

# BEAUTY IS WEALTH: CEO APPEARANCE AND SHAREHOLDER VALUE

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This paper examines whether and how the appearance of chief executives officers (CEOs) relates to shareholder value. We obtain a Facial Attractiveness Index of 667 CEOs based on their facial geometry. CEOs with a higher Facial Attractiveness Index are associated with better returns around their job announcements, and higher acquirer returns upon acquisition announcements. To mitigate endogeneity concerns, we compare stock returns surrounding news dates with CEOs' images to returns surrounding news dates without CEOs' images. Facial Attractiveness Index positively affects returns only around news dates with CEOs' images. These findings suggest that CEO appearance matters for shareholder value.

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This paper examines whether and how chief executive officer (CEO) appearance relates to shareholder value. Appearance, measured by attractiveness, competence, likability, and trustworthiness, is associated with various types of individual outcomes. It predicts candidates' election results (Todorov et al. (2005), among others), individual income (Hamermesh and Biddle (1994)), achievements, peer recognition (Kennedy (1990)), and even military ranks (Mazur et al. (1984)). In the finance literature, appearance affects managerial compensation (Graham, Harvey, and Puri (2014)), personal lending (Duarte, Siegel, and Young (2012); Ravina (2012)), and hedge fund investments (Pareek and Zuckerman (2013)). However, the existing literature examining the effects of appearance mainly focuses on personal-level outcomes. It is far less clear whether and through what channels appearance is related to group welfare, such as shareholder value. In the context of the corporate world, given the importance of the CEO for a company and the evidence that appearance matters in a variety of different outcomes, CEO appearance may affect shareholder value in some way(s).

To further assess whether and in what channels CEO appearance is associated with shareholder value, we obtain a Facial Attractiveness Index of 667 CEOs of S&P 500 companies based on facial geometry.<sup>1</sup> Since the time of ancient Greece, a person's facial geometry, including the golden ratio and facial symmetry, has been well documented as an objective measure of beauty and attractiveness (Atalay (2006)).<sup>2</sup> The relation between facial geometry and attractiveness has thus become a significant research topic in the psychology and biology

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<sup>1</sup> In this study, we focus on the valuation effects of attractiveness instead of other appearance-based qualities, such as competence and trustworthiness.

<sup>2</sup> For example, an ABC News article titled "Britain's 'Most Beautiful Face' Reveals Beauty Secrets" states that "The formula for beauty devised by the ancient Greeks said that the distance from the eyes to the mouth should be one third of the face." (<http://abcnews.go.com/blogs/lifestyle/2012/04/britains-most-beautiful-face-reveals-beauty-secrets/>)

literature. The evidence confirms that attractiveness is associated with facial averageness,<sup>3</sup> symmetry,<sup>4</sup> golden ratio, and other geometry-based facial features.<sup>5</sup>

We obtain each CEO's Facial Attractiveness Index from Anaface.com, a web-based photo analysis application that computes a facial beauty score according to a person's facial geometry. The construction of this score is based on scientific research, various elements of neoclassical beauty, and statistical analysis. Elements used to calculate the facial beauty score include things such as comparing innerocular distance to mouth width, and nose width to face height. For each CEO we sample the scores from Anaface.com six times, and then obtain the average of these six scores as the measure of the Facial Attractiveness Index. To ensure the validity of this facial attractiveness measure, we conduct surveys on the attractiveness of the same sample of CEOs through Amazon's Mechanical Turk (Mturk) service.<sup>6</sup> The Facial Attractiveness Index is positively related to attractiveness ratings by survey respondents, even after controlling for a number of CEO characteristics and facial traits.

Our findings are summarized as follows. First, more attractive CEOs are associated with better stock returns around their job announcements. This effect appears to be economically significant: A ten percent increase in a CEO's Facial Attractiveness Index relates to a 1.17% increase in abnormal returns within ten days surrounding the job announcement date. This result

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<sup>3</sup> For studies on the relation between attractiveness and facial averageness, see Langlois and Roggman (1990), Perrett, May, and Yoshikawa (1994), Rhodes and Tremewan (1996), Perrett et al. (1998), and Rhodes, Sumich and Byatt, (1999), among others.

<sup>4</sup> For the literature on the relation between attractiveness and facial symmetry, see Grammer and Thornhill (1994), Rhodes, Proffitt, Grady, and Sumich (1998), Perrett, Burt, Penton-Voak, Lee, Rowland, and Edwards (1999), Rikowski and Grammer (1999), Jones, Little, Penton-Voak, Tiddeman, Burt, and Perrett (2001), among others.

<sup>5</sup> For the literature in this vein, see Shi, Samal, and Marx (2006), Schmid, Marx, and Samal (2008), and Pallet, Link, and Lee (2010), among others.

<sup>6</sup> Amazon's Mturk service has been widely used in survey-based research. For example, Duarte, Siegel and Young (2012) use surveys from Mturk to measure trustworthiness of potential borrowers in the setting of peer-to-peer lending.

provides the initial evidence that CEO appearance enhances shareholder value and that more attractive CEOs seem to gain a “first impression” advantage in stock prices.

We then propose and test two channels through which CEO appearance matters for shareholder value: *negotiating* and *visibility*. With regard to the *negotiating* channel, existing evidence suggests that more physically attractive people receive better treatments when negotiating with others, and/or are better communicators and negotiators; they thus receive a greater surplus in negotiation (Chaiken (1979); Rosenblatt (2008)). We examine a key corporate event in which interpersonal communications and negotiations are considered extremely important—mergers and acquisitions (M&As).<sup>7</sup> We find a positive and significant relation between CEO attractiveness and acquirer returns around merger announcement dates, after controlling for a number of additional CEO characteristics, including gender, age, tenure, overconfidence, education, as well as CEO photo characteristics, such as whether the CEO wears glasses and/or smiles in the photo. In addition, we separate the sample firms into high and low CEO attractiveness portfolios, and find that the positive relation between attractiveness and stock returns persists for a period of even greater than one year following the merger announcements. These findings support the argument that more attractive CEOs enhance shareholder value through the negotiating channel.

With regard to the *visibility* channel, the psychology literature suggests that attractiveness is likely to affect people’s perceptions (Berger et al. (1972)); further, the marketing literature shows that more attractive endorsers promote consumers’ purchase intentions (Kahle and Homer (1985)). As CEOs are often perceived as the “face” of a firm, more attractive CEOs are likely to create better images for the firm, thus enhancing shareholder value. To test the *visibility* channel,

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<sup>7</sup> *The Wall Street Journal*, August 21, 2006, “Best acquisitions start with charming CEO.” The article states, “There is no substitute for establishing good personal rapport with sellers...As they see it, their biggest edge comes not from what they do in the boardroom, but from getting on the road and wooing possible sellers.”

we examine stock price reactions to variations in the visibility of CEOs surrounding news event dates.<sup>8</sup> The test of the *visibility* channel also provides the empirical benefits of mitigating potential endogeneity concerns, as the media nature of the sample allows us to compare stock returns of the treatment group, i.e., news events with CEOs' images, to those of a control group, i.e., news events without CEOs' images.

We test this channel in two different settings. First, we compare the effects of facial attractiveness on stock returns around television news events with the CEOs' images to the effects of facial attractiveness on returns surrounding a matched sample of non-television news events without the CEOs' images. Second, we examine the difference in stock price reactions between earnings announcement news days containing CEOs' photos and a matched sample of earnings announcement news days without the CEOs' pictures. In both settings, CEO attractiveness has a positive and significant impact on stock returns around news days when CEO images are visible, but has no significant impact on stock returns around the matched samples of news event dates without CEO images. These tests net out additional firm and CEO characteristics that might confound the positive attractiveness-return relation and therefore help mitigate the endogeneity concerns.

To further ensure the robustness of these findings, we use an alternative measure of CEO attractiveness, i.e., the predicted value of the survey-based CEO Attractiveness based on a CEO's facial traits observable in the photos, including *FAI*, *Smiling*, *Bald*, *Glasses*, *Professional*, *Color Photo*, and *Nonwhite*.<sup>9</sup> This predicted survey-based attractiveness measures the fraction of survey respondents' subjective ratings based on observable facial traits of a CEO and excludes

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<sup>8</sup> This test builds on a large literature that documents the influence of media on stock returns. See Merton (1987), Tetlock (2007), Kim and Meschke (2013), Lou (2014), among others.

<sup>9</sup> In other words, we regress *FAI*, *Smiling*, *Bald*, *Glasses*, *Professional*, *Color Photo*, and *Nonwhite* on the survey-based *Attractiveness* and obtain the predict value for each CEO observation.

other factors that might affect the respondents' ratings. We continue to find that more attractive CEOs relate to better stock returns in all the aforementioned analyses using this alternative measure.

Our paper relates to the literature regarding the effects of CEOs on corporate outcomes. Existing literature finds that manager fixed effects matter (Bertrand and Schoar (2003); Graham, Li, and Qiu (2012); Coles and Li (2012)). Further, characteristics of CEOs, including gender (Faccio, Marchica, and Mura (2012)), overconfidence (Malmendier and Tate (2005, 2008); Malmendier, Tate, and Yan (2011)), psychological traits, attitudes (Graham, Harvey, and Puri (2013)), affective states (Mayew and Venkatachalam (2012)), and their various abilities and skills (Kaplan, Klebanov, and Sorensen (2012)) matter for firm investment and success. A broad psychology literature suggests that personality is manifested through appearance (Naumann, Vazire, Rentfrow, and Gosling (2009), among others), but there is much less literature on how appearance affects corporate activities. This paper adds to this literature by providing novel findings that CEO appearance matters for shareholder value through the negotiating and visibility channels.

The present study also contributes to the literature on whether and how the news of corporate events, revealed through different types of media, affects stock prices. Studies show that stock returns can be predicted by the "tone" of news articles (Tetlock (2007), among others) and that of social media such as Twitter (Chen, Hwang, and Liu (2013)). Focusing on the media effects in television, Kim and Meschke (2013) find abnormal returns around CEOs' interviews on CNBC. Further, in the context of mergers, Giglio and Shue (2014) show that the absence of news and passage of time following the mergers contain information about the probability of merger completion, which strongly predicts returns. Our findings suggest that, after controlling

for news contents, factors unrelated to news themselves, such as the attractiveness of interviewees on television, matter for stock returns.<sup>10</sup>

The rest of the paper is organized as follows. Section I reviews related literature, develops the hypotheses, and discusses the empirical strategies. Section II describes the data and the construction of the CEO Facial Attractiveness Index. Section III presents the main results. We report robustness tests in Section IV. Section V concludes.

## **I. The Setting**

### **A. Literature Review**

The effects of physical attractiveness have been a central issue of literature in sociology and psychology. Studies along this line aim to address two main issues. First, do more attractive people receive different *perceptions* and *treatments* from others than unattractive people? Second, do more attractive people exhibit different *characteristics* (such as personality traits, skills, and behavioral tendencies) than unattractive people? In answering the first issue, Status Characteristics Theory (Berger et al. (1972)) posits that perceptions and expectations of other people are based on observable characteristics, which reflect status in our society—race, age, sex, and attractiveness. Consistent with this theory, more attractive people are *perceived* to have better abilities (Webster and Driskell (1978)), possess greater social influence (Chaiken (1986)), are better recognized by peers (Kennedy (1990)), receive better treatment in a variety of settings (Hosoda et al. (2003); Langlois et al. (2000)), and even are viewed as less disturbing when they are maladjusted (Cash et al. (1977)).

In response to the second issue, a plethora of experimental studies suggests that more attractive people show more socially desirable personalities (Adams (1977); Langlois et al.

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<sup>10</sup> Dougal, Engelberg, Garcia, and Parsons (2012) find that the style of journalists affect stock returns; Kim and Meschke (2013) show that stock trading after CEO interviews on CNBC is positively related to attractive anchorwomen and more male viewership.

(2000)), are better able to resist peer pressure (Adams (1977)), are happier (Hamermesh and Abrevaya (2013)), more confident (Mobius and Rosenblatt (2006)), more optimistic (Chaiken (1979)), and more intelligent (Kanazawa (2011)).

Based on the summary above, it is not surprising that the literature finds more attractive people attaining better social and economic achievements, including better academic performance (Jackson, Hunter, and Hodge (1995)), higher income (Hamermesh and Biddle (1994)), and more favorable hiring decisions (Gilmore, Beehr, and Love (1986)). Further, in the finance literature, Pareek and Zuckerman (2013) show that more trustworthy hedge fund managers attract greater fund flows and are more likely to survive, but don't possess better skills. Finally, attractive people also receive more advantages in personal finance. For example, Duarte, Siegel, and Young (2012) and Ravina (2012) find that more trustworthy and/or beautiful borrowers are more likely to secure their loans and pay lower interest rates.

Despite the aforementioned evidence on how appearance affects personal finance and investments, few studies in finance investigate the relation between CEO appearance and corporate outcomes. In the seminal work, Graham, Harvey, and Puri (2014) find that more competent looking CEOs receive higher compensation, but don't seem to improve firm performance. In the psychology literature, using a principle component analysis on 50 *Forbes* 500 Companies in 2006, Rule and Ambady (2008) find a positive correlation between CEO appearance and corporate profits.<sup>11</sup> The present research contrasts with these studies by identifying two channels under which CEO appearance affects shareholder value—negotiating and visibility.

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<sup>11</sup> Graham, Harvey, and Puri (2014) point out that the results from Rule and Ambady (2008) are hard to interpret because they do not scale profitability by firm size.

This paper also relates to the literature on the economic effects of individuals' physical attributes, such as height and body mass index. For example, Persico, Postlewaite, and Silverman (2004) find that taller workers receive a wage premium; Addoum, Korniotis, and Kumar (2013) show that individuals who are tall and of normal weight relative to their peers are more likely to participate in financial markets and hold riskier portfolios. The existing literature along this line focuses on the relation between physical attributes and *individual*-level outcomes. In contrast, the present study examines a special group of individuals—CEOs—and finds evidence that an individual's physical attractiveness may also affect *group* welfare, such as shareholder value. Focusing on CEOs provides a good setting for testing the effects of individuals' attractiveness on social economic outcomes, as CEOs have a considerable influence on corporate policies and thus shareholder value.

## **B. Hypothesis Development**

The key question in this article is whether and how more attractive CEOs enhance shareholder value. In what follows, we develop several hypotheses that form the basis for the empirical tests in the subsequent sections of this article.

The first hypothesis relates to the existence of the value enhancing effects of CEO appearance. The study of stock price reactions around a CEO's job announcement date provides a natural starting point to gauge this effect for the following reasons. First, a new CEO creates substantial uncertainty as investors are unsure about his or her ability to change firm value (Pan, Wang, and Weisbach (2013)). Based on the aforementioned review of literature, more attractive people may have, or are perceived to have, certain attributes and abilities that create value. Therefore, investors may infer these attributes and abilities from a new CEO's appearance and make investment decisions accordingly. Further, Barberis, Mukherjee, and Wang (2013) show

that stock returns can be explained by investors' first impressions. If CEO appearance is indeed factored into investor assessments and thus affects shareholder value, we would expect this CEO appearance effect on stock prices to exist around a new CEO's job announcement date. More formally:

*Hypothesis 1* More attractive CEOs are associated with better stock returns around their job announcement dates.

The above hypothesis discusses the existence of the value enhancing effect of CEO appearance, if any. But a natural follow-up question is why CEO attractiveness is associated with better shareholder value. The following two hypotheses aim to answer this question.

First, more attractive individuals appear to be, or are perceived to be, more effective communicators (Chaiken (1986)) and negotiators (Rosenblatt (2008)); they receive a greater surplus in negotiating games (Rosenblatt (2008)) and more fundraising success (Price (2008)), possibly due to the acquisition of social skills developed through more positive attention from parents, caregivers, teachers, and coworkers (Hatfield and Sprecher (1986); Langlois et al. (2000)). Therefore, more attractive CEOs may enhance shareholder value through corporate events in which interpersonal communications and negotiations are extremely important. Mergers and acquisitions (M&As) provide an ideal setting for testing this negotiating channel for the following reasons. First, M&As are considered to be important and even milestone corporate events that significantly affect firm value. Second, large M&As demand CEOs' considerable involvement, which is documented to be an important factor in deciding the success of these deals. We therefore hypothesize that more attractive CEOs create value for shareholders in M&As through the negotiating channel:

*Hypothesis 2 (Negotiating Channel):* More attractive CEOs are associated with better acquirer returns around the announcement of M&A transactions.

The second channel is related to the visibility of CEO attractiveness. The aforementioned Status Characteristics Theory suggests that people are likely to form their perceptions and expectations of an individual based on his or her attractiveness. Indeed, marketing literature shows that more attractive celebrity endorsers are positively associated with consumers' purchase intentions (Kahle and Homer (1985)) and that buyer satisfaction is positively associated with the sellers' attractiveness (Campbell, Graham, Jolibert, and Meissner (1988)). CEOs are often perceived as the embodiment of the firm and are indeed the principal corporate decision makers. Therefore, more attractive CEOs are likely to create better images not only for themselves but also for the firm, thus enhancing shareholder value. A natural testing ground for this visibility channel is the study of stock price reactions to CEOs' appearance in the media. If, indeed, visibility is an important channel for attractive CEOs to create positive images about the firm and thus firm value, we should expect a positive relation between CEO appearance and stock prices on days when the CEO's image appears in the news. Therefore:

*Hypothesis 3 (Visibility Channel):* More attractive CEOs are associated with better stock returns when the CEO's image appears in the news.

### **C. Empirical strategies**

As reviewed in Section I.A., existing findings on the effects of appearance support two views, i.e., more attractive people receive different *perceptions* and *treatments* from others, and more attractive people exhibit different *characteristics* than unattractive people. In the context of this study, both views could explain Hypothesis 1 and 2. For example, it is likely that a more attractive CEO charms negotiators of a target firm and/or exhibit characteristics and abilities to

better negotiate or to better source the deal, resulting in higher acquirer returns. In empirical testing, the second view raises concerns for identification, as other CEO characteristics manifested by appearance, rather than appearance itself, might drive shareholder value.

We provide two empirical strategies to mitigate the endogeneity issue. First, we control for variables that proxy for several CEO characteristics that may otherwise confound the effects of CEO appearance on stock returns; these variables include gender, age, tenure, overconfidence, race, and education. We also control for CEO photo characteristics, including baldness, whether the CEO wears glasses in the photo, whether the CEO smiles in the photo, and the type of the photo (color and/or professional photo). Second, we analyze differential CEO attractiveness effects on stock returns between a treatment sample, which shows a CEO's image, and a control sample without the CEO's image. The media nature of the sample for the *visibility* hypothesis allows us to find a control group to conduct this test. Specifically, we compare the effects of CEO appearance on stock returns around news events with the CEO's image (treatment group) to those surrounding a matched sample of news events for the same CEO, but without his or her image (control group). Comparing these two samples nets out unobservable firm and CEO characteristics that might cause the positive CEO attractiveness-return relation and thus helps mitigate the endogeneity concern.

The above empirical strategies have both strengths and weaknesses. On the plus side, we are able to build a stronger causal link between CEO appearance and shareholder value through the *visibility* channel (Hypothesis 3). On the minus side, we are limited in what we can establish about a causal relation between CEO appearance and shareholder value for Hypotheses 1 and 2 due to the difficulty in obtaining valid counterfactuals in testing these two hypotheses. Therefore, despite our effort to control for observable CEO characteristics, tests for the first two hypotheses

remain open to the possibility that CEO appearance might be correlated with unobservable CEO and/or firm traits (such as genes and Testosterone levels) that drive firm value.

## **II. Measure of CEO Attractiveness and Sample Description**

In this article, we use different samples to test the aforementioned hypotheses on whether and how CEO appearance relates to shareholder value. In what follows, we first discuss how we measure CEO attractiveness in Subsection A. We describe the sample used in each of the different tests in Subsection B, including (1) the main sample of CEOs with Facial Attractiveness Index, and samples used to study CEO attractiveness effects around (2) job announcements, (3) M&A announcements, (4) television news events, and (5) earnings announcement news events. We present descriptive statistics in Subsection C.

### **A. Measuring CEOs' Facial Attractiveness**

The effects of perceived facial attractiveness has been well studied in the psychology literature (Cunningham (1986); Cunningham, Barbee, and Pike (1990); Cunningham et al. (1995)). A large body of this literature measures facial attractiveness based on ratings given by survey respondents. Recently, biostatisticians have started to use facial geometry calculated from standard images to measure facial attractiveness. For example, using neoclassical canons, symmetry, and golden ratios, Schmid, Marx, and Samal (2008) take facial measurements from different landmarks on the face and compute facial attractiveness scores accordingly.<sup>12</sup> In this paper, we calculate the Facial Attractiveness Index (FAI) of CEOs from Anaface.com, which appears to use similar techniques to those used by Schmid, Marx, and Samal (2008). The “Frequently Asked Questions” section on the website provides the following information with respect to how it measures facial geometry:

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<sup>12</sup> We contacted one of the authors in this study for the use of their measure, which was not readily available for distribution.

[Anaface.com's] specific algorithm is proprietary, but we take into account many factors from neoclassical beauty, modern research papers, and our own scientific studies/statistical analysis. Examples include things such as comparing innerocular distance to mouth width and nose width to face height.

Anaface.com requires the user to upload a photograph to the website and place 17 different markers at different facial landmarks on the photograph (see Figure 1 for an example). Anaface.com then scores each face based on its proprietary algorithm. As shown in Figure 1, Anaface.com also provides some guidance on which factors contribute to the overall score: Horizontal symmetry, the ratio of nose to ear length, the ratio of eye width compared to innerocular distance, the ratio of nose width to face width, the ratio of face width to face height, and the ratio of mouth width to nose width. To ensure the validity and reliability of this measure, for each CEO we sample the facial beauty scores obtained from Anaface.com six times, and then take the average of these six scores as our measure of Facial Attractiveness Index.

[Figure 1 goes here]

This geometry-based facial attractiveness measure provides the following advantages: (1) this measure is based on facial geometry and excludes more subjective criteria such as eye color, skin color, and complexion, and (2) this measure is easy to quantify using geometry and mathematics.

This geometry-based measure also has limitations. The precision requirements of the uploaded CEO photos include (1) sufficient resolution, (2) the CEO's face looking directly at the camera, and (3) visibility of each of the facial landmarks required by Anaface.com.<sup>13</sup> We collect photographs for each of the 821 CEOs in our initial sample by conducting image searches on

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<sup>13</sup> For example, one of the landmarks required by Anaface.com is the top of the CEO's ears. This is especially problematic for female CEOs with long hair styles.

Google.com. We are able to carefully select a single image for 667 of the 821 CEOs that satisfy the requirement of Anaface.com's algorithm. Nevertheless, potential measurement errors may still occur, as certain facial traits and photo characteristic may distort the Facial Attractiveness Index. For example, companies that have better M&A opportunities may also be those companies that happen to circulate more professional CEO photos, potentially resulting in a higher Facial Attractiveness Index due to better photo quality. In this case, the positive relation between Facial Attractiveness Index and acquirer returns is spurious due to the non-random measurement error, i.e., the CEO's photo appears to be more formal and professional. To address these issues, in all of the regression analyses, we control for several CEO facial traits and photo characteristics, including whether the CEO smiles in the picture (*Smiling*), whether the CEO is bald (*Bald*), whether the CEO wears glasses (*Glasses*), whether the selected CEO picture is considered a professional photo (*Professional*), and whether the CEO photo is in color (*Color Photo*). In what follows, we describe the samples and data sources in detail.

## **B. Sample**

### **B.1. Main CEO Sample with Facial Attractiveness Index**

The selection of our main sample begins with the intersection of the *Execucomp Annual Compensation* file (*Execucomp*) and the *Compustat North America Fundamentals Annual* file (*Compustat*). Both databases are available from *Wharton Research Data Services*.

Because we rely on Google.com's image searches to compute the Facial Attractiveness Index of CEOs, we restrict the sample period to between 2000 and 2012 and include only those firms that are in the S&P 500 index in *Execucomp*. These two screening procedures ensure that (1) the CEO in question is more likely to be a public figure as he or she is leading a large public company, and (2) images of the CEO are more likely to be available on the Internet following

2000 after the Internet gained general popularity. These screens result in 821 unique firm-CEO combinations. After eliminating observations with missing firm/CEO level data or without CEO photos, the final sample consists of 667 CEOs. We further obtain these CEOs' characteristics from *Execucomp*, including their age, tenure, gender, and starting and ending dates on the job. Finally, companies' stock price information comes from *The Center for Research in Security Prices (CRSP)*, and their accounting information comes from *Compustat*. Appendix A provides definitions of variables used in this paper and their data sources.

## **B.2. Sample on CEO Job Announcements**

To analyze whether more attractive CEOs are associated with better stock returns around their job announcement dates as predicted in Hypothesis 1, we base our sample on the 667 CEOs with FAIs (described in Section II.B.1) and hand-collect data on their job announcement dates from two sources: *LexisNexis* and *Proquest*. From both databases we search all online and print articles about CEO job announcements. In the vast majority of cases we are able to find unique announcement dates; in cases where we find multiple report dates about a CEO's job announcement, we select the earliest report date as the announcement date.<sup>14</sup> We further verify these announcement dates using CEO profiles on *Businessweek.com* and *Forbes.com*. In addition, we exclude interim CEOs, cases in which the CEO's job announcement date is confounded by another major corporate event such as divestitures or bankruptcies, and cases in which the CEO is a founder. The final sample contains 486 job announcements of 485 CEOs

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<sup>14</sup> For each CEO we search Proquest and Lexis Nexis for the earliest announcement of the executive becoming the CEO. For example, if an executive was being "groomed" to become the CEO we use the "grooming" announcement date as our announcement date. This procedure ensures that market was surprised by the announcement of the successor.

(out of the 667 CEOs with a Facial Attractiveness Index) between 1985 and 2012 from 287 firms.<sup>15</sup> This sample is used in Table II.

### **B.3. Sample on Mergers and Acquisitions**

Hypothesis 2 (the Negotiating Hypothesis) posits that more attractive CEOs are associated with better acquirer returns around M&A announcements. To test this hypothesis, we rely on acquirer information provided by the *Securities Data Company (SDC) Mergers and Acquisition Database*. From this database we identify all acquisition announcements that occurred during the tenure of the 667 CEOs in our main sample. We further exclude international acquisitions, acquisitions in which the bidder acquired less than 50% of the target's shares, and transactions for which we cannot compute the ratio of transaction value to the bidder's market value of equity (the variable *Transaction value*). Finally, we exclude acquisitions in which the transaction value is less than \$5 million or the ratio of the transaction value to the bidder's market value is less than 5% to ensure that we capture M&As that are more likely to have a material impact on the firm and substantial CEO involvement. The final sample contains 591 M&As from 1985 to 2012 that are associated with 278 CEOs in 217 firms.<sup>16</sup> This sample is used in Table III.

### **B.4. Sample on CEOs' Television News Dates**

Hypothesis 3 (the Visibility Hypothesis) posits that more attractive CEOs enhance shareholder value through their appearance in the media. To test this hypothesis, we identify television news events when the CEO or the image of the CEO appears on television by

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<sup>15</sup> We find one CEO who switches firms within the sample. Therefore, we have 485 CEOs with 486 job announcement dates. Further, our sample contains CEOs who held their positions during 2000 to 2012, but the job announcements of CEOs date back to as early as 1985.

<sup>16</sup> Our sample contains CEOs who held their positions during 2000 to 2012, but some CEOs in this sample started their tenure as early as 1985. Since we trace all M&A transactions that occur during a CEO's tenure, we include these transactions from 1985.

conducting Internet searches using the video search function from Google.com. We further restrict the search to only the news from CNBC.com. We search for each CEO by name and record the headline and air date of each television news event. The availability of CEO television news events on CNBC.com is limited prior to 2008, so we restrict our sample to appearances that occurred between 2008 and 2012. We additionally require that each television news event air during the CEO's tenure.

To mitigate the endogeneity concerns for analyses on the television news sample, we form a matched sample of non-television news events as the control group, i.e., news articles that contain information on the same group of CEOs, but do not include any images of the CEOs. We further restrict that these non-television news events occur within ten days before or after each CEO television news event date. To identify the non-television news events that involve the same group of CEOs, we search *Proquest's ABI/Inform Complete* by CEO name and company.<sup>17</sup> To ensure that our print news event is not a transcript from television news, we exclude news articles that have the following keywords: "CNBC," "Bloomberg," "CBS," "Fox News," "MSNBC," "CNN," "ABC," "NBC," "TV," "tv," or "television" in the headline, abstract, copyright, or publication title. We further hand-check the remaining print news events to make sure they are not television transcripts. We then carefully review each television and print news event, remove those that are unrelated to the CEO in question, and exclude print news articles with CEO images. To ensure that the effects of the visibility of CEOs' attractiveness are not contaminated, we exclude those television (print) news events that occur within +/- 1 day of the print (television) news event. Our final sample of "clean" television (print) news events contains

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<sup>17</sup> *Proquest's ABI/Inform Complete* is a comprehensive database of news stories including newspapers, magazines, news wires, annual reports, and scholarly reports. We eliminate annual reports and scholarly reports from our searches.

801 (914) observations. The samples of both television and print news events are used in Panel A of Table V.

We also control for the effects of news content on stock returns around both the television and print news events. Specifically, we classify the content of each news event into 12 categories—investment, mergers and acquisitions, earnings, financial policies, personnel, legal, company, product, political, industry, international, and other—and control for these news content dummies in the analyses. Finally, using major sports event days as a source of exogenous variation, we control for potential selection bias that CEOs with higher FAIs are selected into television or print news events. We further discuss this robustness test in Section IV.C.

### **B.5. Sample on CEOs' Earnings Announcement News**

We further use CEOs' earnings announcement news to ensure the robustness of the results on the visibility hypothesis. We first obtain all quarterly earnings announcement dates during the CEO's tenure from I/B/E/S. We then use the image search function from Google.com to identify whether a CEO's image appears in the print earnings announcement news. We are able to identify 122 earnings announcement news with CEOs' images from 2000 to 2013.

We also form a control sample of earnings announcement dates without the CEO's image appearing in the news; the control sample is matched based on the same quarter of the prior year to the treatment sample.<sup>18</sup> Both the samples of earnings announcement news are used in Panel B of Table V.

The advantages of using earnings announcement news are two-fold. First, by examining the differential effects of CEO appearance on the print news with and without CEO image, we address potential concerns that visual correlates of CEO appearance might otherwise drive the

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<sup>18</sup> In unreported results we also match to all other quarterly earnings announcements in the same year unaccompanied by a photo in print news. The results are not materially different.

positive FAI effects on television. Second, by focusing on earnings announcement news, we are able to control for the magnitude of the news using measures that proxy for unexpected earnings.

### **C. Summary Statistics**

Panel A of Table I reports the summary statistics. We present the descriptive statistics of the main sample (discussed in Section II.B.1) in Panel A1 and descriptive statistics of the remaining samples (discussed in Sections II.B.2 to II.B.5) in Panel A2. The average Facial Attractiveness Index (the variable *FAI*) of CEOs in the main sample is 7.24 out of a maximum score of 10. This score does not materially change across samples of CEO job announcements, M&A announcements, television/print news events, and earnings announcement news events, and ranges from 7.15 to 7.26. The average firm size (as proxied by market value of equity) ranges from \$16.2 billion to \$50.8 billion across different samples, reflecting our sample selection criteria that focus on large U.S. public companies.

Certain types of firms or firms in certain industries may tend to select more attractive CEOs, raising concerns that the effects of *FAI* on shareholder value are confounded by other firm characteristics. For example, larger companies or companies with worse performance may have more resources or incentives to hire more attractive CEOs. To mitigate this concern, Panel B of Table I presents regression results of the natural logarithm of *FAI* as the dependent variable on the firm-specific control variables in each of the aforementioned samples. We do not find *FAI* to be consistently correlated with these firm characteristics—firm size, firm value (proxied by the market-to-book ratio), stock returns, and leverage ratios—across different samples. In unreported results, we do not find that the *FAI* measure is correlated with industry either. Finally, in all of the later analyses of the effects of *FAI* on shareholder value, we control for these firm

characteristics to alleviate concerns that differences in size or other firm characteristics may be omitted variables causing the differences in stock returns.

In Panel B (Table I) we also examine the relation between *FAI* and a variety of CEO characteristics, including gender, age, tenure, overconfidence, talent, educational background and race. CEO overconfidence is well documented to affect a variety of corporate outcomes (Malmendier and Tate (2008); Campbell, Gallmeyer, Johnson, Rutherford, and Stanley (2011); Hirshleifer, Low, and Teoh (2012), among others). We thus follow Hirshleifer, Low, and Teoh (2012) and measure CEO overconfidence using *OC67*, an indicator variable that takes the value of one if the CEO has options more than 67% in-the-money at least two times during his or her tenure, and zero otherwise. Further, we follow Falato, Li and Milbourn (2011) and Custódio, Ferreira, and Matos (2013) and proxy for CEO talent using an *Ivy League* dummy—an indicator variable that takes the value of one if the CEO attended an Ivy League school at any academic level. We also include an *MBA* dummy that take the value of one if the CEO earned an MBA degree—to measure the CEO’s educational background. Again, we do not find these CEO characteristics to consistently affect *FAI* across the samples. Finally, in Panel B (Table I), to eliminate potential measurement errors pertaining to *FAI*, we also control for CEO facial traits and photo characteristics discussed in Section II.A—*Smiling*, *Bald*, *Glasses*, *Professional*, and *Color Photo*. Once again, in all later analyses of the effects of *FAI* on shareholder value, we control for these CEO characteristics as well as the facial traits and photo characteristics variables.

[Table I goes here]

### **III. Empirical Results**

In Section I we develop three hypotheses on the impact of CEO attractiveness. Those hypotheses are tested in this section. We analyze the effects of *FAI* on shareholder value around CEO job announcements in Subsection A. We examine the CEO attractiveness effects around M&As in Subsection B. We investigate how *FAI* affects stock returns around news events in Subsection C.

#### **A. CEO Attractiveness and Stock Returns around CEO Job Announcements**

Hypothesis 1 states that firms with more attractive CEOs receive better stock price reactions around their job announcement dates. Table II presents regressions of cumulative abnormal returns surrounding the CEO job announcement dates on the natural logarithm of *FAI* ( $\text{Log}(\text{FAI})$ ). To ensure the robustness of the results, we analyze multiple event windows from event window (-2, 2) to event window (-5, 5). Abnormal returns are calculated using the market-model estimated over 255 trading days while ending 46 trading days before the event date.

*FAI* has a positive and significant impact on stock returns surrounding the announcement dates. Moreover, this effect appears to be economically significant: For the (-5, 5) event window, a ten percent increase in *FAI* results in a 1.17% increase in stock returns. These findings suggest that shareholders perceive more attractive CEOs to be more valuable.

In Table II we further extend the analysis to longer event windows, starting from five days before to 60 days after the announcement dates. *FAI* continues to have a positive and significant impact on stock returns. Further, the economic significance grows even larger with a longer event window: A ten percent increase in *FAI* corresponds to a 1.94% increase in stock returns for the event window (-5, 60).

Finally, to ensure that the positive effects of *FAI* are not confounded by other factors, in Table II we control for a number of firm, CEO, and photo characteristics (which we discuss in

Section II.C) that are documented to affect announcement stock returns. The coefficients on *FAI* remain positive and significant after controlling for these characteristics.

In addition, the nature of the CEO turnover could also affect announcement returns and thus confound the effects of *FAI*. For example, the effects of *FAI* could be confounded by whether (1) the new CEO is selected within or outside the company, (2) the company in question hires a new CEO who used to be an executive from another company (i.e., the new CEO is raided from another company), (3) the former CEO is forced to leave, and (4) there exists a period of power vacuum between the former CEO's departure and the new CEO's announcement (called marathon succession). To control for these potential confounding effects related to CEO turnovers, all models of Table II include four dummy variables, namely, *Internal*, *Raided*, *Forced* and *Marathon*. Once again, controlling for these potential confounding variables does not affect the significance of the *FAI* effects.

[Table II goes here]

## **B. CEO Attractiveness and Acquirer Returns**

The results reported in Section III.A suggest that more attractive CEOs are associated with better stock returns around the job announcement dates, but they do not reveal why more attractive CEOs enhance shareholder value. In this section, we test the Negotiating Hypothesis by examining the effects of CEO attractiveness on acquirer returns in M&As. We report results on the short-term price reaction around mergers announcement dates in Section III.B.1. We further present the long-term stock performance results following the mergers announcements in Section III.B.2.

### **B.1. Short-term Price Reaction**

According to Hypothesis 2 (the Negotiating Hypothesis), if more attractive CEOs receive better treatments in negotiations and/or have better negotiating skills, we would expect more attractive CEOs to negotiate larger surpluses from corporate events (such as M&As) in which their interpersonal communications and negotiations are extremely important. Consequently, we expect acquirers' stock returns surrounding M&A announcements to be positively correlated with *FAI*.

Table III shows the regression results of abnormal acquirer returns surrounding the M&A announcements on Facial Attractiveness Index. As in Table II, we also use multiple event windows to assess the robustness of the results. As before, the abnormal returns are calculated using the market-model estimated over 255 trading days while ending 46 trading days before the event date. Consistent with the Negotiating Hypothesis, we find a positive relation between the acquirers' stock returns and  $\text{Log}(FAI)$  surrounding the M&A announcement dates. Specifically, a ten percent increase in *FAI* creates a 1.17% increase in acquirer returns for the event window from five days before to five days after the merger announcement, and a 1.69% increase when we expand the event window from five days before to 60 days after the announcement.

The positive effects of *FAI* around M&A announcements could be confounded by other firm characteristics variables. For example, Betton, Eckbo, and Thorburn (2008) find that firm size and whether the target firm is publicly listed or not are two important determinants in explaining acquirer returns in M&As. In Table III we control for these variables. Consistent with Betton, Eckbo, and Thorburn (2008), we find that acquirers of public targets have lower announcement returns. More important, controlling for these factors does not affect the significance of the *FAI* effects.

The positive effects of *FAI* could also be confounded by the anticipation that an M&A deal will be announced or not. Specifically, if the probability that the deal will be announced is somehow correlated with *FAI*, this correlation may render unreliable estimates of the positive *FAI* effects on acquirer returns. We address this concern by including *Initial Bid*, a proxy for the anticipation of merger announcements (Cai, Song, and Walkling (2011)). *Initial Bid* is a binary variable that takes the value of 1 if no other bids have occurred in the bidder's industry over the prior 365 days. We find that controlling for initial bids in our regression analysis does not alter the positive *FAI* effects on acquirer returns.

Finally, as discussed in Section I.C, in Tables II and III, the positive and significant relations between *FAI* and stock returns around CEO job appointments and M&A announcements could be driven by unobservable characteristics. Therefore, though we try to address the potential selection bias in Section IV, we don't claim to find a *causal* relation, but a positive correlation between *FAI* and shareholder value in these two tests. We aim to mitigate the endogeneity concerns and build a stronger causal link between CEO attractiveness and shareholder value in Subsection III.C.

[Table III goes here]

## **B.2. Long-term Stock Performance**

The results presented in Table III reveal a positive and significant relation between CEO attractiveness and acquirer returns around M&A announcement, consistent with the Negotiating Hypothesis. These results raise a follow-up question: How persistent are these CEO attractiveness effects following the merger announcements? If more attractive CEOs indeed negotiate better M&A deals, we would expect the CEO attractiveness effects to persist for even longer periods, as existing studies document significant long-term performance impacts of

M&As.<sup>19</sup> To see this, we separate the sample firms into two portfolios—high and low *FAI* portfolios—based on a median split of CEOs' *FAIs*. We then compare the post-merger long-run stock performance of each portfolio.

Table IV reports the results. We calculate two measures of long-run stock returns for each portfolio: buy-and-hold abnormal returns (relative to size and book-to-market benchmark portfolios), and monthly (calendar-time) factor-adjusted abnormal returns. These factors include the three factors introduced by Fama and French (1992) and the momentum factor introduced by Carhart (1997). We find that, following the M&A announcements, acquiring firms in the high *FAI* portfolio outperform those in the low *FAI* portfolio by 4.7% in buy-and-hold abnormal returns in the six-month window, and up to 15.5% in the two-year window. This difference is statistically significant at the 10% level or lower. In terms of calendar-time abnormal returns, the high *FAI* portfolio outperforms the low *FAI* group by 1% in monthly alphas (or 12% in annual abnormal returns) in the six months following the M&A announcements, and by 0.7% (or 8.4% in annual abnormal returns) within twelve months. Overall, the findings seem to suggest that more attractive CEOs create greater long-term values for shareholders through the negotiating channel.

[Table IV goes here]

## **C. CEO Attractiveness and Stock Returns around News Events**

### **C.1. Television News versus Non-television News**

This subsection explores whether more attractive CEOs improve shareholder value through public appearance (Hypothesis 3: The Visibility Hypothesis). Therefore, the first test in this section examines whether CEO attractiveness positively affects the stock returns around

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<sup>19</sup> In unreported tests, we do not find significant long-run effects of CEO attractiveness following their job announcements as well as news events.

television news broadcasts with his or her presence or image. We acknowledge that this test may also be plagued by the fact that *FAI* might be endogenous. For example, the visibility of more attractive CEOs might be correlated with unobservable variables that are also correlated with stock returns. In this case, interpreting the results that the visibility of more attractive CEOs *causes* a higher shareholder value might be misleading. We undertake the following analyses to address this concern.

We first form a matched sample of non-television news events, i.e., news articles that contain information on the same group of CEOs but without any image of these CEOs. By comparing the effects of CEO attractiveness on stock returns surrounding the television news events to those around matched non-television event dates, we aim to net out any potential unobservable firm and CEO characteristics that could otherwise confound the effects of attractiveness. In addition, if the visibility of more attractive CEOs enhances shareholder value through the visibility channel, we would expect *FAI* to have an insignificant effect on stock returns around the matched non-television news days.

Panel A of Table V presents the OLS regressions of abnormal stock returns surrounding the news announcements on the natural logarithm of *FAI* ( $\text{Log}(FAI)$ ) for multiple event windows (Models (1) to (10)). The relation between stock returns and  $\text{Log}(FAI)$  is positive and statistically significant on both the television news day (0,0) and the (-1,1) event window surrounding the television news event (Models (1) and (2)), while the relation between stock returns and  $\text{Log}(FAI)$  on print news days or on the (-1,1) event window around the print news event is insignificant (Models (6) and (7)).<sup>20</sup> In Panel A (Table V) we also examine the effects of CEO attractiveness on television news days using longer event windows. We don't find *FAI* to significantly affect

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<sup>20</sup> We use a Wald test and find statistical significance of the difference between the marginal effect of  $\text{Log}(FAI)$  on television and print news days; however, Wald test fails to show statistical significance of the difference between the marginal effect of  $\text{Log}(FAI)$  in Models (2) and (7) of Table V, respectively.

stock returns on these longer event windows.<sup>21</sup> Overall, the evidence suggests that shareholders respond positively to viewing more attractive CEOs, consistent with more attractive CEOs improving shareholder value through the visibility channel.

Further, in models (1) to (10) we include the same control variables that proxy for firm and CEO characteristics as in the previous analyses—firm size, market-to-book ratio, past stock returns, leverage, CEO gender, age, tenure, overconfidence, talent, educational background, race, and CEO facial traits that appear in the picture. In addition, it is well documented that news content is an important factor determining the effects of media on stock returns. To control for the effects of news content on stock returns around these selected CEO news events, we carefully review the content of each television and print news in our sample. We then classify the content of each news event into 12 categories: investment, mergers and acquisitions, earnings, financial policies, personnel, legal, company, product, political, industry, international, and other. We find that the effects of *FAI* on stock returns around CEO television news days remain positive and significant after controlling for the aforementioned firm and CEO characteristics as well as news contents.

Finally, it is likely that the selection of television news against news articles may invite bias toward certain firm characteristics and/or news content. In Model (11) of Panel A (Table V), we report the results of a probit regression in which the dependent variable is equal to one if the CEO news event appears on television and zero if it appears on news articles. We don't find the same set of explanatory variables to significantly affect the selection of CEO news into television

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<sup>21</sup> To ensure that our facial attractiveness measure does not represent an unobservable, time-invariant factor that may drive the above result, in an unreported analysis we also investigate the effect of  $\text{Log}(FAI)$  on the abnormal returns in the (-1,-1) event window. *FAI* does not significantly affect the stock returns on the date before both the television and print news events, thus greatly reducing the possibility that CEO attractiveness might proxy for some unobservable factor(s).

as opposed to print articles, thus reducing concerns surrounding this selection bias. We provide further robustness tests for this selection bias in Section IV.C.

## **C.2. Earnings Announcement News with and without CEO Image**

In Section III.C.1 we find positive and significant effects of CEO attractiveness on stock returns surrounding the television news event dates, but insignificant results around a matched sample of non-television news dates. Two potential concerns arise with these findings. First, the positive *FAI* effect could be driven by the visual correlates of CEO appearance on television, such as the CEO's body language and the eloquence of his or her speaking. Second, it is likely that the magnitude of news that appear on television is very different from the magnitude of news that appears on the print news media, potentially due to the higher marginal costs of producing and airing news on television. In this case, the positive *FAI* effects on television could simply reflect the magnitude of the news instead of CEO appearance. The comparison of the CEO attractiveness effects between television news and print news could thus be mis-specified.

To address these two concerns, we re-examine the effects of *FAI* on stock returns based on the print news that appears on the earnings announcement dates. Specifically, we compare the difference in stock price reactions between earnings announcement news with CEO image and a control sample of earnings announcement news without the CEO's picture, where the control sample is matched to the treatment sample based on the same quarter in the prior year. By restricting the samples to print news with and without CEO images, we are able to limit the confounding effects of visual correlates that may drive the positive *FAI* effects on stock returns. Further, by focusing only on the earnings announcement dates, we examine the CEO appearance effects based on a unique news type—earnings announcement, and control for the magnitude of the news using standard measures of unexpected earnings, thus addressing any concerns that the

treatment and control samples are very different in both the content and the magnitude of the news. Specifically, we follow Mayew and Venkatachalam (2012) and calculate unexpected earnings ( $UE$ ) as the difference between actual I/B/E/S earnings per share and I/B/E/S analyst summary consensus median earnings per share scaled by price per share two days before the announcement.

Panel B of Table V reports OLS regressions of abnormal stock returns surrounding the earnings announcements on  $Log(FAI)$  for multiple event windows (Models (1) to (10)). The relation between stock returns and  $Log(FAI)$  continues to be positive and statistically significant in the event windows (-1,1), (-2,2), and (-3,3) surrounding the earnings announcement dates with CEO image, while the relation between stock returns and  $Log(FAI)$  on earnings announcement dates without CEO pictures remains insignificant across all event windows.<sup>22</sup> In Panel B (Table V) we also include the same control variables that proxy for firm and CEO characteristics as in the previous analyses and unexpected earnings ( $UE$ ) to control for the magnitude of the earnings news. Overall, the results in Panel B (Table V) further support the positive and significant effects of  $FAI$  on shareholder value through the visibility channel.

Finally, in Model (11) of Panel B (Table V), we also report the results of a probit regression in which the dependent variable takes the value of one if the news event is earnings announcement with a CEO image and zero if the news event is earnings announcement without the CEO's image. Again, we don't find the same set of explanatory variables to significantly affect the selection of CEO news into earnings announcement news with and without CEO pictures, thus reducing concerns surrounding this selection bias.

[Table V goes here]

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<sup>22</sup> As in Panel A of Table V, we use the Wald test and find statistical significance of the difference between the marginal effect of  $Log(FAI)$  on earnings announcement news with and without CEO image in the (-1,1), (-2,2) and (-3,3) event windows.

## **IV. Robustness Checks**

### **A. Validity of the Facial Attractiveness Index**

One potential concern with the main results reported in Section III is whether the Facial Attractiveness Index is a valid measure of CEO attractiveness. Two possibilities follow this concern. First, potential measurement errors in the process of obtaining this measure from Anaface.com and/or CEO photo characteristics could keep us from obtaining reliable estimates. As we mention in Section II.A, we address these issues by (1) multi-sampling the facial geometry scores of each CEO six times and taking the average of the sampled scores as our measure of Facial Attractiveness Index, and (2) controlling for CEO facial traits and photo characteristics that might impact Facial Attractiveness Index in a non-random fashion

Second, even in the absence of measurement errors, there might not be sufficient evidence that Facial Attractiveness Index is a valid measure of CEO attractiveness. For this issue, it is worth noting, however, that a large body of literature in psychology finds geometry-based facial features, including symmetry, averageness, and golden ratios, to be related to attractiveness. Some of the studies along this line of research obtain these geometry-based facial features using computerized programs that appear to be very similar to those used by Anaface.com. For example, both Rhodes and Tremewan (1996) and Schmid, Marx, and Samal (2008) locate 169 and 29 facial landmarks, respectively, to obtain geometry-based facial features; their findings confirm a positive relation between facial geometry and attractiveness.

In this subsection, to further confirm the validity of Facial Attractiveness Index as a measure of CEO attractiveness, we analyze the relation between Facial Attractiveness Index and a survey-based measure of attractiveness. More specifically, we follow Duarte, Siegel, and Young (2012) and conduct surveys of CEO attractiveness through Amazon's Mechanical Turk

(Mturk) service. Mturk is an online crowdsourcing platform through which qualified individual “workers” provide highly standardized tasks such as rating image-related subjects. We upload our sample of CEO photos to Mechanical Turk and ask ten workers (as survey respondents) to rate the attractiveness of each CEO on a scale of a one (the least attractive) to five (the most attractive). We then take the average of the ten scores received from these workers as our survey-based measure of attractiveness. Following Duarte, Siegel, and Young (2012) and Graham, Harvey, and Puri (2014), we repeat the same procedure and ask workers to rate other appearance-based qualities of CEO, such as competence, trustworthiness, and baby-facedness. To ensure the quality of these survey-based measures, we require workers (1) to reside in the U.S. and (2) to receive 99 percent or higher customer satisfaction when performing prior Mturk services. Further, to assess the consistency of the workers’ ratings, we upload pictures of “trial” subjects unrelated to our CEO sample and ask these workers to rate how attractive these trial subjects are. We find that subjects who resemble fashion models and/or movie stars receive higher ratings of attractiveness than those with average looks, adding to the consistency of these survey-based measures.

Panel A of Table VI reports the summary statistics of these survey-based measures. On average, our sample of CEOs receives 2.43 of attractiveness rating (on the scale of 5). In Panel B (Table VI), Facial Attractiveness Index is positively and significantly correlated with the survey-based attractiveness measure in the univariate test (Model (1)). The positive and significant correlation between the two measures remains after we control for factors that may affect Facial Attractiveness Index, such as firm size, CEO gender, age, tenure, race as well as their facial traits and picture characteristics (Model (5)). Overall, the results align both measures of attractiveness and add to the validity of the Facial Attractiveness Index.

One question remains as to the extent to which Facial Attractiveness Index and survey-based attractiveness measures differ, despite that they show positive correlations in Panel B of Table VI. One well discussed possibility in the biology and psychology literature is that survey-based measures, which gauges perceived attractiveness, could be driven by nature and/or cultural factors (nurture), whereas facial geometry-based measures, which are based on biological features, could be primarily driven by nature. In this paper, we take no stance as to what drives the difference between the two measures, nor do we claim which measure is better. Instead, in addition to the difference in sample and research design, studies using different attractiveness measures may yield different findings due to the distinct sources of attractiveness.

Finally, we further examine the correlation between Facial Attractiveness Index and other perceived CEO qualities, including *Competence*, *Trustworthiness*, and *Baby-facedness*. Facial Attractiveness Index does not appear to be correlated with these three measures in the univariate test (Models (2) to (4), Panel B of Table VI). After adding the same controls that may affect Facial Attractiveness Index as we did in Model (5), *Competence* appears to be positively correlated with Facial Attractiveness Index at the ten percent significance level (Models (6), Panel B of Table VI). An unreported test suggests that survey-based *Attractiveness* is correlated with *Competence* (the correlation coefficient is 37%). Therefore, the positive and (marginally) significant coefficients of *Competence* on Facial Attractiveness Index could be driven by this correlation. We thus obtain residualized *Competence*, *Trustworthiness* and *Baby-facedness*, which are not correlated with *Attractiveness*. In Models (9) to (11) (Panel B, Table VI); the residualized measures (*Res(Competence)*, *Res(Trustworthiness)*, and *Res(Baby-facedness)*, respectively) do not significantly explain Facial Attractiveness Index, whereas *Attractiveness* continues to have a positive and significant correlation with Facial Attractiveness Index.

[Table VI goes here]

## **B. Survey-based Attractiveness and Shareholder Value**

In Section IV.A we show a positive and significant correlation between Facial Attractiveness Index and the survey-based attractiveness measure of CEOs, providing evidence of the validity of the Facial Attractiveness Index. In this subsection, we further examine whether more attractive CEOs are associated with better shareholder value, where attractiveness is measured based on the survey-based measure. We propose a predicted survey-based attractiveness, i.e., the predicted value of the survey-based CEO attractiveness measure (as described in Section IV.A) based on observable facial traits of the CEO that appear on the photos, including *FAI*, *Smiling*, *Bald*, *Glasses*, *Professional*, *Color Photo*, and *Nonwhite*. This *Predicted Survey-based Attractiveness* measures respondents' subjective ratings based on observable facial traits of a CEO and excludes other factors that might affect the respondents' ratings. It is worth noting that, by construction, this measure still originates from the respondents' ratings and is thus different from the Facial Attractiveness Index in nature.

Table VII presents the results. In all the regressions, we include the predicted value of the Survey-based *Attractiveness* and the same set of control variables as in the previous analyses. For conciseness, we only report the coefficients and *t-statistics* of the predicted value of the survey-based attractiveness. We find that this *Predicted Survey-based Attractiveness* still has a positive and significant impact on stock returns surrounding CEO job announcements (Panel A), mergers announcement (Panel B), television news events (Panel C), and earnings announcement events with CEO photos (Panel E), consistent with the previous findings using Facial Attractiveness Index as the measure of CEO attractiveness. We further find that *Predicted Survey-based Attractiveness* has no significant impact on stock returns surrounding print news

events (Panel D) and earnings announcement events without CEO photos (Panel F). Overall, these results add to the robustness of the findings that more attractive CEOs are associated with better shareholder value.

### C. Tests for Selection Bias in the Absence of Control Samples

Sections III.A and III.B provide evidence that CEO appearance is positively related to stock returns in the context of CEO job and M&A announcements. However, these events are firms' voluntary choices and lack observable control samples. Therefore, it is likely that these events are initiated when firms possess information not fully known to markets, and that the unobservable factors that determine the decisions to replace a CEO and/or undertake an M&A are also correlated with *FAI*. Consequently, the OLS model used in the prior analysis to estimate the relation between announcement returns and *FAI* may result in a potential selection bias (Prabhala (1997)). To address this concern, we follow Eckbo, Maksimovic, and Williams (1990) and estimate the following conditional model using maximum likelihood estimation (MLE) for both the CEO job announcement and M&A announcement tests we report in Tables II and III:

$$E[CAR_i | CAR_i = x_i\gamma_i + \eta_i > 0] = x_i\gamma_i + \omega \frac{\phi(x_i\gamma_i/\omega)}{\theta(x_i\gamma_i/\omega)} \quad (1)$$

where  $CAR_i$  is the cumulative abnormal return;  $x_i$  is the vector of regressors for manager  $i$ , including *FAI*;  $\gamma_i$  is the vector of coefficients;  $\eta_i$  is assumed to be normally distributed with variance  $\omega^2$ ; and  $\phi$  and  $\theta$  represent the normal probability density function and cumulative density function, respectively.

Intuitively, (1) accounts for private information related to the decision to replace a CEO and the acquisition announcement. In an unreported analysis (available upon request), we find that, after addressing this selection bias in the absence of control events, the coefficients of *FAI*

estimated from (1) remain positive and significant; further, both the economic and statistical significance do not materially change. These results further support our main findings.

#### **D. Tests Controlling for Selection Bias in the News Events**

In our test of the Visibility Hypothesis (reported in Section III.C), we control for potential endogeneity issues due to confounding unobservable firm and CEO characteristics that may be driving our results. Specifically, in Section III.C.1, we compare the difference in the effects of *FAI* on stock returns between CEOs' television news events versus a matched sample of print news events. Doing so enables us to net out any potential firm and CEO unobservable characteristics.<sup>23</sup> However, this approach does not control for the potential selection bias that *FAI* is correlated with unobservable factors that determine whether a CEO is selected into television or print news events.

To mitigate this potential selection bias, we re-estimate the effects of *FAI* on stock returns during television and print news events using Heckman's (1979) procedure. We estimate outcome and selection models by maximum likelihood estimation (MLE).<sup>24</sup> In the selection equation, we consider major sports event days as a source of exogenous variation.<sup>25</sup> We hypothesize that CEOs are more likely to appear on CNBC in the days leading up to major sports events than appear in print news events. This is because, for the majority of print news outlets, the business news sections are more likely to compete for space and prominence with sports news sections during major sports events. In contrast, business television stations such as CNBC are less likely to divert to sports news as NBC has its own sports channels. Further, it is unlikely

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<sup>23</sup> In this test, we assume that these unobservable firm and CEO characteristics remain time invariant within ten days surrounding these events.

<sup>24</sup> Using the two-step procedure does not affect the results in a meaningful way.

<sup>25</sup> We include the following major sports events: National Football League's (NFL) playoffs, Super Bowl, National Basketball Association's (NBA) playoffs and finals, National Hockey League's (NHL) playoffs and finals, American League Championship Series (ALCS), National League Championship Series (NLCS), World Series (WS), the 2008 and 2012 Summer Olympics, and the 2010 Winter Olympics. If an event occurs on a non-trading day, we assign it to the first trading day prior to the event.

that an individual firm's stock returns are driven by contemporaneous sports news events. Consistent with this conjecture, in unreported results (available upon request), we find indeed that the CEO is less likely to be selected into print news days on the major sports events days.

[Table VIII goes here]

Table VIII reports the results for the estimated outcome equation of abnormal returns on television and print news days on *FAI* and other controls. More important, the coefficient on *FAI* remains significant and positive at the 1% level on CEO television news days, after controlling for the selection bias using the major sports events as a source of the exogenous shock. Further, the coefficient on *FAI* remains insignificant on print news days. We further perform a test on the difference between the coefficients on *FAI* in the television and in print news events, and find that the difference is significant at the 1% level. Overall the results further support a positive effect of *FAI* on shareholder value through the visibility channel.<sup>26</sup>

## V. Conclusion

In this paper, we investigate whether and how CEO appearance matters for shareholder value. We calculate the Facial Attractiveness Index of CEOs based on their facial geometry. We first document the existence of the CEO appearance effects on shareholder value by showing that more attractive CEOs are associated with better stock returns around their job announcement dates.

We further hypothesize and test two channels through which more attractive CEOs enhance shareholder value: negotiating and visibility. To test the negotiating channel, we examine the stock price reactions around M&A announcement dates and find a positive and

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<sup>26</sup> We only report the results on the television and print news days (event window (0,0)) rather than event window (-1,1) and longer event windows because, in Panel A of Table V, a Wald test fails to show statistical significance of the difference between the marginal effect of  $\text{Log}(FAI)$  in these event windows (Models (2) and (6), Panel A of Table V).

significant CEO attractiveness effect on acquirer returns. This positive relation persists beyond one year following the mergers announcement dates. We test the visibility channel by first investigating the stock price reaction around CEO television news event dates and find that more attractive CEOs are associated with better stock returns surrounding CEO-related television news days. However, we find no significant relation between CEO attractiveness and stock returns around a matched sample of non-television news events. In a second test, we continue to find the positive and significant CEO attractiveness effects on stock returns surrounding earnings announcement dates with CEO image, but insignificant effects around earnings announcement dates without the CEO's image. These findings mitigate the endogeneity concerns when interpreting our findings. Overall, our results suggest that more attractive CEOs create value for shareholders through better negotiating prowess and visibility.

The findings of this paper shed light on how the appearance of corporate insiders affects corporate decisions and outcomes. It is well established in the asset pricing literature that investors' decisions are likely based on initial, possibly unconscious, impressions and perceptions. Along this line, several studies find evidence of how a "first impression effect" of appearance impacts personal financing. However, less is known about how the first impression effect of appearance of corporate insiders would affect the perceptions and thus decisions of corporate stakeholders. More research is called for to further assess these possibilities.

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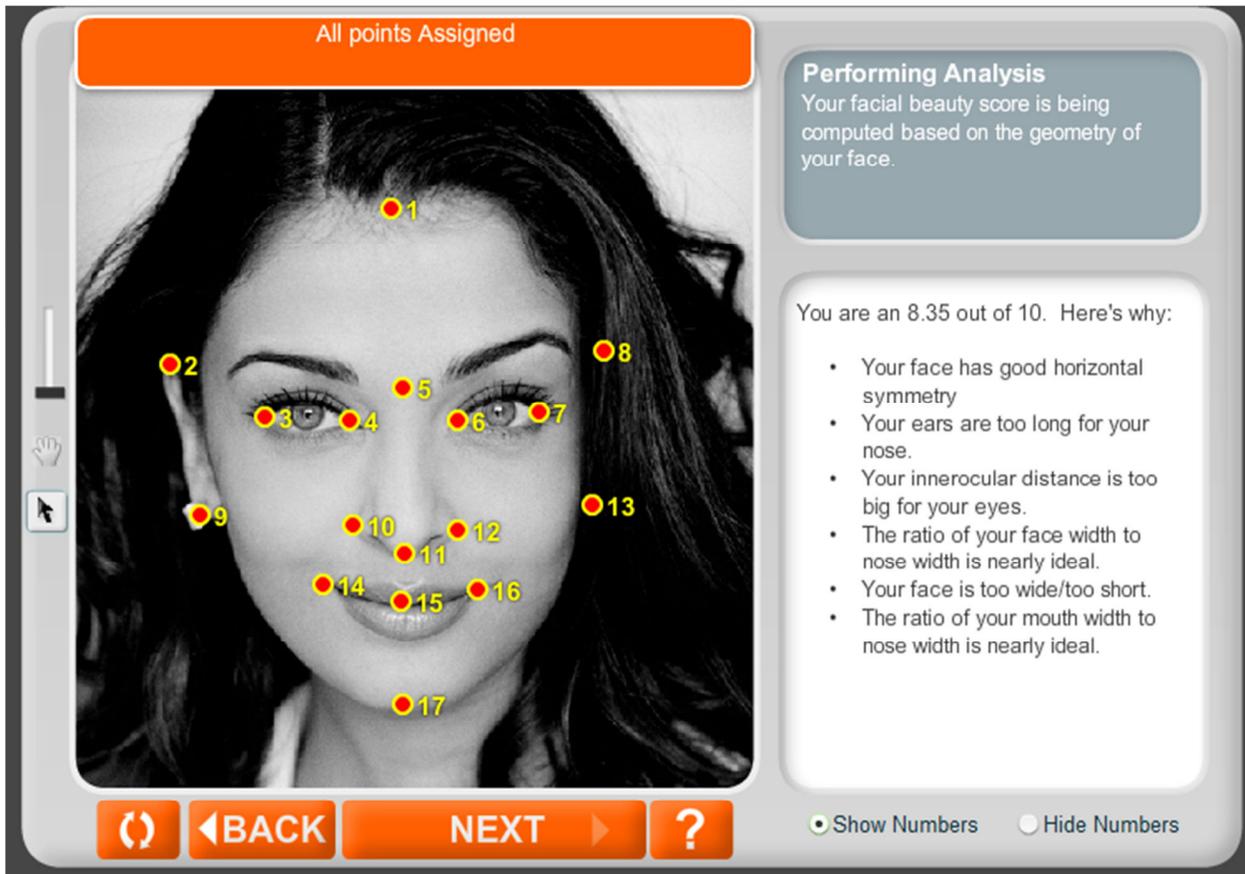
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**Figure 1**

This figure presents a screen shot of Anaface.com. The photograph is the default image provided by the website.



### Appendix: Variable Definitions

In this appendix we report the main variables used in the paper. The first column presents the variable name. The second column provides a brief description of the variable, along with any *Compustat*, *Execucomp*, or *CRSP* data items used to construct the variable. The final column reports the data source(s) used to compute the variable. *SDC* in the final column represents the *Securities Data Corporation*.

Variable	Description	Source
<i>FAI</i>	Facial attractiveness index; the measure of a CEO's facial geometry.	Anaface.com
<i>Size</i>	Market value of equity (in millions; <i>CRSP</i> Variable: ABS(PRC*SHROUT)/1000).	<i>CRSP</i>
<i>Leverage</i>	The ratio of total liabilities ( <i>Compustat</i> Variable: LT) to total assets ( <i>Compustat</i> Variable: AT).	<i>Compustat</i>
<i>MTB</i>	Market value of equity to book value of equity ( <i>Compustat</i> Variable: CSHO*PRCC_F/(AT-LT)).	<i>Compustat</i>
<i>Stock Return</i>	The firm's annual stock return measured over the previous year.	<i>CRSP</i>
<i>Female</i>	A binary variable equal to one if the CEO is female ( <i>Execucomp</i> Variable: GENDER).	<i>Execucomp</i>
<i>Age</i>	The age of the CEO in years ( <i>Execucomp</i> Variable: AGE).	<i>Execucomp</i>
<i>Tenure</i>	The CEOs tenure at a given company, measured in months.	<i>Execucomp</i> <i>Proquest</i> <i>LexisNexis</i>
<i>OC67</i>	CEO overconfidence measure by Hirshleifer, Low, and Teoh (2012); a dummy variable =1 if the CEO has options more than 67% in-the-money at least two times during his or her tenure, and zero otherwise.	<i>Execucomp</i>
<i>Ivy</i>	An indicator variable =1 if the CEO attended Ivy league schools, i.e., Brown University, Columbia University, Cornell University, Dartmouth College, Harvard University, Princeton University, University of Pennsylvania, or Yale University.	<i>Proquest</i> <i>LexisNexis</i>
<i>MBA</i>	An indicator variable if the CEO earned a Masters of Business Administration degree.	<i>Proquest</i> <i>LexisNexis</i>
<i>Attractiveness</i>	Perceived attractiveness, measured as the average ranking of 10 survey respondents.	<i>Amazon Mturk</i>

(Continued)

## Appendix: Variable Definitions Continued

Variable	Description	Source
<i>Competence</i>	Perceived Competence, measured as the average ranking of 10 survey respondents.	<i>Amazon Mturk</i>
<i>Trustworthiness</i>	Perceived trustworthiness, measured as the average ranking of 10 survey respondents.	<i>Amazon Mturk</i>
<i>Baby-facedness</i>	Perceived baby-facedness, measured as the average ranking of 10 survey respondents.	<i>Amazon Mturk</i>
<i>Smiling</i>	An indicator variable =1 if the CEO smiles in the photo.	<i>Google Image search</i>
<i>Bald</i>	Perceived baldness of the CEO measured from the average ranking of 10 survey respondents.	<i>Amazon Mturk</i>
<i>Glasses</i>	An indicator variable =1 if the CEO is wearing glasses in the photo.	<i>Google Image search</i>
<i>Professional</i>	An indicator variable =1 if the photo appears to be of professional quality.	<i>Google Image search</i>
<i>Color Photo</i>	An indicator variable =1 if the photo is in color.	<i>Google Image search</i>
<i>Nonwhite</i>	An indicator variable =1 if the CEO's race is not Caucasian.	<i>Google Image search</i>
<i>UE</i>	Unexpected Earnings; Absolute Value of (Median EPS estimate - Actual EPS)/Stock price two days before the EPS announcement date.	<i>I/B/E/S</i>
<i>Volatility</i>	Annual stock return volatility.	<i>CRSP</i>
<i>Forced</i>	Indicator variable =1 if the CEO's predecessor was forced out (e.g., the news article states that the CEO was forced out or the CEO was under 60 years old and did not take another position either inside or outside the company).	<i>Proquest LexisNexis</i>
<i>Internal</i>	Indicator variable =1 if the CEO was an employee of the company for at least one year prior to the appointment as CEO.	<i>Proquest LexisNexis</i>

(Continued)

## Appendix: Variable Definitions Continued

Variable	Description	Source
<i>Raided</i>	Indicator variable =1 if the CEO was an employee of another public company within one year of appointment as CEO.	<i>Proquest LexisNexis</i>
<i>Marathon</i>	Indicator variable =1 if the CEO's predecessor's retirement date was announced before the current CEO's job announcement date or the CEO's predecessor was an interim CEO.	<i>Proquest LexisNexis</i>
<i>Transaction value</i>	The ratio of the M&A transaction value to the bidder's market value of equity.	<i>SDC CRSP</i>
<i>Public</i>	An indicator variable =1 if the target has a ticker on <i>SDC</i> or the target is in the <i>Compustat</i> file in the year prior to acquisition.	<i>SDC Compustat</i>
<i>Initial bid</i>	An indicator variable =1 if there have been no other bids in the bidder's industry for the past year.	<i>SDC</i>
<i>News Type dummies</i>	Indicator variables that account for the type of news story for each television and print news event. We classify the type of news into the following categories: Investment news, M&As news, earnings news, financial policy news, personnel news, legal news, company news, product news, political news, industry news, international news, and other news.	<i>Proquest LexisNexis</i>

**Table I. Summary statistics**

Table I presents summary statistics for each sample used in the paper. Panel A provides summary statistics of the main sample of the 667 CEO observations (Panel A1) as well as samples we use in testing each hypothesis (Panel A2). Panel B presents OLS regressions of *FAI* on all firm, CEO, and event-specific characteristics for each sample. *t*-statistics are reported in the parentheses; \*\*\*, \*\*, and \* signify statistical significance at the 1%, 5%, and 10% levels, respectively. The control variables are described in the Appendix.

**Panel A. Descriptive Statistics****Panel A1. Descriptive Statistics of the Main Sample**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Sample Period	2000 to 2012							
	N	Mean	SD	Min	Q1	Median	Q3	Max
<i>FAI</i>	667	7.242	0.697	4.452	6.800	7.343	7.743	8.630
<i>Log(FAI)</i>	667	1.975	0.101	1.493	1.612	1.994	2.046	2.155
<i>Size (\$Mil)</i>	667	26854	57431	231	4409	8491	21025	626550
<i>MTB</i>	667	4.651	10.808	-56.953	1.969	3.239	5.300	231.438
<i>Stock return</i>	667	0.198	0.602	-0.972	-0.117	0.104	0.402	7.952
<i>Leverage</i>	667	0.554	0.203	0.043	0.427	0.561	0.674	1.581
<i>Female</i>	667	0.025	0.158	0	0	0	0	1
<i>Age</i>	667	53	7	36	49	53	58	77
<i>Tenure (Months)</i>	667	108	80	1	55	89	138	621
<i>OC67</i>	667	0.046	0.211	0	0	0	0	1
<i>Ivy</i>	667	0.225	0.418	0	0	0	0	1
<i>MBA</i>	667	0.355	0.479	0	0	0	1	1
<i>Smiling</i>	667	0.717	0.451	0	0	1	1	1
<i>Bald</i>	667	2.328	1.077	1	1.4	2	3	5
<i>Glasses</i>	667	0.261	0.439	0	0	0	1	1
<i>Professional</i>	667	0.922	0.268	0	1	1	1	1
<i>Color Photo</i>	667	0.930	0.256	0	1	1	1	1
<i>Nonwhite</i>	667	0.040	0.197	0	0	0	0	1
<i>N(Firms)</i>	359							
<i>N(CEOs)</i>	667							

**Table I. Summary statistics (Cont.)**  
**Panel A2. Descriptive Statistics of Other Samples**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	CEO Job Announcement		M&A		TV		Print		Earnings Announcement w/ picture		Earnings Announcement w/o picture	
Sample Period	1985 to 2012		1985 to 2012		2008 to 2012				2000 to 2013			
	Mean	Median	Mean	Median	Mean	Median	Mean	Median	Mean	Median	Mean	Median
<i>FAI</i>	7.261	7.364	7.208	7.302	7.151	7.003	7.242	7.420	7.249	7.397	7.217	7.383
<i>Log(FAI)</i>	1.980	1.995	1.973	1.989	1.973	1.956	1.986	2.014	1.986	1.994	1.979	1.991
<i>Size(\$Mil)</i>	25519	8490	16241	5209	42023	18583	50080	24603	49681	21694	50847	22191
<i>MTB</i>	4.706	3.035	4.014	2.582	2.293	2.272	3.595	2.920	5.381	2.771	3.616	3.071
<i>Stock return</i>	0.116	0.065	0.317	0.220	0.166	0.124	0.135	0.099	0.095	0.074	0.200	0.120
<i>Leverage</i>	0.562	0.565	0.541	0.552	0.569	0.571	0.577	0.597	0.609	0.614	0.608	0.612
<i>Female</i>	0.033	0.000	0.019	0.000	0.037	0.000	0.066	0.000	0.057	0.000	0.066	0.000
<i>Age</i>	51	51	53	53	56	54	54	54	57	56	56	55
<i>Tenure (Months)</i>	90	82	175	148	148	113	117	100	129	104	139	113
<i>CAR(-2,2)</i>	0.007	0.002	-0.003	-0.002	0.002	0.000	0.000	0.001	-0.001	0.004	0.003	0.002
<i>OC67</i>	0.037	0.000	0.093	0.000	0.086	0.000	0.075	0.000	0.057	0.000	0.066	0.000
<i>Ivy</i>	0.212	0.000	0.247	0.000	0.286	0.000	0.322	0.000	0.262	0.000	0.264	0.000
<i>MBA</i>	0.387	0.000	0.338	0.000	0.288	0.000	0.341	0.000	0.361	0.000	0.349	0.000
<i>Smiling</i>	0.718	1.000	0.750	1.000	0.824	1.000	0.700	1.000	0.648	1.000	0.613	1.000
<i>Bald</i>	2.306	2.000	2.274	2.000	2.153	1.800	2.105	2.000	2.189	2.000	2.217	2.000
<i>Glasses</i>	0.270	0.000	0.315	0.000	0.326	0.000	0.211	0.000	0.189	0.000	0.189	0.000
<i>Professional</i>	0.934	1.000	0.902	1.000	0.941	1.000	0.923	1.000	0.902	1.000	0.906	1.000
<i>Color Photo</i>	0.928	1.000	0.897	1.000	0.966	1.000	0.928	1.000	0.992	1.000	0.991	1.000
<i>Nonwhite</i>	0.033	0.000	0.042	0.000	0.030	0.000	0.078	0.000	0.057	0.000	0.047	0.000
<i>Forced</i>	0.084	0.000										
<i>Internal</i>	0.770	1.000										

(Continued)

Table I. Panel A2. Continued

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	CEO Job Announcement		M&A		TV		Print		Earnings Announcement w/ picture		Earnings Announcement w/o picture	
Sample Period	1985 to 2012		1985 to 2012		2008 to 2012				2000 to 2013			
	Mean	Median	Mean	Median	Mean	Median	Mean	Median	Mean	Median	Mean	Median
<i>Raided</i>	0.212	0.000										
<i>Marathon</i>	0.117	0.000										
<i>Transaction value</i>			0.331	0.126								
<i>Public</i>			0.501	1.000								
<i>Initial bid</i>			0.832	1.000								
<i>News Contents:</i>												
<i>Investment</i>					0.019	0.000	0.049	0.000				
<i>M&amp;A</i>					0.030	0.000	0.074	0.000				
<i>Earnings</i>					0.177	0.000	0.173	0.000				
<i>Financial Policy</i>					0.010	0.000	0.021	0.000				
<i>Personnel</i>					0.034	0.000	0.088	0.000				
<i>Legal</i>					0.021	0.000	0.020	0.000				
<i>Company News</i>					0.181	0.000	0.159	0.000				
<i>Product</i>					0.055	0.000	0.117	0.000				
<i>Political</i>					0.080	0.000	0.034	0.000				
<i>Industry</i>					0.222	0.000	0.024	0.000				
<i>International</i>					0.057	0.000	0.030	0.000				
<i>Other</i>					0.105	0.000	0.211	0.000				
<i>UE</i>									0.003	0.001	0.002	0.001
<i>Volatility</i>									0.303	0.264	0.323	0.299
N	486		591		801		914		122		106	
N(Firms)	287		217		168		121		77		72	
N(CEOS)	485		278		177		124		79		72	

**Table I. Summary statistics (Cont.)**  
**Panel B. Determinants of FAI**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Full Sample	CEO Job Announcement	M&A	TV	Print	Earnings w/ picture	Earnings w/o picture
Dep. Variable	<i>Log(FAI)</i>						
<i>Log(Size)</i>	0.002 (0.602)	-0.001 (-0.137)	0.006* (1.944)	0.004 (0.631)	-0.008 (-0.804)	0.007 (0.615)	0.017 (0.973)
<i>MTB</i>	0.000 (0.083)	0.001 (1.053)	-0.001 (-0.748)	0.000 (0.795)	0.001*** (2.932)	0.001 (1.117)	0.002 (0.425)
<i>Stock return</i>	-0.002 (-0.208)	-0.012 (-1.079)	0.009 (1.356)	0.007 (1.013)	-0.014** (-2.024)	0.008 (0.604)	0.006 (0.254)
<i>Leverage</i>	-0.020 (-0.875)	-0.004 (-0.167)	0.007 (0.266)	-0.139*** (-2.892)	-0.174*** (-3.788)	-0.070 (-1.613)	-0.069 (-1.029)
<i>Female</i>	0.007 (0.267)	0.007 (0.219)	-0.009 (-0.264)	0.070* (1.757)	0.077** (2.008)	0.058 (0.897)	0.096 (1.102)
<i>Age</i>	-0.001 (-0.845)	-0.001 (-1.218)	-0.002** (-2.406)	0.002 (1.432)	0.004* (1.778)	0.005* (1.704)	0.006* (1.755)
<i>Tenure</i>	-0.000 (-0.625)	-0.000 (-0.637)	0.000 (0.485)	-0.000*** (-2.605)	-0.000** (-2.053)	-0.000 (-0.211)	0.000 (0.086)
<i>OC67</i>	-0.022 (-1.156)	0.009 (0.454)	-0.027* (-1.731)	0.050* (1.705)	0.040 (1.465)	0.032 (0.649)	0.027 (0.332)
<i>Ivy</i>	0.005 (0.471)	0.005 (0.439)	0.016 (1.422)	0.044*** (2.701)	0.016 (0.762)	0.015 (0.477)	0.018 (0.432)
<i>MBA</i>	0.008 (0.938)	0.005 (0.501)	0.022** (2.156)	0.013 (0.862)	0.066*** (4.047)	-0.004 (-0.164)	-0.003 (-0.095)
<i>Smiling</i>	-0.021*** (-2.610)	-0.037*** (-3.492)	-0.048*** (-5.029)	0.008 (0.471)	-0.036 (-1.547)	0.008 (0.313)	-0.003 (-0.103)

(Continued)

Table I. Panel B. Continued

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Full Sample	CEO Job Announcement	M&A	TV	Print	Earnings w/ picture	Earnings w/o picture
Dep. Variable	<i>Log(FAI)</i>						
<i>Bald</i>	-0.001 (-0.157)	-0.000 (-0.080)	0.015*** (3.166)	0.014* (1.823)	0.021* (1.914)	0.026 (1.632)	0.028 (1.423)
<i>Glasses</i>	0.003 (0.287)	0.009 (0.850)	-0.021** (-2.224)	-0.050*** (-2.990)	-0.032 (-1.349)	0.007 (0.215)	0.001 (0.032)
<i>Professional</i>	-0.029** (-2.165)	-0.019 (-0.979)	-0.040*** (-2.730)	0.062** (2.143)	0.032 (1.047)	-0.017 (-0.463)	0.008 (0.134)
<i>Color Photo</i>	-0.001 (-0.034)	-0.003 (-0.206)	0.004 (0.327)	0.001 (0.027)	-0.024 (-0.582)	-0.165*** (-4.054)	-0.194*** (-4.263)
<i>Nonwhite</i>	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<i>Internal</i>		0.051 (1.376)					
<i>Raided</i>		0.043 (1.177)					
<i>Forced</i>		-0.008 (-0.398)					
<i>Marathon</i>		-0.014 (-0.950)					
<i>Transaction value</i>			-0.001 (-0.272)				
<i>Public</i>			0.020** (2.177)				
<i>Initial bid</i>			0.007 (0.546)				

(Continued)

Table I. Panel B. Continued

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Full Sample	CEO Job Announcement	M&A	TV	Print	Earnings w/ picture	Earnings w/o picture
Dep. Variable	<i>Log(FAI)</i>						
<i>News type dummies</i>				Yes	Yes		
<i>UE</i>						-0.849 (-0.931)	2.187 (0.987)
<i>Volatility</i>						-0.006 (-0.075)	0.045 (0.533)
<i>Intercept</i>	2.047*** (40.200)	2.044*** (26.699)	2.011*** (41.112)	1.827*** (17.005)	1.973*** (16.875)	1.776*** (9.177)	1.595*** (5.588)
Industry controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes
SE clustered(Firm)	Yes	Yes	No	No	No	No	No
SE clustered(CEO)	No	No	Yes	Yes	Yes	Yes	Yes
N	667	486	591	801	914	122	106
R-squared	0.143	0.212	0.358	0.628	0.723	0.715	0.727

**Table II. CEO Appearance and Stock Returns around Job Announcements**

Table II presents regression analysis of cumulative abnormal returns (relative to the market-model) surrounding CEO job announcements on the natural logarithm of *FAI* (*Log (FAI)*). Various event windows (-day(s), +day(s)) are reported. Industry is defined as 2-digit SIC codes. Standard errors are robust to heteroskedasticity and within firm correlation (clustered standard errors); *t-statistics* are reported in the parentheses; \*\*\*, \*\*, and \* signify statistical significance at the 1%, 5%, and 10% levels, respectively. The control variables are described in the Appendix.

Dependent Variable: Cumulative Abnormal Returns (CAR)

	(1)	(2)	(3)	(4)	(5)
	Event Window (Days)				
	(-2,2)	(-3,3)	(-5,5)	(-5,30)	(-5,60)
<i>Log(FAI)</i>	0.071* (1.901)	0.090** (2.288)	0.117*** (2.685)	0.136** (2.090)	0.194** (2.325)
<i>Log(Size)</i>	0.000 (0.058)	0.000 (0.043)	-0.003 (-0.766)	-0.009 (-1.503)	-0.018** (-2.407)
<i>MTB</i>	-0.000 (-0.280)	-0.000 (-1.382)	-0.000 (-1.241)	-0.001** (-2.051)	-0.001 (-1.247)
<i>Stock return</i>	-0.020** (-2.029)	-0.023** (-2.059)	-0.032** (-2.383)	-0.097*** (-3.895)	-0.144*** (-4.795)
<i>Leverage</i>	-0.011 (-0.728)	-0.008 (-0.458)	0.002 (0.083)	0.033 (0.903)	0.118* (1.791)
<i>Female</i>	-0.001 (-0.083)	-0.005 (-0.256)	-0.001 (-0.066)	0.035 (1.261)	0.004 (0.078)
<i>Age</i>	0.000 (0.229)	0.000 (0.560)	0.000 (0.453)	-0.001 (-0.713)	-0.002 (-1.381)
<i>Tenure</i>	0.000 (1.409)	0.000 (1.171)	0.000 (0.722)	-0.000 (-0.098)	-0.000 (-0.745)
<i>OC67</i>	-0.006 (-0.379)	-0.008 (-0.452)	-0.012 (-0.643)	0.066*** (2.651)	0.108*** (2.966)

(Continued)

Table II. Continued

	(1)	(2)	(3)	(4)	(5)
	Event Window (Days)				
	(-2,2)	(-3,3)	(-5,5)	(-5,30)	(-5,60)
<i>Ivy</i>	0.001 (0.125)	0.000 (0.039)	0.006 (0.646)	-0.018 (-1.242)	-0.013 (-0.587)
<i>MBA</i>	-0.000 (-0.019)	-0.002 (-0.192)	-0.006 (-0.699)	-0.000 (-0.009)	-0.002 (-0.089)
<i>Internal</i>	-0.037* (-1.651)	-0.049* (-1.903)	-0.058** (-2.356)	-0.086*** (-2.756)	-0.038 (-0.940)
<i>Raided</i>	-0.015 (-0.607)	-0.023 (-0.841)	-0.026 (-0.977)	-0.045 (-1.393)	0.004 (0.082)
<i>Forced</i>	-0.009 (-0.750)	-0.014 (-1.167)	-0.013 (-0.807)	-0.022 (-0.985)	0.005 (0.144)
<i>Marathon</i>	0.007 (0.569)	-0.002 (-0.164)	0.004 (0.301)	-0.022 (-0.899)	-0.017 (-0.539)
<i>Smiling</i>	-0.002 (-0.328)	-0.001 (-0.103)	0.003 (0.377)	-0.000 (-0.006)	0.003 (0.119)
<i>Bald</i>	-0.004 (-1.413)	-0.003 (-0.937)	-0.003 (-0.814)	-0.002 (-0.413)	-0.004 (-0.456)
<i>Glasses</i>	-0.012* (-1.918)	-0.012 (-1.637)	-0.010 (-1.180)	-0.023 (-1.646)	-0.023 (-1.146)
<i>Professional</i>	0.015 (1.085)	0.014 (0.895)	0.020 (1.088)	0.039 (1.365)	0.014 (0.279)
<i>Color Photo</i>	-0.012 (-0.622)	-0.014 (-0.592)	-0.011 (-0.420)	-0.056 (-1.506)	-0.053 (-1.250)

(Continued)

Table II. Continued

	(1)	(2)	(3)	(4)	(5)
	Event Window (Days)				
	(-2,2)	(-3,3)	(-5,5)	(-5,30)	(-5,60)
<i>Nonwhite</i>	0.008 (0.315)	0.001 (0.040)	-0.000 (-0.011)	0.028 (0.662)	0.012 (0.230)
<i>Intercept</i>	-0.100 (-1.172)	-0.140 (-1.630)	-0.172* (-1.733)	-0.025 (-0.164)	-0.034 (-0.144)
Industry controls	Yes	Yes	Yes	Yes	Yes
SE clustered(Firm)	Yes	Yes	Yes	Yes	Yes
N	486	486	486	486	486
R-squared	0.169	0.162	0.187	0.287	0.312

**Table III. CEO Appearance and Acquirer Returns around Mergers Announcements**

Table III presents regression analysis of cumulative abnormal returns (relative to the market-model) surrounding the mergers announcements on the natural logarithm of *FAI* (*Log (FAI)*). Various event windows (-day(s), +day(s)) are reported. Industry is defined as 2-digit SIC codes. Standard errors are robust to heteroskedasticity and within firm correlation (clustered standard errors); *t-statistics* are reported in the parentheses; \*\*\*, \*\*, and \* signify statistical significance at the 1%, 5%, and 10% levels, respectively. The control variables are described in the Appendix.

Dependent Variable: Cumulative Abnormal Returns (CAR)

	(1)	(2)	(3)	(4)	(5)
	Event Window (Days)				
	(-2,2)	(-3,3)	(-5,5)	(-5,30)	(-5,60)
<i>Log(FAI)</i>	0.093*** (2.731)	0.077** (2.169)	0.117*** (3.130)	0.107** (2.105)	0.169*** (2.594)
<i>Log(Size)</i>	-0.008*** (-2.962)	-0.008*** (-2.999)	-0.011*** (-3.270)	-0.018*** (-3.320)	-0.013 (-1.495)
<i>MTB</i>	0.000 (0.067)	0.000 (0.227)	0.000 (0.343)	0.000 (0.167)	0.000 (0.220)
<i>Stock return</i>	0.005 (0.524)	-0.003 (-0.382)	-0.012* (-1.809)	-0.053*** (-3.662)	-0.074*** (-4.076)
<i>Leverage</i>	0.018 (0.916)	-0.006 (-0.260)	-0.008 (-0.330)	0.022 (0.678)	0.067 (1.157)
<i>Female</i>	-0.008 (-0.273)	-0.000 (-0.007)	-0.001 (-0.019)	0.021 (0.706)	0.020 (0.579)
<i>Age</i>	0.000 (0.465)	0.000 (0.432)	0.000 (0.497)	0.001 (0.840)	0.001 (0.847)
<i>Tenure</i>	-0.000 (-1.580)	-0.000* (-1.886)	-0.000* (-1.795)	-0.000*** (-2.732)	-0.000* (-1.964)
<i>OC67</i>	0.023** (2.195)	0.022** (1.976)	0.013 (1.125)	-0.006 (-0.316)	-0.000 (-0.012)

(Continued)

Table III. Continued

	(1)	(2)	(3)	(4)	(5)
	Event Window (Days)				
	(-2,2)	(-3,3)	(-5,5)	(-5,30)	(-5,60)
<i>Ivy</i>	0.003 (0.374)	0.004 (0.434)	0.005 (0.496)	-0.002 (-0.111)	-0.006 (-0.271)
<i>MBA</i>	0.008 (1.058)	0.013 (1.448)	0.013 (1.436)	0.029** (2.219)	0.027 (1.630)
<i>Transaction value</i>	-0.000 (-0.079)	-0.000 (-0.178)	-0.001 (-0.332)	-0.004 (-1.172)	0.000 (0.079)
<i>Public</i>	-0.033*** (-4.396)	-0.035*** (-4.227)	-0.035*** (-3.975)	-0.040*** (-2.860)	-0.039** (-2.113)
<i>Initial bid</i>	-0.012 (-1.173)	-0.012 (-1.046)	-0.019 (-1.642)	-0.045* (-1.752)	-0.085** (-2.203)
<i>Smiling</i>	-0.004 (-0.542)	-0.011 (-1.179)	-0.011 (-1.126)	-0.030** (-2.107)	-0.053*** (-2.907)
<i>Bald</i>	-0.001 (-0.238)	-0.003 (-0.844)	-0.001 (-0.252)	0.004 (0.679)	0.007 (0.898)
<i>Glasses</i>	-0.004 (-0.536)	-0.002 (-0.273)	-0.006 (-0.721)	-0.019 (-1.537)	-0.015 (-0.970)
<i>Professional</i>	0.013 (1.123)	0.002 (0.218)	0.008 (0.693)	0.015 (0.674)	0.020 (0.577)
<i>Color Photo</i>	-0.004 (-0.354)	-0.008 (-0.781)	0.006 (0.437)	0.004 (0.226)	-0.011 (-0.435)
<i>Nonwhite</i>	-0.021 (-1.088)	-0.040** (-2.545)	-0.032** (-2.169)	-0.039* (-1.775)	-0.021 (-0.577)

(Continued)

Table III. Continued

	(1)	(2)	(3)	(4)	(5)
	Event Window (Days)				
	(-2,2)	(-3,3)	(-5,5)	(-5,30)	(-5,60)
<i>Intercept</i>	-0.115 (-1.415)	-0.036 (-0.421)	-0.110 (-1.201)	-0.025 (-0.189)	-0.183 (-1.006)
Industry controls	Yes	Yes	Yes	Yes	Yes
SE clustered (CEO)	Yes	Yes	Yes	Yes	Yes
N	591	591	591	591	591
R-squared	0.170	0.167	0.190	0.258	0.223

**Table IV: CEO Appearance and Long-run Acquirer Returns**

Table IV reports the relation between *FAI* and long-run acquirer returns following M&A announcements. We report the average long-run buy and hold abnormal returns and calendar-time portfolio returns for various event windows following M&A announcements. Events are sorted into high and low *FAI* based on the median split; \*\*\*, \*\*, and \* signify statistical significance at the 1%, 5%, and 10% levels, respectively.

(1)	(2)	(3)	(4)	(5)
		Buy and Hold Portfolios		Calendar-Time Portfolios
<i>Months</i>	<i>FAI</i>	<i>N</i>	<i>BAHR</i>	<i>Alpha</i>
6	<i>High</i>	284	0.039	0.009
6	<i>Low</i>	290	-0.008	-0.001
	<i>p(High - Low)</i>		0.098*	0.036**
12	<i>High</i>	284	0.119	0.008
12	<i>Low</i>	290	0.033	0.001
	<i>p(High - Low)</i>		0.079*	0.047**
18	<i>High</i>	284	0.199	0.006
18	<i>Low</i>	290	0.032	0.004
	<i>p(High - Low)</i>		0.012**	0.494
24	<i>High</i>	284	0.194	0.005
24	<i>Low</i>	290	0.039	0.004
	<i>p(High - Low)</i>		0.055*	0.754

**Table V: CEO Appearance and Stock Price Reactions around News events**

Panel A of Table V reports regression analysis of cumulative abnormal returns (CARs) (relative to the market-model) surrounding television news events and print news events on the natural logarithm of *FAI* ( $\text{Log}(FAI)$ ). In Models (1) to (5), we report CARs around the television news events for event windows (0,0) to (-5,5). In Models (6) to (10), we report CARs around the print news events for event windows (0,0) to (-5,5). In Model (11), the dependent variable is a dummy variable equal to 1 if the event appears on television and zero if the event appears on print news. We search television news stories through Google.com's video search function. We further restrict the news results to appear only on CNBC.com. We search print news using the *Proquest Complete* database; the matched sample of print news stories is restricted to +/- 10 days surrounding television news events. Television (print) news events that are within +/- 1 day of print (television) news events are removed. Print news stories that contain photographs are also removed. Finally, the sample is restricted to news events between 2008 and 2012. Standard errors are robust to heteroskedasticity and within CEO correlation (clustered standard errors); *t-statistics* are reported in the parentheses; \*\*\*, \*\*, and \* signify statistical significance at the 1%, 5%, and 10% levels, respectively. The control variables are described in the Appendix.

**Panel A. Television News Dates versus Non-television News Dates**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
	TV					Print					
	Event Window (Days)					Event Window (Days)					=1 if TV
Dep. Var: CAR	(0,0)	(-1,1)	(-2,2)	(-3,3)	(-5,5)	(0,0)	(-1,1)	(-2,2)	(-3,3)	(-5,5)	
<i>Log(FAI)</i>	0.048*** (3.248)	0.038** (2.008)	0.027 (1.167)	0.029 (1.183)	0.024 (0.816)	0.000 (0.004)	-0.010 (-0.255)	-0.021 (-0.507)	-0.011 (-0.272)	0.019 (0.344)	-0.752 (-0.416)
<i>Log(Size)</i>	-0.002* (-1.945)	-0.003 (-1.513)	-0.006** (-2.522)	-0.008*** (-2.765)	-0.011*** (-3.021)	-0.003** (-2.223)	-0.009*** (-2.967)	-0.013*** (-3.083)	-0.015*** (-2.875)	-0.013** (-2.033)	-0.126 (-0.772)
<i>MTB</i>	0.000 (1.311)	0.000 (0.572)	0.000*** (4.357)	0.000*** (4.062)	0.000*** (3.578)	0.000* (1.881)	-0.000 (-0.402)	-0.000 (-0.609)	-0.000 (-0.427)	-0.001 (-0.664)	-0.001 (-0.347)
<i>Stock return</i>	-0.001 (-0.818)	-0.005* (-1.732)	-0.016*** (-5.534)	-0.017*** (-2.738)	-0.030*** (-3.975)	0.001 (0.619)	-0.002 (-0.463)	-0.004 (-0.652)	-0.003 (-0.333)	-0.014 (-1.111)	0.128 (0.817)

(Continued)

Table V. Panel A. Continued

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
	TV					Print					
	Event Window (Days)					Event Window (Days)					=1 if TV
Dep. Var: CAR	(0,0)	(-1,1)	(-2,2)	(-3,3)	(-5,5)	(0,0)	(-1,1)	(-2,2)	(-3,3)	(-5,5)	
<i>Leverage</i>	0.019** (2.580)	0.014 (1.018)	0.014 (1.284)	0.001 (0.110)	-0.013 (-0.787)	0.004 (0.430)	0.030 (1.437)	0.034* (1.682)	0.034 (1.615)	0.033 (0.842)	-0.474 (-0.410)
<i>Female</i>	-0.007** (-1.989)	0.002 (0.259)	-0.004 (-0.309)	-0.004 (-0.270)	-0.000 (-0.023)	-0.004 (-0.565)	0.003 (0.166)	-0.003 (-0.158)	-0.007 (-0.307)	-0.017 (-0.709)	0.498 (0.572)
<i>Age</i>	-0.000 (-0.353)	-0.000 (-0.911)	-0.000 (-0.563)	-0.000 (-0.560)	-0.000 (-0.630)	0.000 (0.864)	0.000 (0.662)	0.000 (0.321)	0.000 (0.045)	-0.000 (-0.330)	0.023 (0.697)
<i>Tenure</i>	0.000 (1.406)	0.000* (1.895)	0.000 (1.091)	0.000 (1.058)	0.000 (0.713)	0.000 (0.980)	-0.000 (-0.057)	-0.000 (-0.892)	-0.000 (-0.163)	0.000 (0.143)	0.001 (0.452)
<i>OC67</i>	-0.021** (-2.579)	-0.007 (-0.770)	0.000 (0.007)	-0.007 (-0.809)	-0.023 (-1.092)	-0.002 (-0.647)	-0.032*** (-2.757)	-0.012 (-0.814)	-0.026 (-1.357)	-0.025 (-0.566)	-0.366 (-0.675)
<i>Ivy</i>	-0.001 (-0.290)	0.001 (0.245)	0.001 (0.187)	0.001 (0.115)	-0.002 (-0.340)	-0.002 (-0.569)	0.001 (0.167)	-0.003 (-0.348)	0.002 (0.146)	0.002 (0.146)	0.166 (0.436)
<i>MBA</i>	0.002 (0.909)	0.002 (0.463)	0.005 (1.122)	0.004 (0.830)	0.009 (1.415)	0.002 (0.856)	0.015* (1.964)	0.008 (0.948)	0.004 (0.423)	0.002 (0.189)	-0.193 (-0.512)
<i>Smiling</i>	0.001 (0.522)	0.001 (0.331)	0.002 (0.451)	0.001 (0.254)	0.001 (0.194)	0.002 (0.806)	-0.002 (-0.290)	0.008 (1.019)	0.014 (1.435)	0.017 (1.468)	0.612* (1.803)

(Continued)

Table V. Panel A. Continued

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
	TV					Print					
	Event Window (Days)					Event Window (Days)					=1 if TV
Dep. Var: CAR	(0,0)	(-1,1)	(-2,2)	(-3,3)	(-5,5)	(0,0)	(-1,1)	(-2,2)	(-3,3)	(-5,5)	
<i>Bald</i>	-0.000 (-0.304)	-0.001 (-0.289)	-0.002 (-0.687)	-0.003 (-1.102)	-0.003 (-0.979)	0.001 (1.268)	0.007** (2.153)	0.007** (2.026)	0.006 (1.498)	0.004 (0.825)	0.093 (0.591)
<i>Glasses</i>	-0.000 (-0.156)	-0.000 (-0.122)	0.002 (0.486)	0.003 (0.641)	0.000 (0.019)	0.001 (0.290)	-0.007 (-0.911)	-0.002 (-0.172)	-0.000 (-0.042)	0.003 (0.392)	0.415 (1.039)
<i>Professional</i>	-0.004 (-0.941)	0.009 (1.004)	0.014 (1.195)	0.018* (1.808)	0.008 (0.744)	0.005 (0.763)	0.011 (0.797)	0.006 (0.377)	0.002 (0.144)	0.002 (0.088)	0.321 (0.355)
<i>Color Photo</i>	0.004 (0.915)	0.009* (1.741)	0.019** (2.565)	0.024** (2.580)	0.033* (1.959)	-0.002 (-0.436)	0.005 (0.400)	-0.006 (-0.468)	-0.010 (-0.619)	-0.007 (-0.370)	0.603 (1.111)
<i>Nonwhite</i>	0.002 (0.417)	0.003 (0.288)	-0.002 (-0.253)	0.013 (1.275)	0.010 (0.913)	0.007 (1.314)	-0.009 (-0.524)	-0.005 (-0.261)	-0.006 (-0.379)	0.002 (0.148)	-1.033 (-1.410)
<i>News type dummies</i>	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<i>Intercept</i>	-0.081*** (-2.781)	-0.070 (-1.404)	-0.030 (-0.603)	-0.014 (-0.232)	0.036 (0.499)	0.007 (0.234)	0.049 (0.625)	0.114 (1.370)	0.128 (1.366)	0.063 (0.470)	1.992 (0.399)
Industry controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
SE clustered(CEO)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	801	801	801	801	801	914	914	914	914	914	1715
R-squared	0.123	0.109	0.157	0.147	0.136	0.068	0.124	0.141	0.142	0.151	
Pseudo R-squared											0.182

**Table V: CEO Appearance and Stock Price Reactions around News events (Cont.)**

Panel B of Table V reports regression analysis of cumulative abnormal returns (CARs) (relative to the market-model) surrounding earnings announcement news (with and without CEO image) on the natural logarithm of *FAI* ( $\text{Log}(FAI)$ ). In Models (1) to (5), we report CARs around the earnings announcement news with CEO image for event windows (0,0) to (-5,5). In Models (6) to (10), we report CARs around earnings announcement news without the CEO's image for event windows (0,0) to (-5,5). In Model (11), the dependent variable is a dummy variable equal to 1 if the event is the earnings announcement news with CEO image and zero if the event is the earnings announcement news without the CEO's image. We search CEO image through Google.com's image search function. The control sample of earnings announcement dates without the CEO's image is matched based on the same quarter of the prior year to the treatment sample. Standard errors are robust to heteroskedasticity and within CEO correlation (clustered standard errors); *t-statistics* are reported in the parentheses; \*\*\*, \*\*, and \* signify statistical significance at the 1%, 5%, and 10% levels, respectively. The control variables are described in the Appendix.

**Panel B. Earnings Announcement News with and without CEO Image**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
	Earnings news with Photo					Earnings news without Photo					
	Event Window (Days)					Event Window (Days)					=1 w/photo
Dep. Var: CAR	(0,0)	(-1,1)	(-2,2)	(-3,3)	(-5,5)	(0,0)	(-1,1)	(-2,2)	(-3,3)	(-5,5)	
<i>Log(FAI)</i>	0.049 (0.583)	0.200** (2.015)	0.225* (1.928)	0.228** (2.102)	0.196 (1.638)	0.000 (0.005)	0.003 (0.042)	-0.023 (-0.263)	0.009 (0.095)	0.013 (0.111)	0.974 (0.642)
<i>Log(Size)</i>	0.003 (0.366)	0.000 (0.044)	-0.002 (-0.146)	-0.004 (-0.303)	-0.001 (-0.050)	-0.001 (-0.085)	-0.005 (-0.639)	-0.007 (-0.781)	-0.005 (-0.585)	-0.003 (-0.279)	0.004 (0.027)
<i>MTB</i>	0.000 (0.729)	-0.000 (-0.005)	-0.000 (-0.146)	0.000 (0.021)	0.000 (0.106)	0.004 (1.105)	0.006 (1.419)	0.002 (0.375)	-0.000 (-0.008)	-0.003 (-0.577)	0.032* (1.677)
<i>Stock return</i>	0.009 (0.909)	-0.002 (-0.117)	-0.011 (-0.630)	-0.011 (-0.675)	-0.008 (-0.408)	-0.004 (-0.446)	-0.010 (-0.724)	-0.020 (-1.360)	-0.014 (-0.887)	-0.022 (-1.288)	-0.602 (-1.133)

(Continued)

Table V. Panel B. Continued

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
	Earnings news with Photo					Earnings news without Photo					
	Event Window (Days)					Event Window (Days)					=1 w/photo
Dep. Var: CAR	(0,0)	(-1,1)	(-2,2)	(-3,3)	(-5,5)	(0,0)	(-1,1)	(-2,2)	(-3,3)	(-5,5)	
<i>Leverage</i>	-0.046 (-0.613)	-0.031 (-0.324)	-0.023 (-0.221)	-0.012 (-0.120)	-0.012 (-0.112)	0.003 (0.096)	-0.021 (-0.670)	-0.023 (-0.792)	-0.016 (-0.541)	0.036 (0.925)	0.180 (0.216)
<i>Female</i>	-0.023 (-0.618)	-0.059 (-1.101)	-0.062 (-0.972)	-0.048 (-0.785)	-0.061 (-0.914)	-0.042 (-1.418)	-0.056 (-1.491)	-0.035 (-0.976)	-0.039 (-1.018)	-0.026 (-0.625)	-0.737 (-0.922)
<i>Age</i>	-0.001 (-0.452)	-0.002 (-1.008)	-0.002 (-0.999)	-0.002 (-1.140)	-0.001 (-0.647)	0.003 (1.657)	0.002 (1.339)	0.001 (0.771)	0.001 (0.505)	0.002 (1.208)	0.016 (0.677)
<i>Tenure</i>	0.000 (0.120)	-0.000 (-0.194)	0.000 (0.113)	0.000 (0.012)	-0.000 (-0.267)	0.000 (0.134)	-0.000 (-0.536)	-0.000 (-0.880)	-0.000 (-1.017)	-0.000 (-1.483)	-0.002 (-1.088)
<i>OC67</i>	0.036 (1.100)	0.004 (0.071)	-0.002 (-0.033)	0.015 (0.206)	-0.004 (-0.049)	-0.019 (-0.515)	0.003 (0.050)	0.060 (1.451)	0.102** (2.461)	0.074* (1.753)	0.616 (0.830)
<i>Ivy</i>	0.039 (1.485)	0.034 (1.031)	0.024 (0.617)	0.015 (0.398)	0.027 (0.671)	-0.001 (-0.036)	0.001 (0.047)	-0.001 (-0.036)	-0.002 (-0.070)	-0.022 (-0.901)	-0.037 (-0.103)
<i>MBA</i>	-0.005 (-0.358)	-0.019 (-1.243)	-0.017 (-0.923)	-0.021 (-1.128)	-0.022 (-1.097)	-0.013 (-0.783)	-0.013 (-0.741)	-0.002 (-0.141)	-0.000 (-0.022)	-0.015 (-0.685)	-0.088 (-0.270)
<i>UE</i>	-0.567 (-0.704)	-1.485 (-1.047)	-1.587 (-1.173)	-1.863 (-1.488)	-2.625 (-1.613)	-1.074 (-0.626)	1.648 (0.593)	-0.567 (-0.188)	-4.388 (-1.308)	-0.630 (-0.159)	47.515 (1.052)

(Continued)

Table V. Panel B. Continued

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
	Earnings news with Photo					Earnings news without Photo					
	Event Window (Days)					Event Window (Days)					=1 w/photo
Dep. Var: CAR	(0,0)	(-1,1)	(-2,2)	(-3,3)	(-5,5)	(0,0)	(-1,1)	(-2,2)	(-3,3)	(-5,5)	
<i>Volatility</i>	0.024 (0.388)	0.044 (0.598)	0.042 (0.510)	0.001 (0.010)	0.032 (0.277)	0.025 (0.675)	0.055 (1.108)	0.059 (0.834)	0.072 (0.870)	0.085 (0.998)	-1.959 (-1.641)
<i>Smiling</i>	0.030* (1.940)	0.027 (1.386)	0.029 (1.402)	0.032 (1.607)	0.039* (1.670)	0.024 (1.231)	0.002 (0.066)	-0.007 (-0.311)	-0.011 (-0.501)	-0.011 (-0.367)	0.257 (0.829)
<i>Bald</i>	-0.003 (-0.325)	-0.010 (-1.053)	-0.017 (-1.515)	-0.010 (-0.960)	-0.012 (-1.057)	-0.013* (-1.739)	-0.016* (-1.924)	-0.011 (-1.231)	-0.014 (-1.413)	-0.001 (-0.057)	-0.075 (-0.478)
<i>Glasses</i>	0.020 (1.418)	0.017 (0.977)	0.025 (1.227)	0.016 (0.799)	0.009 (0.435)	-0.022 (-1.109)	-0.019 (-1.060)	-0.007 (-0.483)	0.001 (0.099)	-0.003 (-0.178)	-0.042 (-0.116)
<i>Professional</i>	0.052** (2.490)	0.007 (0.200)	0.013 (0.318)	0.001 (0.020)	0.013 (0.291)	0.010 (0.376)	-0.005 (-0.132)	0.012 (0.351)	0.025 (0.717)	-0.016 (-0.475)	-0.131 (-0.248)
<i>Color Photo</i>	0.024 (0.697)	0.072 (1.598)	0.103** (2.095)	0.087* (1.921)	0.122** (2.472)	0.010 (0.419)	0.013 (0.372)	-0.007 (-0.207)	-0.093** (-2.378)	-0.108*** (-2.773)	0.534 (0.381)
<i>Nonwhite</i>	0.001 (0.034)	0.030 (0.713)	0.037 (0.716)	0.042 (0.813)	0.037 (0.634)	-0.024 (-0.934)	-0.021 (-0.655)	-0.042 (-1.270)	-0.037 (-0.952)	-0.000 (-0.012)	0.468 (0.629)

(Continued)

Table V. Panel B. Continued

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
	Earnings news with Photo					Earnings news without Photo					
	Event Window (Days)					Event Window (Days)					=1 w/photo
Dep. Var: CAR	(0,0)	(-1,1)	(-2,2)	(-3,3)	(-5,5)	(0,0)	(-1,1)	(-2,2)	(-3,3)	(-5,5)	
<i>Intercept</i>	-0.173 (-0.786)	-0.358 (-1.213)	-0.397 (-1.149)	-0.355 (-1.065)	-0.420 (-1.179)	-0.161 (-0.928)	-0.058 (-0.287)	0.078 (0.379)	0.107 (0.522)	-0.002 (-0.007)	-2.466 (-0.608)
Industry controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
SE clustered(CEO)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	122	122	122	122	122	106	106	106	106	106	228
R-squared	0.45	0.314	0.33	0.31	0.305	0.502	0.474	0.418	0.479	0.538	
Pseudo R-squared											0.039

**Table VI: Facial Attractiveness Index and Survey-based Measures**

Table VI reports the relation between *FAI* and Survey-based measures of CEO appearance. Panel A reports the descriptive statistics of the survey-based measures. Panel B reports regression analysis of *FAI* on survey-based measures, including *Attractiveness*, *Competence*, *Trustworthiness*, and *Baby-facedness*, as well as additional controls. *Res(Competence)* is the residualized value of *Competence* (after removing its correlation with *Attractiveness*). *Res(Trustworthiness)* is the residualized value of *Trustworthiness* (after removing its correlation with *Attractiveness*). *Res(Baby-facedness)* is the residualized value of *Baby-facedness* (after removing its correlation with *Attractiveness*). \*\*\*, \*\*, and \* signify statistical significance at the 1%, 5%, and 10% levels, respectively. All other control variables are described in the Appendix.

**Panel A: Descriptive Statistics: Survey-based Measures**

	(1)	(2)	(3)	(4)	(5)
	Mean	SD	Min	Median	Max
<i>Attractiveness</i>	2.433	0.618	1.100	2.400	4.300
<i>Competence</i>	3.515	0.425	2.100	3.500	4.800
<i>Trustworthiness</i>	3.156	0.511	1.500	3.200	4.500
<i>Baby-facedness</i>	2.241	0.553	1.000	2.200	3.900
N	667				
N(Firms)	359				
N(CEOs)	667				

**Table VI: Facial Attractiveness Index and Survey-based Measures (Cont.)**

**Panel B: Relation between Facial Attractiveness Index and Survey-based Measures**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
<i>Attractiveness</i>	0.096** (2.347)				0.116** (2.261)				0.108** (2.102)	0.116** (2.256)	0.121** (2.364)
<i>Competence</i>		0.082 (1.261)				0.132* (1.855)					
<i>Trustworthiness</i>			-0.021 (-0.414)				0.048 (0.800)				
<i>Baby-facedness</i>				0.051 (1.093)				0.079 (1.635)			
<i>Res(Competence)</i>									0.083 (1.067)		
<i>Res(Trustworthiness)</i>										0.003 (0.043)	
<i>Res(Baby-facedness)</i>											0.058 (1.165)
<i>Log(Size)</i>					0.016 (0.744)	0.013 (0.593)	0.016 (0.776)	0.016 (0.755)	0.013 (0.622)	0.016 (0.741)	0.015 (0.718)

(Continued)

Table VI. Panel B. Continued

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
<i>Age</i>					-0.002 (-0.434)	-0.005 (-1.013)	-0.005 (-1.042)	-0.003 (-0.654)	-0.003 (-0.531)	-0.002 (-0.435)	-0.001 (-0.190)
<i>Tenure</i>					-0.000 (-0.619)	-0.000 (-0.685)	-0.000 (-0.686)	-0.000 (-0.642)	-0.000 (-0.625)	-0.000 (-0.618)	-0.000 (-0.577)
<i>Smiling</i>					-0.151*** (-2.771)	-0.158*** (-2.808)	-0.159** (-2.533)	-0.151*** (-2.729)	-0.159*** (-2.865)	-0.152** (-2.445)	-0.158*** (-2.880)
<i>Bald</i>					0.013 (0.486)	-0.008 (-0.307)	-0.005 (-0.179)	-0.006 (-0.217)	0.008 (0.291)	0.013 (0.486)	0.013 (0.484)
<i>Glasses</i>					0.059 (0.883)	0.012 (0.181)	0.017 (0.263)	0.028 (0.439)	0.042 (0.592)	0.059 (0.821)	0.058 (0.868)
<i>Professional</i>					-0.218** (-2.286)	-0.240** (-2.481)	-0.213** (-2.216)	-0.223** (-2.357)	-0.238** (-2.450)	-0.218** (-2.280)	-0.232** (-2.437)
<i>Color Photo</i>					-0.013 (-0.125)	-0.011 (-0.105)	-0.004 (-0.036)	0.004 (0.043)	-0.015 (-0.150)	-0.013 (-0.124)	-0.007 (-0.065)
<i>Nonwhite</i>					-0.401*** (-2.758)	-0.428*** (-2.962)	-0.421*** (-2.950)	-0.431*** (-3.019)	-0.410*** (-2.787)	-0.401*** (-2.747)	-0.409*** (-2.812)

(Continued)

Table VI. Panel B. Continued

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
<i>Intercept</i>	7.017*** (69.269)	6.964*** (30.170)	7.316*** (45.233)	7.137*** (67.229)	7.260*** (17.604)	7.329*** (18.713)	7.575*** (19.896)	7.454*** (20.360)	7.372*** (17.309)	7.261*** (17.428)	7.197*** (17.522)
Industry controls	Yes										
SE clustered(Firm)	Yes										
N	667	667	667	667	667	667	667	667	667	667	667
R-squared	0.007	0.003	0.000	0.002	0.145	0.144	0.139	0.141	0.147	0.145	0.146

**Table VII: Survey-based Attractiveness and Shareholder Value**

Table VII reports regression analysis of cumulative abnormal returns (CARs) (relative to the market-model) surrounding various corporate events on the predicted value of the survey-based *Attractiveness* and all other controls included in the previous analyses. For conciseness, we only report the coefficients and *t*-statistics of *Predicted Survey-based Attractiveness*. Standard errors are robust to heteroskedasticity and within CEO correlation (clustered standard errors); *t*-statistics are reported in the parentheses; \*\*\*, \*\*, and \* signify statistical significance at the 1%, 5%, and 10% levels, respectively. The control variables are described in the Appendix.

**Panel A. CEO Job Announcement**

	(1)	(2)	(3)	(4)	(5)
Dep. Var: CAR	(-2,2)	(-3,3)	(-5,5)	(-5,30)	(-5,60)
<i>Predicted Survey-based Attractiveness</i>	0.110* (1.839)	0.145** (2.281)	0.186*** (2.642)	0.223** (2.023)	0.309** (2.183)
N	486	486	486	486	486
R-squared	0.169	0.162	0.187	0.287	0.312

**Panel B. Mergers Announcements**

	(-2,2)	(-3,3)	(-5,5)	(-5,30)	(-5,60)
Dep. Var: CAR	(-2,2)	(-3,3)	(-5,5)	(-5,30)	(-5,60)
<i>Predicted Survey-based Attractiveness</i>	0.222*** (2.594)	0.186** (2.000)	0.275*** (2.862)	0.247* (1.822)	0.412** (2.378)
N	591	591	591	591	591
R-squared	0.171	0.168	0.191	0.258	0.223

**Panel C. Television News Events**

	(0,0)	(-1,1)	(-2,2)	(-3,3)	(-5,5)
Dep. Var: CAR	(0,0)	(-1,1)	(-2,2)	(-3,3)	(-5,5)
<i>Predicted Survey-based Attractiveness</i>	0.041*** (3.225)	0.036** (2.212)	0.03 (1.488)	0.03 (1.415)	0.026 (1.027)
N	801	801	801	801	801
R-squared	0.122	0.109	0.157	0.147	0.136

**Panel D. Print News Events**

	(0,0)	(-1,1)	(-2,2)	(-3,3)	(-5,5)
Dep. Var: CAR	(0,0)	(-1,1)	(-2,2)	(-3,3)	(-5,5)
<i>Predicted Survey-based Attractiveness</i>	0.015 (0.382)	-0.003 (-0.025)	-0.018 (-0.144)	0.029 (0.234)	0.157 (0.949)
N	914	914	914	914	914
R-squared	0.068	0.124	0.141	0.142	0.152

**Panel E. Earnings news with Photo**

Dep. Var: CAR	(0,0)	(-1,1)	(-2,2)	(-3,3)	(-5,5)
<i>Predicted Survey-based Attractiveness</i>	0.044 (0.553)	0.184* (1.899)	0.206* (1.808)	0.209* (1.973)	0.179 (1.532)
N	122	122	122	122	122
R-squared	0.45	0.314	0.329	0.309	0.304

**Panel F. Earnings news without Photo**

Dep. Var: CAR	(0,0)	(-1,1)	(-2,2)	(-3,3)	(-5,5)
<i>Predicted Survey-based Attractiveness</i>	0.009 (0.115)	0.012 (0.143)	-0.02 (-0.223)	0.009 (0.102)	0.014 (0.116)
N	106	106	106	106	106
R-squared	0.502	0.475	0.417	0.479	0.538

**Table VIII: Television and News Events Controlling for Selection Bias**

Table VIII reports the results from the outcome regression including the Inverse Mills Ratio to control for the selection of CEOs into television news events and print news events. The coefficients on Inverse Mills Ratio (unreported) are significant at the 5% level in both regressions. A Wald test of the difference between the coefficient on *FAI* in CEOs' television news events and that in CEOs' print news samples is significant at the 5% level. The p-value from the joint test of the significance of the instruments is also reported. T-statistics are reported in the parentheses; \*\*\*, \*\*, and \* signify statistical significance at the 1%, 5%, and 10% levels, respectively. The control variables are described in the Appendix.

	(1)	(2)
	Television	Print
Dep. Var: CAR	(0,0)	(0,0)
<i>Log(FAI)</i>	0.053*** (3.060)	0.002 (0.103)
<i>Log(Size)</i>	-0.002 (-1.343)	-0.003* (-1.690)
<i>MTB</i>	0.000 (0.907)	0.000* (1.888)
<i>Stock return</i>	-0.002 (-1.180)	0.001 (0.352)
<i>Leverage</i>	0.021*** (2.780)	0.007 (0.646)
<i>Female</i>	-0.010* (-1.822)	-0.006 (-0.840)
<i>Age</i>	-0.000 (-0.766)	0.000 (0.518)
<i>Tenure</i>	0.000 (1.116)	0.000 (0.523)
<i>OC67</i>	-0.020** (-2.357)	-0.000 (-0.011)
<i>Ivy</i>	-0.002 (-0.478)	-0.003 (-0.642)

(Continued)

Table VII. Continued

	(1)	(2)
	Television	Print
Dep. Var: CAR	(0,0)	(0,0)
<i>MBA</i>	0.003 (1.041)	0.003 (0.942)
<i>Smiling</i>	-0.002 (-0.371)	-0.001 (-0.230)
<i>Bald</i>	-0.001 (-0.567)	0.001 (0.848)
<i>Glasses</i>	-0.002 (-0.679)	-0.001 (-0.359)
<i>Professional</i>	-0.006 (-0.859)	0.005 (0.736)
<i>Color Photo</i>	0.001 (0.134)	-0.005 (-0.825)
<i>Nonwhite</i>	0.008 (0.870)	0.011* (1.935)
<i>Content dummies</i>	Yes	Yes
<i>Intercept</i>	-0.078** (-2.354)	-0.003 (-0.084)
Instruments (p-value)	0.005***	0.015**
Industry controls	Yes	Yes
SE clustered(CEO)	Yes	Yes
N	801	914