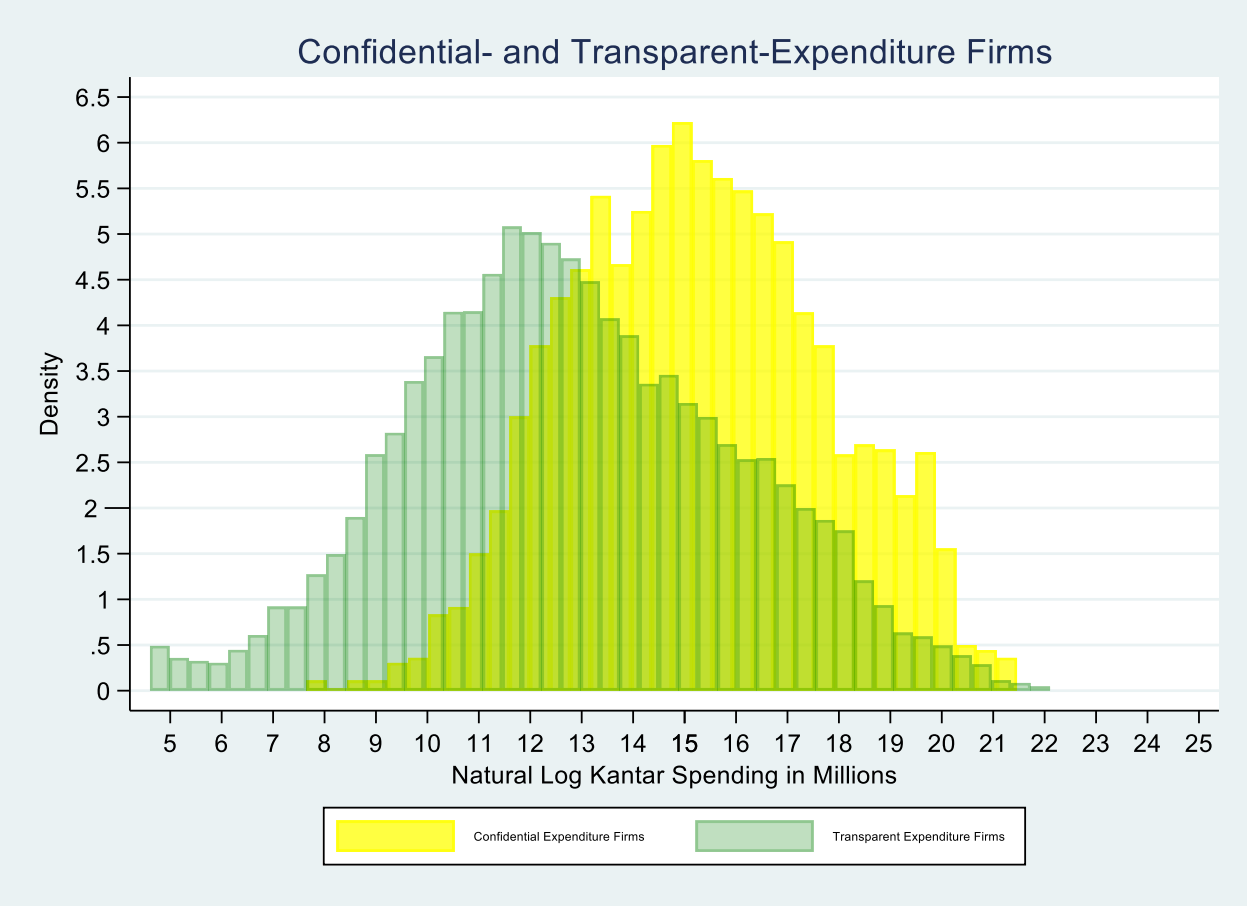

Table 1: Summary Statistics of Observed Advertising Expenditures

Panel A: Summary Statistics

	N	Mean	St. Dev	1st quartile	Median	3rd quartile
For all firms:						
Observed Advertising (Kantar Group)	48,905	26.602	140.603	0.049	0.377	4.385
• Print & Publishing	48,905	7.090	39.343	0.019	0.169	1.456
• Online	48,905	2.844	20.395	0.000	0.000	0.088
• Broadcast	48,905	16.678	97.574	0.000	0.001	0.803
Among reported-expenditure firms:						
Reported Advertising (Compustat)	23,625	132.808	527.379	1.454	7.800	47.305
Observed Advertising (Kantar Group)	23,625	43.034	187.158	0.099	0.985	12.428
Among confidential-expenditure firms:						
Observed Advertising (Kantar Group)	3,598	53.370	163.745	0.654	3.935	23.814
Among immaterial-expenditure firms:						
Observed Advertising (Kantar Group)	21,682	4.256	32.615	0.022	0.127	0.749

Panel B: Correlation Matrix

	Observed Advertising (from Kantar Group)
Reported Advertising (from Compustat)	0.704^{***}
	(0.000)

Our analysis uses firm-year observations. Panel A of the table presents summary statistics for these expenditures across media channels. 'Reported advertising' refers to the figures publicly disclosed by firms in their annual reports and recorded in Compustat, expressed in millions. Observed Advertising' captures the actual annual advertising expenditure of these companies as tracked by Kantar Group, further segmented into the categories of Print & Publishing, Broadcast and Online. We classify companies into two categories based on Compustat data: 'Reported spenders' are those with disclosed ad spending. In contrast 'Confidential spenders' are identified by the absence of such data in Compustat, although Kantar reports that they spend at least 5 percent of their pre-tax revenues on advertising. A third category, 'Immaterial-expenditure firms', includes those that do not report advertising expenditure that is less than 5 percent of their pre-tax income according to Kantar. Panel B examines the relationship between advertising expenditures reported in Compustat and those observed by Kantar Group. We use statistical significance tests to understand the strength and reliability of these correlations. A three-star designation (***), indicating a 1% significance level in two-tailed tests, underscores the robustness of our findings.

Table 2: Confidential-expenditure and Current Firm Value

	(1)	(2)
Variable	Log $(P/B)_t$	Log$(Tobin's\ Q)_t$
Confidential Expenditure$_t$	-0.075**	-0.038**
	(-2.526)	(-2.231)
ROA_t	2.665***	1.724***
	(14.044)	(14.752)
ROA Volatility$_t$	0.659**	0.653***
	(2.098)	(3.354)
$Size_t$	-0.241***	-0.123***
	(-11.483)	(-10.772)
$Leverage_t$	1.211***	0.002
	(14.062)	(0.060)
Sales Growth$_t$	0.188***	0.081***
	(5.781)	(4.419)
Log(*#Analyst*)$_t$	0.028***	0.025***
	(2.770)	(4.502)
$BigN_t$	-0.151***	-0.032**
	(-4.442)	(-1.981)
Log(*Intangible Assets*)$_t$	-0.407***	-0.270***
	(-4.448)	(-5.658)
Constant	2.360***	1.297***
	(14.962)	(14.709)
Year FE	Yes	Yes
Firm FE	Yes	Yes
N	20,066	20,811
Adjusted R^2	0.743	0.809

This table reports how investors value the firm in the presence of unrevealed material advertising expenditures. Our variable of interest is *Confidential-expenditure*, which equals 1 if advertising costs are missing on Compustat but appearing in Kantar and, simultaneously, are at least 5% of pre-tax income and 0 otherwise. The dependent variable in column (1) is *Log (P/B)*, the natural log of the price-to-book equity ratio. The dependent variable in column (2) is *Log(Tobin's Q)*, which is the natural log of the sum of the market value of equity and book value of debt divided by total assets. We define other variables in Appendix Table A1. We winsorize all variables at the 1% and 99% levels. *, **, *** represent significance at 10 percent, 5 percent, and 1 percent, respectively. Standard errors are clustered by the firm; t-statistics are in parentheses.

Table 3: Confidential-expenditure and Analysts Forecast Dispersion

Variable	(1) *Forecast Dispersion* $1M_t$ (*Median*)	(2) *Forecast Dispersion* $2M_t$ (*Median*)	(3) *Forecast Dispersion* $1M_t$ (*Mean*)	(4) *Forecast Dispersion* $2M_t$ (*Mean*)
$Confidential\text{-}expenditure_{t-1}$	0.044***	0.050***	0.048***	0.045***
	(3.959)	(4.378)	(4.295)	(4.093)
$Size_t$	-0.009**	-0.010**	-0.010**	-0.012**
	(-2.005)	(-2.048)	(-2.141)	(-2.479)
MB_t	0.000	0.000	0.000	0.000
	(0.162)	(0.269)	(0.392)	(0.292)
ROA_t	-0.156***	-0.167***	-0.148***	-0.154***
	(-5.398)	(-5.116)	(-5.058)	(-4.905)
$ROA\ Volatility_t$	0.116**	0.146**	0.138**	0.139**
	(1.998)	(2.500)	(2.257)	(2.395)
$Leverage_t$	0.042***	0.047***	0.041***	0.048***
	(3.022)	(3.014)	(2.940)	(3.193)
$BigN_t$	-0.001	0.003	-0.001	-0.001
	(-0.119)	(0.275)	(-0.130)	(-0.131)
$Log(\#Analyst)_t$	-0.025***	-0.026***	-0.027***	-0.026***
	(-5.902)	(-5.320)	(-6.585)	(-5.593)
$Firm\ Age_t$	-0.005**	-0.004	-0.005*	-0.004
	(-1.971)	(-1.506)	(-1.959)	(-1.577)
$Loss_t$	0.051***	0.048***	0.049***	0.048***
	(7.567)	(6.473)	(7.282)	(6.564)
Constant	0.235***	0.235***	0.239***	0.247***
	(5.377)	(4.866)	(5.597)	(5.486)
Year FE	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes
N	24643	24599	24643	24598
Adjusted R^2	0.184	0.183	0.191	0.189

This table reports the information uncertainty that analysts face in the presence of material unrevealed advertising expenditures. Our variable of interest is Confidential-expenditure, which equals 1 if advertising costs are missing on Compustat while appearing in Kantar and, at the same time, is over or equal to 5% of pre-tax income and 0 otherwise at time *t*-1. The dependent variable is *Forecast Dispersion #M* (*Median/Mean*) at time *t*, measured as the standard deviation of analyst forecasts errors made # months before a firm's actual announcement of EPS, scaled by the absolute value of median or mean forecast errors. Other variables are defined in Appendix Table A1. We winsorize all variables at the 1% and 99% levels. *, **, *** represent significance at 10 percent, 5 percent, and 1 percent, respectively. Standard errors are clustered at the firm level; t-statistics are in parentheses.

Table 4: Confidential-expenditure and Analysts' Overestimation in EPS

Variable	(1) *Overestimate 1M$_t$ (Median)*	(2) *Overestimate 2M$_t$ (Median)*	(3) *Overestimate 1M$_t$ (Mean)*	(4) *Overestimate 2M$_t$ (Mean)*
Confidential-expenditure$_{t-1}$	-0.004**	-0.004**	-0.004**	-0.004**
	(-2.186)	(-2.411)	(-2.092)	(-2.178)
Size$_t$	-0.002*	-0.002	-0.002*	-0.002*
	(-1.665)	(-1.644)	(-1.792)	(-1.648)
MB$_t$	-0.000	-0.000	-0.000	-0.000
	(-0.625)	(-0.417)	(-0.628)	(-0.272)
ROA$_t$	-0.010	-0.011	-0.010	-0.011
	(-1.266)	(-1.329)	(-1.257)	(-1.336)
ROA Volatility$_t$	-0.013	-0.014	-0.014	-0.013
	(-1.315)	(-1.410)	(-1.313)	(-1.283)
Leverage$_t$	0.019***	0.019***	0.019***	0.020***
	(3.384)	(3.312)	(3.437)	(3.396)
BigN$_t$	0.002	0.003	0.002	0.003
	(1.060)	(1.525)	(1.015)	(1.516)
Log(#Analysts)$_t$	-0.004***	-0.004***	-0.004***	-0.004***
	(-3.979)	(-4.021)	(-3.898)	(-3.883)
Firm Age$_t$	-0.004***	-0.004***	-0.004***	-0.004***
	(-3.622)	(-3.664)	(-4.035)	(-3.913)
Loss$_t$	0.006***	0.006***	0.006***	0.006***
	(4.069)	(3.701)	(4.141)	(3.879)
Constant	0.072***	0.070***	0.074***	0.075***
	(4.911)	(4.969)	(5.369)	(5.148)
Year FE	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes
N	26821	26684	26821	26684
Adjusted R^2	0.280	0.275	0.279	0.271

This table reports whether analysts make a pessimistic or optimistic forecast when a firm chooses to withhold material advertising expenditures. Our variable of interest is *Confidential-expenditure*, which equals 1 if advertising costs are missing on Compustat but appearing in Kantar and, at the same time, is over or equal to 5% of pre-tax income and 0 otherwise at time *t-1*. The dependent variable is *Forecast Error #M (Median/Mean)* at time *t*. The mean or median forecast errors of analysts' forecast made # months prior to a firm's actual announcement of EPS, scaled by the prior year-end stock price. *Forecast errors* are defined as analyst forecasts minus actual EPS. Other variables are defined in Appendix Table A1. We winsorize all variables at the 1% and 99% levels. *, **, *** represent significance at 10 percent, 5 percent, and 1 percent, respectively. Standard errors are clustered at the firm level; t-statistics are in parentheses.

Table 5: Advertising-related Words Mentioned by Analysts in the Earnings Call

Panel A: The percentage of transcripts including advertising-related word mentioned by analysts

	Firm Type			All Obs
	Reported Expenditure (1)	Confidential Expenditure (2)	Immaterial Expenditure (3)	
Earnings Call Available	8337	617	5800	14754
Questions from Analysts	3821	312	990	5123
% of Transcript	45.83%	50.57%	17.07%	34.72%

Test Statistics: Columns 1 vs 2 (t-test: -4.74%; p-value: 0.0228)
Columns 2 vs 3 (t-test: 33.5%; p-value: 0.0000)

Panel B: Average number of occurrences for each advertising-related word mentioned by analysts in the Q&A section

	Firm Type		
	Reported Expenditure (1)	Confidential Expenditure (2)	Immaterial Expenditure (3)
Marketing	1.037	1.394	0.818
Brand	1.304	1.042	0.792
Advertising	0.513	0.506	0.213
Branding	0.060	0.032	0.063
Promotion	0.610	0.564	0.207

Panel C: The ratio of advertising-related words mentioned by analysts in the Q&A section

	Firm Type			*t*-test			
	Reported Expenditure (1)	Confidential Expenditure (2)	Immaterial Expenditure (3)	(1)-(2)	(p-value)	(2)-(3)	(p-value)
Questions from Analysts	0.99%	1.14%	0.35%	-0.03%	(0.0133)	0.43%	(0.0000)

This table presents the advertising-related-words ratio mentioned by analysts in earnings calls. Panel A calculates the frequency with which analysts mention advertising-related words in the calls. Panel B shows the average occurrences for each advertising-related word used. Panel C calculates the ratio of advertising-related words mentioned by analysts. We define the ratio as the number of advertising-related words mentioned by analysts to the total # words spoken by analysts. We winsorize all variables at the 1% and 99% levels. We find similar results in a multivariate setting.

Table 6: Advertising-related Words Answered by Executives in the Earnings Call

Panel A: The percentage of transcripts including advertising-related word mentioned by executives

	Firm Type			All Obs
	Reported Expenditure (1)	Confidential Expenditure (2)	Immaterial Expenditure (3)	
Earnings Call Available	8337	617	5800	14754
Answered by Executives	5639	435	2087	8161
% of Transcript	67.64%	70.50%	35.98%	55.31%

Test Statistics: Columns 1 vs 2 (t-test: -2.86%; p-value: 0.1417)
Columns 2 vs 3 (t-test: 34.52%; p-value: 0.0000)

Panel B: Average number of occurrences for each advertising-related word mentioned by executives in the Q&A section

	Firm Type		
	(1) Reported Expenditures	(2) Confidential Expenditure	(3) Immaterial Expenditure
Marketing	1.964	2.547	1.118
Brand	4.000	2.966	1.611
Advertising	0.796	0.837	0.250
Branding	0.086	0.067	0.070
Promotion	0.877	0.986	0.232

Panel C: The ratio of advertising-related words mentioned by executives in the Q&A section

	Firm Type			*t*-test			
	Reported Expenditure (1)	Confidential Expenditure (2)	Immaterial Expenditure (3)	(1)-(2)	(p-value)	(2)-(3)	(p-value)
Answered by Executives	0.75%	0.78%	0.37%	-0.15%	(0.5009)	0.77%	(0.0000)

This table presents how often executives in the earnings calls mentioned advertising-related words. In Panel A, we calculate the frequency at which executives mention advertising-related words in earnings calls. Panel B shows the average number of occurrences for each advertising-related word we used. In Panel C, we calculate the ratio of advertising-related words executives mentioned. We define the ratio as the number of advertising-related words mentioned by executives to the total number of words spoken by analysts. We find similar results in a multivariate setting.

Table 7: Confidential-expenditure and CEO tenure

Panel A The impact of CEO job security on the decision to become a confidential-expenditure firm

	Confidential-expenditure$_t$	
Variable	(1)	(2)
Short CEO Tenure 4 Years$_t$	0.009***	
	(2.586)	
Short CEO Tenure 3 Years$_t$		0.006*
		(1.924)
Firm Age$_t$	0.017*	0.017*
	(1.887)	(1.879)
Size$_t$	-0.009	-0.009
	(-1.605)	(-1.638)
Leverage$_t$	0.025	0.025
	(1.240)	(1.237)
HHI$_t$	-0.024	-0.023
	(-0.353)	(-0.332)
ROA$_t$	0.008	0.008
	(0.448)	(0.443)
Constant	-0.086	-0.082
	(-0.744)	(-0.711)
Year Fixed Effects	Yes	Yes
Firm Fixed Effects	Yes	Yes
N	26,184	26,184
Adjusted R^2	0.412	0.412

Panel B Subsample analysis of industries with high and Low CEO turnover

	Confidential-expenditure$_t$			
	High Industry CEO Turnover	Low Industry CEO Turnover	High Industry CEO Turnover	Low Industry CEO Turnover
	(1)	(2)	(3)	(4)
Short CEO Tenure 4 Years$_t$	0.013***	0.002		
	(3.093)	(0.354)		
Short CEO Tenure 3 Years$_t$			0.010**	0.001
			(2.366)	(0.138)
Control Variables	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes
Firm Fixed Effects	Yes	Yes	Yes	Yes
N	15,757	10,427	15,757	10,427
Adjusted R^2	0.361	0.475	0.361	0.475

Panel A of this table reports whether firms with short CEO tenure are more likely to be confidential-expenditure firms. Our variable of interest is Confidential-expenditure, which equals 1 if advertising expenditures are missing from Compustat but appear in Kantar and are greater than or equal to 5% of pre-tax income, and 0 otherwise. Short CEO Tenure 4 Years (Short CEO Tenure 3 Years) is an indicator variable if CEO tenure is less than 4 (3) years, and 0 otherwise. In Panel B, we categorize industries based on the Fama-French 12 industry classification. "High industry CEO turnover" includes firms in industries where the CEO turnover rate exceeds the sample firm average. We winsorize all variables at the 1% and 99% levels. Asterisks *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively.

Table 8: The Interplay between CEO Tenure, Advertising Rivalry, and Confidential Advertisers

Panel A Confidential-expenditure and CEO tenure

	Confidential-expenditure$_t$	
	(1)	(2)
Short CEO Tenure 4 Years$_t$	0.009***	
	(2.615)	
Short CEO Tenure 3 Years$_t$		0.006*
		(1.953)
High Fluidity Indicator$_t$	0.010**	0.010**
	(2.137)	(2.129)
Constant	Yes	Yes
Control Variables	Yes	Yes
Year FE	Yes	Yes
Firm FE	Yes	Yes
N	26,184	26,184
Adjusted R^2	0.413	0.412

Panel B Subsample analysis of industries with high CEO turnover and of industries with low CEO turnover

	Confidential-expenditure$_t$			
	High Industry CEO Turnover	Low Industry CEO Turnover	High Industry CEO Turnover	Low Industry CEO Turnover
	(1)	(2)	(3)	(4)
Short CEO Tenure 4 Years$_t$	0.013***	0.002		
	(3.111)	(0.371)		
Short CEO Tenure 3 Years$_t$			0.010**	0.001
			(2.378)	(0.165)
High Fluidity Indicator$_t$	0.006	0.015**	0.006	0.015**
	(0.839)	(2.299)	(0.824)	(2.298)
Constant	Yes	Yes	Yes	Yes
Control Variables	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes
N	15,757	10,427	15,757	10,427
Adjusted R^2	0.361	0.475	0.361	0.475
F	2.185	1.978	1.702	1.957

This table reexamines the results in Table 7 by adding *High Fluidity Indicator*. *High Fluidity Indicator* is set to 1 if a firm's fluidity value exceeds the average fluidity of the sample firms, and zero otherwise. We include constant, control variables, firm-fixed effects, and year-fixed effects in all panels. Other variables are defined in Appendix Table A2. We winsorize all variables at the 1% and 99% levels. *, **, *** represent significance at 10 percent, 5 percent, and 1 percent, respectively. Standard errors are clustered by firm; t-statistics are in parentheses.

Appendix

Table A1: Summary Statistics of Confidential-expenditure Regression Analyses

Panel A: Confidential-expenditure firms and Firm Value Sample Variables (Used in Table 2)

	N	Mean	S.D.	1st quartile	Median	3rd quartile
Dependent Variables						
P/B	20,066	3.257	3.831	1.385	2.149	3.563
Tobin's Q	20,811	1.828	1.161	1.099	1.431	2.084
Independent Variables						
Confidential-expenditure	20,811	0.059	0.237	0.000	0.000	0.000
Size	20,811	7.837	2.010	6.505	7.832	9.201
Log(*#Analyst*)	20,811	1.706	1.131	0.693	1.946	2.639
Leverage	20,811	0.235	0.193	0.078	0.210	0.346
ROA	20,811	0.083	0.091	0.032	0.078	0.128
ROA Volatility	20,811	0.032	0.038	0.009	0.020	0.039
BigN	20,811	0.852	0.355	1.000	1.000	1.000
Sales Growth	20,811	0.073	0.209	-0.019	0.053	0.134
Intangible Assets	20,811	0.187	0.199	0.020	0.112	0.306
High Fluidity Indicator	20,811	0.360	0.230	0.000	0.000	1.000

Panel A provides descriptive statistics for the sample used in Table 2. Continuous variables are winsorized at 1 percent and 99 percent.

Variable Definitions:

P/B	=	the price-to-book equity ratio, like Dong, Hirsheifer, and Teoh (2006, 2012);
Tobin's Q	=	the sum of the market value of equity and the book value of debt divided by total assets;
Confidential-expenditure	=	an indicator which equals 1 if advertising costs is missing on Compustat but appearing in Kantar and at the meanwhile is over or equal to 5% of pre-tax income, and 0 otherwise;
Size	=	the natural log of total assets;
Log(#Analyts)	=	the number of analysts following the firm;
Leverage	=	book value of long-term debt divided by total assets;
ROA	=	the firm's ROA (earnings before interests and taxes divided by the average of total assets);
ROA Volatility	=	the standard deviation of *ROA* over the 5 years before the current year;
BigN	=	an indicator set to 1 if the auditor is a BigN auditor, and set to 0 otherwise;
Sales Growth	=	the sales in t minus sales in t-1, scaled by sales in t-1;
Intangible Assets	=	the natural log of intangible assets.
High Fluidity Indicator	=	an indicator taking the value 1 when a firm's fluidity value exceeds the average fluidity value. We follow Hoberg et al. (2014) to measure fluidity.

The remainder independent variables are used and described in Panel B.

Panel B: Analyst Forecast and Confidential-expenditure Sample (Used in Table 3 and Table 4)

	N	Mean	S.D.	1st quartile	Median	3rd quartile
Dependent Variables						
Forecast Dispersion $1M_t$ (*Median*)	24,751	0.067	0.196	0.008	0.017	0.044
Forecast Dispersion $2M_t$ (*Median*)	24,538	0.069	0.205	0.009	0.018	0.045
Forecast Dispersion $3M_t$ (*Median*)	24,329	0.076	0.212	0.010	0.021	0.052
Forecast Dispersion $1M_t$ (*Mean*)	24,734	0.066	0.191	0.008	0.017	0.044
Forecast Dispersion $2M_t$ (*Mean*)	24,525	0.068	0.199	0.009	0.018	0.045
Forecast Dispersion $3M_t$ (*Mean*)	24,323	0.077	0.219	0.010	0.021	0.052
Overestimation $1M_t$ (*Median*)	24,717	0.007	0.039	-0.002	0.000	0.004
Overestimation $2M_t$ (*Median*)	24,609	0.008	0.039	-0.002	0.000	0.005
Overestimation $3M_t$ (*Median*)	24,493	0.008	0.040	-0.002	0.000	0.007
Overestimation $1M_t$ (*Mean*)	24,717	0.007	0.039	-0.002	0.000	0.004
Overestimation $2M_t$ (*Mean*)	24,609	0.008	0.040	-0.002	0.000	0.005
Overestimation $3M_t$ (*Mean*)	24,493	0.008	0.040	-0.002	0.000	0.007
Independent Variables						
Confidential-expenditure$_{t-1}$	24,751	0.061	0.239	0.000	0.000	0.000
Size$_t$	24,751	7.755	1.853	6.411	7.655	8.974
MB$_t$	24,751	3.346	4.724	1.438	2.299	3.915
ROA$_t$	24,751	0.082	0.113	0.032	0.081	0.136
ROA Volatility$_t$	24,751	0.042	0.058	0.011	0.024	0.049
Leverage$_t$	24,751	0.232	0.201	0.060	0.204	0.349
BigN$_t$	24,751	0.905	0.294	1.000	1.000	1.000
Log(#Analyst)$_t$	24,751	2.089	0.757	1.609	2.079	2.708
Firm Age$_t$	24,751	11.717	7.318	6.000	11.000	17.000
Loss$_t$	24,751	0.181	0.385	0.000	0.000	0.000
High Fluidity Indicator	24,643	0.406	0.241	0.000	0.000	1.000

Panel B provides descriptive statistics for the sample used in Table 3 and Table 4.

Variable Definitions:

Forecast Dispersion #M (*Median*)	=	the dispersion in analyst forecasts, measured as the standard deviation of analyst forecasts errors made # months prior to a firm's actual announcement of EPS, scaled by the absolute value of median forecast errors;
Forecast Dispersion #M (*Mean*)	=	the dispersion in analyst forecasts, measured as the standard deviation of analyst forecasts errors made # months prior to a firm's actual announcement of EPS, scaled by the absolute value of mean forecast errors;
Overestimation #M (*Median*)	=	the mean overestimation in EPS of analysts forecast made # months prior to a firm's actual announcement of EPS, scaled by the prior year-end stock price. Overestimation in EPS defines as analyst forecast minus actual EPS;
Overestimation #M (*Mean*)	=	the median overestimation in EPS of analysts forecast made # months prior to a firm's actual announcement of EPS, scaled by the prior year-end stock price. Overestimation in EPS defines as analyst forecast minus actual EPS;
MB	=	the firm's market value of equity scaled by the book value of equity;
Firm Age	=	age of the firm as appears on CRSP;
Loss	=	an indicator set to 1 if a firm has net loss and set to 0 otherwise.

Panel C: Earnings Calls and Confidential-expenditure Sample Variables (Used in Table 5 and Table 6)

	N	Mean	S.D.	1st quartile	Median	3rd quartile
Dependent Variables						
Mentioned by Analysts$_t$ (*Dummy*)	12,006	0.373	0.484	0.000	0.000	1.000
Mentioned by Analysts$_t$ (*Ratio*)	12,006	0.008	0.013	0.000	0.000	0.015
Answered by Executives$_t$ (*Dummy*)	12,006	0.585	0.493	0.000	1.000	1.000
Answered by Executives$_t$ (*Ratio*)	12,006	0.006	0.010	0.000	0.004	0.010
Independent Variables						
Confidential-expenditure$_t$	12,006	0.039	0.194	0.000	0.000	0.000
Size$_t$	12,006	7.637	1.881	6.283	7.573	8.894
MB$_t$	12,006	3.490	6.367	1.405	2.432	4.314
BigN$_t$	12,006	0.880	0.325	1.000	1.000	1.000
ROA$_t$	12,006	0.076	0.119	0.032	0.080	0.133
ROA Volatility$_t$	12,006	0.044	0.051	0.014	0.026	0.052
Firm Age$_t$	12,006	14.680	7.419	10.000	15.000	20.000
Log(*Market Value*)$_t$	12,006	7.694	1.888	6.382	7.658	9.005
Log(*Sales*)$_t$	12,006	7.408	1.803	6.122	7.380	8.633
Leverage$_t$	12,006	0.242	0.219	0.051	0.206	0.364
Loss$_t$	12,006	0.239	0.426	0.000	0.000	0.000
Sales Growth$_t$	12,006	0.093	0.221	-0.012	0.061	0.155
Log (*SG&A*)$_t$	12,006	5.985	1.565	4.895	5.865	7.020
SG&A ratio$_t$	12,006	0.376	0.240	0.179	0.328	0.536

Panel C provides descriptive statistics for the sample used in Table 5 and Table 6.

Variable Definitions:

Mentioned by Analysts$_t$ (*Dummy*)	=	a dummy variable that is equal to 1 if an analyst mentions any advertising-related words such as marketing, brand, advertising, branding, and promotion, and 0 otherwise;
Mentioned by Analysts$_t$ (*Ratio*)	=	the ratio calculated by advertising-related words mentioned by analysts to the total number of words spoken by analysts;
Answered by Executives$_t$ (*Dummy*)	=	a dummy variable that is equal to 1 if an executive mentions any advertising-related words such as marketing, brand, advertising, branding, and promotion, and 0 otherwise;
Answered by Executives$_t$ (*Ratio*)	=	the ratio of advertising-related words mentioned by executives to the total number of words spoken by executives;
Log(*Market Value*)	=	the natural log of market value;
Log(*Sales*)$_t$	=	the natural log of sales;
Log (*SG&A*)$_t$	=	the natural log of selling, general, and administrative expenses;
SG&A ratio$_t$	=	The ratio of selling, general, and administrative expenses to the sum of selling, general, and administrative expenses and cost of goods sold.

Panel D: CEO Tenure and Confidential-expenditure Sample Variables (Used in Table 7)

	N	Mean	S.D.	1st quartile	Median	3rd quartile
Dependent Variables						
Confidential-expenditure	26,184	0.057	0.233	0.000	0.000	0.000
Independent Variables						
Short CEO Tenure 4 Years	26,184	0.394	0.489	0.000	0.000	1.000
Short CEO Tenure 3 Years	26,184	0.305	0.460	0.000	0.000	1.000
Firm Age	26,184	12.074	7.229	6.000	12.000	18.000
Size	26,184	8.025	1.777	6.711	7.909	9.205
Leverage	26,184	0.235	0.192	0.074	0.215	0.350
HHI	26,184	0.097	0.071	0.054	0.078	0.110
ROA	26,184	0.039	0.109	0.012	0.044	0.083
High Fluidity Indicator	26,184	0.394	0.239	0.000	0.000	1.000

Panel D provides descriptive statistics for the sample used in Table 7. Continuous variables are winsorized at 1 percent and 99 percent.

Variable Definitions:

Short CEO Tenure 4 Years	=	an indicator variable if CEO tenure is less than 4 years, and 0 otherwise.
Short CEO Tenure 3 Years	=	an indicator variable if CEO tenure is less than 3 years, and 0 otherwise.
HHI	=	Herfindahl-Hirschman Index is calculated annually based on two-digit SIC codes.