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David M. GOMULYA

Singapore Management University, dgomulya@smu.edu.sg

Elaine M. WONG

University of California, Riverside

Margaret E. ORMISTON

George Washington University

Warren BOEKER

University of Washington

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The role of facial appearance on CEO selection after firm misconduct

By: David Gomulya, Department of Management and Organization, Nanyang Technological University

Elaine M. Wong, School of Business Administration, University of California, Riverside

Margaret E. Ormiston, School of Business, George Washington University

Warren Boeker, Foster School of Business, University of Washington

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When that debate was over, I realized that we didn't have to wait for Election Day. We just elected a president. It all happened on television (Hewitt, n.d.).¹

The 1960 debate between John F. Kennedy and Richard M. Nixon was the first televised debate between U.S. presidential candidates. Polls immediately after the debate showed that those who listened to the debate on the radio felt that Nixon had the advantage, whereas those who watched on TV favored Kennedy. These divergent reactions led to subsequent claims that, although Nixon may have been more experienced and knowledgeable on the issues, Kennedy's appearance as young, physically fit, and poised enabled him to win over the TV audience, as compared with Nixon who appeared pale, sickly, and unkempt (Gidlow, 2014). These beliefs have led to a substantial amount of subsequent research that has demonstrated the importance of appearance, and, in particular, facial appearance, for those assessing leaders (e.g., Livingston & Pearce, 2009; Rule & Ambady, 2008). In fact, while the Kennedy–Nixon example highlights the role of dynamic physical appearance in leader selection, even static images of one's face (i.e., photographs) have been linked to leader selection (Todorov, Mandisodza, Goren, & Hall, 2005).

Facial appearance has long been argued to provide observers with important adaptive information that leads them to rapidly generate commonly agreed upon impressions (Hassin & Trope, 2000; Todorov et al., 2005) that subsequently guide their attitudes and behavior (Zebrowitz & Montepare, 2008). As such, to the extent that individuals consider facial appearance in assessing leaders, it may be logical to extend this reasoning to chief executive officer (CEO) selection. Researchers have noted the importance of CEO selection given the critical role that the chief executive plays in influencing organizational values and norms (Schein, 2010), formulating and deciding upon firm strategy (e.g., Cyert & March, 1963; Finkelstein, Hambrick, & Cannella, 2009), and serving as a key representative and public face of the firm to external constituencies (e.g., Meindl, Ehrlich, & Dukerich, 1985; Pfeffer, 1977, 1981; Wiesenfeld,

¹ Museum of Broadcast Communications Encyclopedia of TV (<http://www.museum.tv>).

Wurthmann, & Hambrick, 2008). Chief executive selection is particularly important when it follows the dismissal of an incumbent CEO that results from firm misconduct, because questions about the trustworthiness of the firm's leadership and a loss of confidence in the CEO are likely to have occurred (e.g., Kanter, 2003). In such a situation it is critically important that the successor CEO regain the confidence of stakeholders inside and outside the firm (Pfarrer, Decelles, Smith, & Taylor, 2008).

The firm misconduct on which we focus in our study involves financial restatement, which results “from ‘aggressive’ accounting practices, misuse of facts, oversight, or misinterpretation of accounting rules or fraud in firms” (Arthaud-Day, Certo, Dalton, & Dalton, 2006, p. 1121). Scandals at Enron and WorldCom are two of the more egregious examples of public companies engaging in fraudulent financial actions that destroyed billions of dollars of market value and damaged these firms' reputations. Indeed, firms are expected to respond proactively to repair their damaged reputation following these trust violations, and past work has demonstrated that an important tactic for trust repair is replacing the CEO (Arthaud-Day et al., 2006; Desai, Hogan, & Wilkins, 2006; Farber, 2005).

Given the breach of trust that these violations entail, perceived trustworthiness likely affects the type of successor CEO chosen following financial misconduct. There are a number of ways that a new leader can signal trustworthiness. Research examining CEO selection following restatement has primarily focused on highlighting the leader's previous experience and background (Gomulya & Boeker, 2014), which are signals of ability-based trustworthiness. Although a focus on ability-based trustworthiness via consideration of successor CEO capabilities attends to one aspect of trust repair, it is most effective in situations where the incumbent's competency may have been questioned (cf. Poppo & Schepker, 2010). To the extent that restatements entail intentional misuse of facts or oversight in accounting, they do not as directly focus on issues of competency. Rather, they can be viewed as integrity-based trust violations—intentional and dishonest acts (Poppo & Schepker, 2010). As such, the perceived integrity of the successor CEO may also be particularly important, especially after restatements since it speaks to the moral and ethical aspect of trust that has been violated.

This discussion gives rise to the question of how individuals assess and are influenced by a concept as abstract as a leader's sense of integrity during the selection process. Despite other information to which a board of directors might attend in a succession decision (cf. Wiersema & Zhang, 2011), research suggests that people often use heuristics such as perceptions of facial appearance to make leadership selection and evaluation decisions (Little, 2014; Spisak, Homan, Grabo, & Van Vugt, 2012; Todorov et al., 2005). Thus, we argue that one surprisingly powerful signal of integrity that will shape leader selection is facial appearance.

We explore how financial restatement relates to the facial appearance of successor CEOs, as well as overall impressions of the health of the firm after a successor has been selected. To examine these relationships we utilize the domain-specific facial stereotyping perspective (Olivola, Eubanks, & Lovelace, 2014) to explain how facial appearance guides leader selection in different contexts. From this work, we argue that restatements lead to the appointment of leaders who convey integrity through their facial appearance. In turn, such appointments will garner more positive reactions from investment analysts and the media as well as fewer negative reactions from the media. To test this prediction, we utilize an objective measure of facial structure that has been shown in past studies to denote trustworthiness and integrity (e.g., Geniole, Molnar, Carré, & McCormick, 2014; Kleisner, Priplatova, Frost, & Flegr, 2013; Stirrat & Perrett, 2010). Our study integrates research on leader selection, reputation repair, and facial appearance and has important practical implications for not only how boards select leaders after firm misconduct specifically, and engage in trust repair following integrity violations generally, but also how CEO candidates signal their trustworthiness.

Theory and Hypotheses

Financial Restatement as an Integrity-Based Trust Violation

The financial misconduct we examine involves the downward restatement of earnings by firms due to accounting irregularities identified by the Securities and Exchange Commission. Financial restatements of previously inflated earnings not only lead to financial loss, but also reputation damage (Arthaud-Day et al., 2006; Gangloff, Connelly, & Shook, 2014) because financial restatements violate normative expectations of ethical behavior (Arthaud-Day et al., 2006), which, in turn, cause stakeholders and observers to perceive the firm as flawed and discredited (Harris & Bromiley, 2007). One common approach to mitigating reputational damage due to restatements is to dismiss the organization's CEO (e.g., Gangloff et al., 2014; Karpoff, Lee, & Martin, 2008), and scholars have found that restating firms are more likely to dismiss their CEO than are nonrestating firms (e.g., Agrawal, Jaffe, & Karpoff, 1999; Arthaud-Day et al., 2006; Beneish, 1999; but see also Desai et al., 2006).

Although research has shown that restating firms often dismiss their CEO, little research has considered characteristics that might be associated with a successor CEO appointed after a restatement. One exception is a study by Gomulya and Boeker (2014), which found that restatements are positively associated with the appointment of successors who have prior CEO experience, more elite education, and prior functional experience in areas other than finance and accounting. These findings complement past research on CEO selection following firm turnarounds and poor performance that indicate that factors reflecting competence, such as elite school attendance (Wiersema & HERNBERGER, 2014), functional backgrounds that align with the context and needs of the firm (e.g., DRAZIN & KAZANJIAN, 1993), and industry experience (e.g., DATTA & RAJAGOPALAN, 1998; HAMBRICK, BLACK, & FREDERICKSON, 1992), are important in mitigating reputational damage. This research has been valuable in elucidating critical successor CEO characteristics; however, it does not explicitly consider the type of trust violation that has occurred and the subsequent intervention necessary, and we posit that doing so is important in not only the selection of the successor CEO, but also for subsequent external evaluations of the health of the firm.

We begin by defining trust as “confident, positive expectations about the words, actions and decisions of another in situations entailing risk” (COLQUITT, LEPINE, PICCOLO, ZAPATA, & RICH, 2012, p. 1). Trust violations are typically categorized either as competence violations, which attribute the transgression to skills and abilities, or integrity violations, which attribute the transgression to deviations from expected principles (cf. KIM, FERRIN, COOPER, & DIRKS, 2004). In turn, repairing trust entails restoring trustors' perceptions of the target's trustworthiness, which is a composite of one's ability, benevolence and integrity (Mayer, Davis, & Schoorman, 1995). Mayer and colleagues (Mayer & Davis 1999; Mayer et al., 1995) define ability as the “group of skills, competencies, and characteristics that enable a party to have influence within some specific domain;” benevolence as “the extent to which a trustee is believed to want to do good to the trustor, aside from an egocentric profit motive;” and integrity as a global assessment by the trustor “that the trustee adheres to a set of principles the trustor finds acceptable” (Mayer & Davis, 1999, p. 124). Although each of these factors is always present in considering trustworthiness perceptions, they are differentially salient depending on the situation (Mayer & Davis, 1999).

As applied to research on restatement, one might argue that the aforementioned work (e.g., Gomulya & Boeker, 2014) has attended to CEO successors' ability-based trustworthiness. However, revelations of misconduct result in concerns not only over leaders' capability to lead their organization, but also their character. Specifically, given that financial restatements violate normative expectations of ethical behavior (Arthaud-Day et al., 2006), we argue that integrity-based trustworthiness becomes salient to successor selection and subsequent firm evaluation. Therefore, we expect restating firms to prefer

successor CEOs who convey integrity, and while there are many ways in which integrity may be signaled, we attend to one powerful indicator that affects leader selection decisions (e.g., Todorov et al., 2005): facial appearance.

Leader Facial Appearance and Financial Restatements

Psychology researchers have long recognized the importance of facial appearance in providing adaptive information that guides attitudes and behavior of both the person being evaluated (target) and the evaluator (perceiver). Perceptions stemming from facial appearance emerge rapidly based upon minimal information and have been found to be consistent across observers (Ambady & Rosenthal, 1992; Hassin & Trope, 2000; Todorov et al., 2005). Further, researchers in psychology and management have found that these associations have consistent effects across varying levels of analysis. At the individual level, facial appearance affects individual incomes, compensation, and organizational rankings (Graham, Harvey, & Puri, 2013; Hamermesh & Biddle, 1994; Mazur, Mazur, & Keating, 1984). At the organizational level, CEO facial appearance has been linked to outcomes such as firm financial performance, company evaluations, and shareholder value (Gorn, Jiang, & Johar, 2008; Halford & Hsu, 2013; Jia, Lent, & Zeng, 2014; Wong, Ormiston, & Haselhuhn, 2011). For example, Halford and Hsu (2013) demonstrate that more attractive CEOs enhance shareholder value when they appear in the media; the authors argue that this arises from these CEOs' more positive image having a positive spillover effect for how observers view the firm.

Recent research suggests that facial appearance also influences leader selection (Little, 2014; Olivola, Eubanks, & Lovelace, 2014; Spisak, Dekker, Kruger, & Van Vugt, 2012; Spisak, Homan et al., 2012; Todorov et al., 2005).² Drawing on implicit leadership theory, which suggests that perceivers select a leader whose characteristics fit their image of a prototypical leader (e.g., Foti & Lord, 1987; Lord, Foti, & DeVader, 1984; Lord & Maher, 1991; Offermann, Kennedy, & Wirtz, 1994), Spisak, Homan, Grabo, and Van Vugt (2012) argue that perceivers use cognitive heuristics to select leaders based on physical features alone. Similarly, Little (2014) posits that an individual's face may serve as one cognitive shortcut in providing information, albeit stereotypical, about the adequacy of that individual for a leadership position.

Indeed, facial appearance has been found to inform observers' leader selection. For example, in a study of U.S. representative elections, Todorov, Mandisodza, Goren, and Hall (2005) found that candidates whose faces were perceived as more competent were more likely to be elected than were their opponents. Relatedly, Alrajih and Ward (2014) compared the faces of CEOs of leading United Kingdom businesses to a set of non-CEO faces and found that subjects associated the CEOs' faces with perceptions of dominance. These findings suggest that individuals perceived as more competent or more dominant may be more likely to be selected into top leadership roles.

Although the preceding research suggests that competent or dominant-looking individuals are more likely to emerge as leaders, drawing on contingency theories of leadership (Fiedler, 1964; Thompson & Vecchio, 2009) facial appearance researchers suggest that no one facial feature will determine leadership emergence in all contexts and that "domain-specific facial stereotyping" guides leader selection (Olivola, Eubanks et al., 2014). In particular "leaders may benefit not just from having competent-looking faces, but also from facial features that 'fit' a certain stereotype uniquely associated with their particular domain" (Olivola, Eubanks et al., 2014, p. 830) or situation. In support of this claim, a number of studies

² Paralleling the focus of our article, these cited studies (e.g., Todorov et al., 2005) all use static facial features to examine the impact of facial appearance on leader selection.

show that across different situations, individuals perceive certain facial features as more or less leader-like. For instance, Spisak, Homan et al. (2012) found that masculine-looking leaders were seen as best suited for competitive environments, whereas feminine-looking leaders were seen as best suited for cooperative environments. They argued that masculine-looking faces are perceived as dominant while feminine-looking faces are perceived as prosocial, and these characteristics matched the respective demands of the competitive and cooperative environments. This study highlights the importance of facial appearance in guiding leadership perception in different contexts.

In the context of restatement, we expect that succession events following a financial restatement are more likely to result in a preference for successor CEOs whose faces convey integrity. Successor CEOs who appear as though they “adhere to sound moral and ethical principles” (Colquitt, Scott, & LePine, 2007, p. 910) will be perceived as being most capable of repairing damage done after financial restatement. Recent research suggests links between facial appearance and perceptions of integrity. For instance, men with wider faces are more willing to deceive and cheat (Haselhuhn & Wong, 2012), exploit the trust of others (Stirrat & Perrett, 2010), and are perceived as being untrustworthy and self-interested (e.g., Geniole et al., 2014; Haselhuhn, Wong, & Ormiston, 2013; Kleisner et al., 2013; Stirrat & Perrett, 2010, but see also Alrajih & Ward, 2014). Engaging in exploitation of others, cheating, and being dishonest are all behaviors that indicate the extent to which an individual has a “propensity to adhere to principles regarded as right or moral” (Jones & Shah, 2016, p. 394), which suggests that these men with wider faces are lower on trust generally and integrity specifically. Thus, we argue that board members, facing a large amount of information and uncertainty surrounding the successor decision (cf. Wiersema & Zhang, 2011), will select leaders who appear higher in integrity as they will seem most able to manage the firm following a financial restatement. Formally, we predict:

Hypothesis 1: Firms that replace CEOs following a financial restatement are more likely to name successors with facial appearances that convey integrity than are firms that replace CEOs for other reasons.

Firm Restatement, Successor CEO Facial Appearance, and Stakeholder Reactions

Although CEO facial integrity may be a selection consideration in attempting to mitigate reputational damage following a financial restatement, the effectiveness of this action depends on observers’ reactions to the appointed successor (e.g., Rhee & Kim, 2012; Schijven & Hitt, 2012). Two especially important constituencies that follow firms closely are investment analysts and the broader business press and popular media. Both of these constituencies are important because they provide an external perspective on the appropriateness of the firm’s actions and have the ability to powerfully shape external observers’ perceptions. In fact, given the breadth and complexity of information available on firms, “society’s members must rely on a selected set of intermediary sensemakers, or arbiters, to render and disseminate judgments” such as investment analysts or the media (Wiesenfeld et al., 2008, p. 234).

This sensemaking process and the ensuing judgments by investment analysts and the media can have significant consequences for the firm and top leaders involved. Investment analysts evaluate the performance of the firms’ leaders and have the power to influence CEO dismissal and the selection of successors (Cowen & Marcel, 2011; Wiersema & Zhang, 2011). Media’s reporting about the appointment of the successor in either positive or negative tenors, which are thought to be distinct rather than two poles of a continuum (Baumeister, Bratslavsky, Finkenauer, & Vohs, 2001), can have different effects on subsequent executive behavior and strategic change (Bednar, 2012; Bednar, Boivie, & Prince, 2013; Pollock & Rindova, 2003). For instance, Bednar (2012) argued that while negative media may lead firm

directors to want to protect their reputation, positive media “can be thought of as a source of managerial power for executives in relation to their firms’ boards” (Finkelstein, 1992, p. 136).

These external constituents are particularly relevant in helping make sense of firms’ efforts to mitigate reputational damage after an integrity violation such as financial restatement. They not only help make sense of these events, but also provide a judgment as to the degree to which a firm has succeeded in repairing its reputation after financial restatement (Gomulya & Boeker, 2014). As such, examining how these stakeholders respond to the appointment of a successor CEO is highly relevant to understanding the degree to which the firm has successfully responded to the integrity violation.

To understand these stakeholders’ reactions to the appointment of a CEO after financial restatement, we again draw on the domain-specific facial stereotyping perspective to consider how the context shapes these constituents’ preferences and reactions to facial features. This work suggests that the context shapes how positively or negatively individuals respond to the facial appearance of their leader. For instance, in a study examining how context affects the link between facial structure and leader evaluations, Hehman, Leitner, Deegan, and Gaertner (2015) found that wider-face men were preferred in intergroup competition contexts because in such situations strength and aggression are positively valued. Interestingly, trustworthiness was not preferred in this intergroup competition context, with the reason given that this characteristic was not valued in the context of intergroup competition. These findings highlight the importance of context in judging particular traits (e.g., integrity) positively or negatively.

Applying this work to our examination of reactions to CEO successor selection suggests that external stakeholders are likely to respond positively or negatively to the CEO successor depending on the context. Because the value of a successor CEO’s characteristics depends on the context and circumstances with which the incumbent leaves the firm (cf. Datta & Guthrie, 1994; Hehman, Leitner, et al., 2015) following restatement, successor CEO’s facial characteristics relating to integrity may be more salient and important to stakeholders evaluating the actions of the firm. As such, a CEO’s signals of integrity, even those conveyed via facial appearance, will be positively valued. When a firm announces a successor CEO who fits the leadership prototype for this situation stakeholders are likely to respond more positively, resulting in investment analysts’ forecasts and media reactions that are more positive as compared to firms that replace their CEOs for other reasons. Given that the media can also release negative reports on the firm, we argue that after financial restatement, CEOs who signal integrity will result in fewer negative media reactions compared to firms that replace their CEOs for other reasons.

Hypothesis 2a: Naming successor CEOs with facial appearances that convey greater integrity will result in a more positive change in analysts’ forecasts following successions due to financial restatement relative to successions for other reasons.

Hypothesis 2b: Naming successor CEOs with facial appearances that convey greater integrity will result in more positive media coverage following successions due to financial restatement relative to successions for other reasons.

Hypothesis 2c: Naming successor CEOs with facial appearances that convey greater integrity will result in less negative media coverage following replacements due to financial restatement relative to successions for other reasons.

Data and Method

To test our hypotheses, we conducted an archival study of restating firms.³ Following past research, we examined restatements from 2003 to 2006 to minimize any spillover effects of the collapse of Enron and WorldCom in 2001 (Arthaud-Day et al., 2006).⁴ We followed past literature to focus on restatements that involved the disclosure of earnings revisions (Arthaud-Day et al., 2006; Harris & Bromiley, 2007; Hennes, Leone, & Miller, 2008). Our restatement data was obtained from reports by the United States Government Accountability Office (U.S. GAO, 2002, 2006), which includes restatements issued as the result of aggressive accounting practices, intentional and unintentional misuse of facts, oversight of accounting rules, and misrepresentation. The GAO's restatement data do not include restatements due to normal corporate activity, simple presentation issues, or accounting policy changes.

We focused on restatements that affected revenue or expense recognitions that resulted in a downward revision of earnings (Collins, Masli, Reitenga, & Sanchez, 2009; Kinney & McDaniel, 1989; Palmrose, Richardson, & Scholz, 2004). In addition to following past studies, this focus is for two main reasons. First, both revenue and expense recognitions account for the two largest causes of the restatements listed by the GAO, where they account for more than half of the total restatement cases. That is, the GAO reports that 34% of restatements are caused by cost recognition while another 22% by revenue recognition.⁵ Given their disproportionate impact, focusing on revenue and expense-recognition reasons allow us to focus on the majority of the cases, or the more prevalent phenomena. Second, as any change in revenues or expenses almost always affects earnings (unless revenues increase [or decrease] by the exact amount that expenses increase [or decrease]), focusing on both allows us to yield samples that will have earnings restatements.

Moreover, within this sample, we further focus on those with downward revisions. At the time of data collection, research assistants, who were blind to the study hypotheses, reviewed articles obtained from Lexis Nexis and firms' financial reports to confirm that every restated firm in our sample experienced a downward revision of earnings. A downward revision of earnings is very unlikely to occur out of simple mistakes. Rather, because of immense pressure by financial analysts and the market, firms experience a lot of pressure to perform well and demonstrate superior earnings (Krishnan & Kozhikode, 2015; Mishina, Dykes, Block, & Pollock, 2010), thus an overstatement or inflation of earnings is likely driven by pressure to meet earnings expectations. Indeed, this overstatement of earnings further underscores the likelihood that restatements in our sample are egregious acts indicative of integrity violations. Finally, to avoid any differences in cultural or financial reporting requirements, we excluded non-U.S.-based firms (Pfarrer et al., 2008). These criteria leave us with an initial sample of 394 restating firms.

A matched-pair sampling design is particularly suitable for examining phenomena with a low base rate of occurrence, as in the case of restatements (cf. Arthaud-Day et al., 2006; Harris & Bromiley, 2007). Following past studies (e.g., Agrawal et al., 1999; Kinney, Palmrose, & Scholz, 2004; Richardson, Tuna, & Wu, 2003), we matched each restating firm with a nonrestating firm in a stratified manner by first identifying potential matching firms from the same four-digit Standard Industrial Classification (SIC)

³ The archival data from this study come from a larger set of data that was utilized initially in Gomulya and Boeker (2014). One other study stemming from this data set is Gomulya and Boeker (2015). Some variables from these other studies are also used as control variables here. However, the independent variables examined in the current article, fWHR and all measures of trustworthiness and its composites, are entirely unique to this study, thereby providing novel analyses and results.

⁴ The GAO ended the data collection in June 2006; accordingly, our data are available only until then.

⁵ The next two largest reasons are securities-related (14%) and restructuring, assets, or inventory related (12%). The remaining five reasons account for less than 10% each, ranging from just above 0% to 6%.

code as the restating firms and then selecting matching firms from the same restatement year. From this group we selected matching firms with total asset size closest to that of the paired restating firm. Given these cumulative selection criteria 352 of our 394 restating firms could be matched on all these characteristics.

To allay concerns that the lack of matching may be due to systematic differences between restating and matching firms we performed a number of checks. Specifically, we tested for significant differences in the four-digit SIC, restatement year, and total firm assets between the two groups (using t tests), employed a two-sample Kolmogorov–Smirnov (K-S) test, and created a pivot table to check the face validity of the t test and K-S test. We found no significant differences between the two groups, which suggests that any differences between the groups cannot be isolated to a significant difference along a single matching criterion (i.e., only the four-digit SIC, restatement year, or total assets). Rather, our inability to successfully match some of the restating firms is likely due to the use of multiple matching criteria since, when a greater number of matching criteria are used, it is difficult to successfully match firms across all of them.

Finally, we tested the similarity of the 394 restating and 352 matching firms in terms of revenue, stockholders' equity, net income, and return on assets and found no statistically significant differences between the groups on any of these dimensions, further confirming that our procedure yielded appropriate matches. Altogether, this matching process provided us with another 352 matching firms for a total of 746 firms (394 restating and 352 matching) before any listwise deletion (see Appendix for details).

Measures

Restatement

This dummy variable references whether a firm restated (coded as 1) or not (coded 0, i.e., matching firm). The definition of restating or matching firm is as described above.

Successor CEO facial integrity

We measured successor CEO facial integrity using the facial width-to-height ratio (fWHR), which is the ratio of bizygomatic width (i.e., width between the two cheekbones) to upper facial height (i.e., distance between upper lip and mid eyebrow).⁶ This objective facial structure measure has been associated with leadership characteristics, such as general trustworthiness (Geniole et al., 2014; Kleisner et al., 2013; Stirrat & Perrett, 2010).

Research on fWHR has consistently found it to be related to a number of behaviors and perceptions in men. In this article we focus on fWHR in men, because existing empirical evidence suggests that fWHR better predicts outcomes for men than women (e.g., Carré & McCormick, 2008; Carré, McCormick, & Mondloch, 2009; Weston, Friday, & Lio, 2007). This literature on fWHR indicates that it is a reliable indicator of leader prototype characteristics. For instance, men with higher fWHRs are more dominant and aggressive (Carré & McCormick, 2008; Carré et al., 2009; Valentine, Li, Penke, & Perrett, 2014) and

⁶ Only eight female CEOs were in the current sample. Additionally, amongst our male CEOs, our sample was 91.3% Caucasian. When included as controls, neither sex nor race affected the pattern of our results.

have been linked to leading more financially successful firms (Wong et al., 2011) than men with lower fWHRs.

Additionally, prior research on fWHR has demonstrated robust associations between fWHR and trustworthiness. Because this literature has yet to examine integrity specifically, we draw on the fWHR-trustworthiness literature to develop our understanding of the relationship between fWHR and integrity. Past fWHR research has found that men with wider faces (relative to the height of their face) are viewed as less trustworthy than are men with narrower faces, who are viewed as more trustworthy (Stirrat & Perrett, 2010). These perceptions stem from findings that men with wider faces are more willing to deceive and cheat (Haselhuhn & Wong, 2012), exploit the trust of others (Stirrat & Perrett, 2010), and more likely to lead firms involved in financial misreporting, insider trading and option backdating (Jia et al., 2014). In contrast, men with narrower faces are less likely to cheat or exploit others' trust. Importantly, men with wider faces not only behave in untrustworthy ways, but also are perceived as being untrustworthy and self-interested (e.g., Geniole et al., 2014; Haselhuhn et al., 2013; Kleisner et al., 2013; Stirrat & Perrett, 2010, but see also Alrajih & Ward, 2014).

In summary, results across a number of studies have demonstrated a positive relationship between fWHR and unethical behavior, exploitation and cheating, which suggests a strong link to perceptions of untrustworthiness generally, and likely lack of integrity in particular. Recall that integrity involves a global assessment of an individual's tendency to act in a morally appropriate way (Mayer et al., 1995). Additionally, a "single integrity breach can lead to negative evaluations across situations and over time" (Jones & Shah, 2016, p. 394). For instance, Kim, Ferrin, Cooper, and Dirks (2004, p. 106) argue that "a single dishonest behavior is considered to offer a reliable signal of low integrity, given the belief that only persons of low integrity will perform in dishonest ways." Given the links between fWHR and dishonest behavior such as lying (Haselhuhn & Wong, 2012), we use fWHR as our measure of integrity, with lower fWHR connoting higher integrity.

We calculate fWHR using photos available from company web sites and Google Images. We followed Carré and McCormick's (2008) and Carré, McCormick, and Mondloch's (2009) guidelines on selecting CEO photos and preparing them for measurement. We measured CEOs' fWHR using NIH ImageJ software. Specifically, two trained research assistants, who were blind to the study hypotheses, measured the width and height of each face in our sample. Interrater agreement was high for measurements of facial width ($\alpha = .99$), height ($\alpha = .96$), and overall fWHR (i.e., the ratio of width/height, $\alpha = .94$), so scores were averaged to provide a single fWHR score. The average successor CEO fWHR was 1.83 (SD = .15).

Analysts' reactions

To gauge investment analysts' reactions, we measured the change in annual mean forecast made by analysts following the focal firm. We calculated this measure using the difference between the first earnings forecast made after the successor CEO was announced and the last forecast made prior to the announcement of the successor CEO (Palmrose et al., 2004). We obtained these earnings forecast data from I/B/E/S. Using the successor CEO announcement date (and not the date the new CEO assumed office) we identified differences in the earnings-per-share (EPS) forecast made by a focal analyst immediately prior to the successor announcement to that made immediately after the succession was announced. In each case, the forecasts were made for the same target forecast date (e.g., end of 2006). We obtained observations in which the duration between the pre- and postsuccession forecast is about a

month (mean of 31 days and a standard deviation of 6 days).⁷ Subsequent robustness checks found that this duration does not significantly influence analysts' reactions.

Media reactions

We measured both positive and negative media coverage, which represent two distinct axes rather than two poles of a continuum (Baumeister et al., 2001). To measure media coverage around the announcement of a successor CEO, we used the Lexis-Nexis academic database to collect both national and regional news articles from 2 days prior to the announcement to 2 days after the announcement. Our search criteria required that the articles have the firm name be in the headline or title, report on managerial issues, and contain news about the succession announcement. This process yielded 1,132 relevant articles. However, our analyses are based on the number of words as described below and hence draw on a larger sample size ($M = 6,567$ news words per firm, $SD = 14,224$).

Using computer-aided text analysis software, the Linguistic Inquiry and Word Count (LIWC) program, we measured the favorability of media content (Pennebaker, Booth, & Francis, 2007). LIWC has been used in previous research examining positive and negative media reactions (Bednar, 2012; Zavyalova, Pfarrer, Reger, & Shapiro, 2012). LIWC text analysis software uses predefined dictionaries of words to determine the rate at which authors use positive or negative words in a given text.⁸ The program then calculates the score or percentage of positive and negative content in each article. The positive coverage variable was then equal to the mean LIWC score for the positive word category from all articles about a sample firm, while negative coverage was measured in the same way but for negative words.

Control variables

We included a number of control variables in our models. Firm age was measured in the restatement year, and firm size was measured using firm revenue for the year prior to the restatement announcement. We controlled for temporal variation by including year dummies for the years of restatement (2003–2006). We controlled for firm performance as the most recent and salient annual Return on Assets (ROA) for the firm prior to the incumbent CEO dismissal. The ROA calculation was based on the restated earnings, resulting in a smaller and more conservative value because firms restated their earnings downward.

As a successor CEO fWHR may depend on the incumbent CEO's fWHR, we also controlled for the incumbent CEO's fWHR. We followed the same procedures used to obtain fWHR for successor CEOs. Interrater agreement was high for measurements of facial width ($\alpha = .98$) and height ($\alpha = .97$), and overall fWHR (i.e., the ratio of width/height, $\alpha = .93$), so scores were averaged to provide one fWHR score. The average incumbent CEO fWHR was 1.83 ($SD = .14$). We also controlled for the difficulty in measuring the successor and incumbent CEOs' fWHR data from the photos by including two variables called successor difficulty and incumbent difficulty respectively (e.g., blurriness, head tilt). The two research

⁷ As most forecasts were issued monthly, we dropped five forecasts that were issued more than a year apart. The remaining forecasts have between-forecast durations ranging from 27 to 35 days except for three instances that have between-forecast durations of 55, 61, and 63 days

⁸ LIWC dictionary uses 408 words to denote positive tenor and 499 words to denote negative tenor. A few examples of the positive words include: accepta*, admir*, good, satisf*A few examples of negative words include: argu*, arrogan*, bad, harm, uneas*. More information about LIWC can be found on its web site: <http://www.liwc.net/#>

assistants who measured the width and height of each face in our sample also coded the degree of difficulty in coding the width and height of the face (1 = extremely difficult to 7 = extremely easy).

Further, as facial perceptions may be affected by whether a CEO is smiling in the facial picture that we used for coding, we also controlled for incumbent CEO smile. We obtained smile ratings by having five coders who were blind to the study hypotheses review and score each photo on the amount of smiling displayed by the target using a 7-point Likert scale (1 = no smile, 7 = very big smile). Interrater agreement was high ($\alpha = .95$), so scores were averaged to create one smile score for each incumbent CEO photo. Likewise, we also included successor CEO smile ratings using a similar measurement method. Interrater agreement was high ($\alpha = .95$), so scores were averaged to create one smile score for each successor CEO photo.

For hypotheses that examine the change in analysts' forecasts as a dependent variable, we controlled for the change in the number of forecasts and the duration between forecasts, which may influence the change in the earnings forecast (Palmrose et al., 2004).⁹

As past studies have shown that CEO competence can influence external reactions to successor CEOs (Gomulya & Boeker, 2014), we also controlled for the successor CEO characteristics. Specifically, we first controlled for successor CEO experience, which takes the value of 1 if the successor CEO has been a chief executive prior to joining the restating firm and 0 otherwise. We also controlled for successor CEO elite education, takes the value of 1 if the successor has an elite educational degree and 0 otherwise. Following Gomulya and Boeker (2014), we define elite education as including both private and public Ivy League schools, elite private universities, and service academies. Finally we controlled for successor CEO from financial/accounting functional background, which takes the value of 1 if the successor CEO's functional background is in finance or accounting and 0 otherwise. Typical examples of financial or accounting backgrounds include controller, vice president for finance, or chief accounting officer. This information was obtained from firms' proxy statements.

Models and Estimation

Endogeneity

To control for potential sample-selection bias that may arise by focusing only on successor CEOs, we estimated all our hypotheses using Heckman regression models (Heckman, 1979). The Heckman model is designed to address the potential issue of omitted variable bias that might arise due to the selection process, which the more commonly used ordinary least square regression cannot address (Heckman, 1979). The Heckman model does so by separating the estimation process into two stages: The first stage is to predict whether the self-selection process might occur, which in our case is the replacement of the incumbent CEO, whereas the second stage is to predict the occurrence of the final outcome, which is the appointment of successor CEOs who convey integrity (in Hypothesis 1), and key stakeholder reactions (in Hypotheses 2a–c).

Accordingly, in the first stage, the dependent variable is CEO replacement, which was operationalized as a binary variable that is assigned the value of 1 when the incumbent CEO is replaced within 2 years after

⁹ We also conducted analyses controlling for *cumulative abnormal return* surrounding the restatement but this variable does not influence the outcome in this model.

the restatement and 0 otherwise.¹⁰ Following the literature (Arthaud-Day et al., 2006), the 2-year window was chosen because the selection of a CEO may take more than 1 year to be successfully implemented, whereas examining a CEO selected more than 2 years after the restatement event may introduce unrelated confounding factors. In order to select cases where the CEO was replaced and did not just retire or move to the board of directors, we carefully examined the CEO replacement cases using SEC filing and media accounts from one year prior to the CEO succession event to 1 year after. Following past studies (Finkelstein et al., 2009; Shen & Cannella, 2002), we then removed any cases in which the CEO departure was characterized as having resulted from death, health issues, from taking up a CEO position in another firm, or if the CEO was an interim CEO in the first place. We also excluded cases in which the succession was a result of a long-term plan for a retirement or when the CEO continued to stay in the firm, typically as Chairman, as such an event reflects a lingering presence of the CEO and does not represent a purposeful replacement (Finkelstein et al., 2009). These exclusions increased our confidence that our analyses capture relevant CEO dismissals. Dismissals need not necessarily be preceded by poor performance and past studies have clearly shown that even high-performing firms commit financial misconduct and dismiss their CEOs (Harris & Bromiley, 2007; Mishina et al., 2010).

We identified CEO selection for the matching firms using a similar method. However, given that the matching firms had no restatement or restatement date, we measured CEO selection by first assigning the restatement date of a restating firm as the focal date of its paired matching firm (e.g., if a restating firm announced it was restating earnings on January 1, 2004, then this date became the focal date of the paired matching firm). We then followed exactly the method we previously used and assigned a value of 1 when the CEO of this matching firm was replaced within 2 years after this focal date and 0 otherwise. In order to ensure that our matched sample only included firms with purposeful replacements, we excluded any cases in which the CEO departure was characterized as having resulted from death, health issues, a long-term retirement plan, from taking up a CEO position in another firm, or if the CEO was an interim CEO in the first place. In other words, our matched sample only includes cases in which the CEO was dismissed from his position. By examining CEO replacements in the matching firms based on similar criteria we apply to the restating firms, we can isolate restatement as a “treatment” factor and examine its effect on the choice of CEO replacements.

For the first stage estimation, in addition to control variables we introduced in the second stage (firm age, firm size, year dummies, and prior ROA), we also controlled for the board structure, because it can limit the likelihood of CEO replacement (Boeker, 1992; Gomulya & Boeker, 2015). Specifically, we introduced the proportion of inside board members and the proportion of board members appointed by the CEO. We also controlled for whether or not the focal firm merged or was acquired within 2 years after the restatement.

¹⁰ We also conducted analyses operationalizing successor CEO experience as the successor’s length of experience as a CEO in firms prior to joining the focal firm (i.e., as a continuous variable). We found the same pattern of significant results for all hypotheses except for Hypothesis 2b in which we found a significant interaction between restatement and successor CEO fWHR on positive media coverage when controlling for CEO tenure continuously. However, simple slope effects reveal that, following restatement, successor CEO facial appearance did not affect positive media coverage. It is the simple slope for the matched firms that is marginally significant, indicating that naming wider-faced CEOs following dismissal is more positively perceived than is naming narrower-faced CEOs. As the interaction is driven by the matched firms, Hypothesis 2b is not supported (results provided upon request).

Instrumental variable

To correct for potential sample selection bias, we included two instrumental variables in the selection equation (first stage) that were correlated with the outcome in the first stage but not with the outcome in the second stage (Heckman, 1979). These instruments are incumbent CEO equity and incumbent CEO–chairman duality (1 when the CEO is the chairman of the board of directors and 0 otherwise). While CEOs’ equity or position as chairman can influence their probability of being replaced as CEOs (the outcome in the first stage), these factors play no role in influencing characteristics of the replacement CEO (the outcome in the second stage) because if the incumbent CEOs was dismissed, their power should no longer influence the successor CEOs’ characteristics. We used robust standard errors to minimize heteroscedasticity. We log transformed variables to reduce skewness and kurtosis, as indicated in Table 1. All analyses are conducted using Stata 11 (Kohler & Kreuter, 2009).

Table 1
Descriptive Statistics^{a,b}

No.	Covariates	Mean	SD	1	2	3	4	5	6	7	8	9	10
1	CEO replacement	0.22	0.42										
2	Change in analysts’ forecast	−.05	0.37	−.09									
3	Positive media coverage	1.89	0.72	0.01	0.08								
4	Negative media coverage	0.52	0.49	−.10	−.37	0.05							
5	Firm age	38.26	31.14	−.13	0.01	0	−.05						
6	Firm size (USD mil.)	2830.68	9188.97	−.08	−.01	0.24	0.17	0.23					
7	Year, 2004	0.24	0.43	−.11	0.04	−.04	−.14	−.10	−.08				
8	Year, 2005	0.38	0.49	0.09	−.14	0.32	0.2	0.14	0.22	−.45			
9	Year, 2006	0.13	0.34	0.01	0.14	0.03	−.12	−.04	−.02	−.22	−.30		
10	ROA	−.01	0.26	−.12	−.04	0.16	0.1	0.16	0.37	−.04	0.12	−.03	
11	Incumbent difficulty	5.43	1.43	−.24	0.1	0.01	0.08	0.27	0.06	−.19	0.05	0.08	0.2
12	Incumbent successor	5.54	1.21	−.29	−.03	0.22	0.01	0.34	0.29	−.19	0.25	0.02	0.25
13	Successor CEO experience	0.28	0.45	−.18	0.06	0	0.03	−.14	−.04	0.05	−.03	−.04	0
14	Successor CEO elite education	0.32	0.47	0.1	−.05	−.04	0.03	−.11	0.14	−.12	0.04	0.01	−.05
15	Successor CEO from Fin./Acctg.	0.15	0.35	0.05	0.07	−.06	−.08	0.11	−.21	0	0.07	−.12	−.17
16	Incumbent CEO smile	4.16	1.47	0.06	0.04	0.07	−.15	0.31	−.06	0.08	0.04	0.02	0.22
17	Incumbent CEO fWHR	1.83	0.14	−.07	−.12	0.08	0.11	0.18	−.13	0.03	−.02	−.05	0.07
18	Successor CEO smile	3.86	1.99	−.12	0.15	0.01	−.26	0.43	0.19	−.25	0.16	0.02	0.23
19	Successor CEO fWHR	1.83	0.15	0.2	−.21	0.02	−.08	0.16	−.06	−.04	0.03	0	0.12
20	Restatement	0.54	0.5	0.23	0.01	0.24	0.17	−.36	−.02	−.05	0.08	0.09	−.08
21	Incumbent integrity	4.17	0.43	0.06	0.01	0.02	−.06	0.03	−.02	0.15	0	−.03	−.06
22	Successor integrity	4.25	0.42	−.04	0.08	0	−.23	0.14	0.36	−.11	0.14	−.08	0.09
23	Incumbent trustworthiness	3.93	0.5	0.02	0.07	0.09	−.07	0.13	0.03	0.08	0.13	0.08	−.05
24	Successor trustworthiness	4.11	0.46	−.07	0.13	0.01	−.35	0.2	0.2	−.18	0.12	0.02	−.01
25	Incumbent CEO equity	7.43	14.11	0.03	−.12	−.17	−.08	−.08	−.32	−.03	−.03	−.06	−.01
26	Incumbent CEO–Chairman duality	0.65	0.48	0	−.07	−.06	0.04	−.01	0.11	−.09	0.03	−.05	−.02
27	Proportion of inside board	0.12	0.13	−.04	0.06	−.16	−.03	−.05	−.14	0.11	−.09	−.11	−.09
28	Proportion of board appt. by CEO	0.5	0.29	−.03	−.03	−.07	0	0.02	−.04	−.11	0.04	0.01	0.03
30	Merger	0.13	0.34	0.45	0	0	0	−.08	−.03	−.03	0.06	0.08	0.02

^a Data are deleted listwise. Means and standard deviations are reported in the original metric; correlations whose absolute values are greater than .1 are significant at $p < .05$. The sample used in this correlation table also excludes cases where the CEO was not terminated, terminated before restatement, or with missing values. Given these exclusions, the maximum sample size among these variables is 501 cases. Sample size for variables that are only relevant in the second stage, such as external reactions, is of course smaller. ^b To reduce skewness and kurtosis, variables are logged and mean-centered, except for all binary variables (when logging, the minimum necessary constant is added to avoid logging of negative numbers). ^c As the Heckman estimation model employed in this study draws on information from both the first and second stages (Heckman, 1979), making inferences only from pairwise correlations that do not account for the relationships between the first and second stages may be misleading. We provide the descriptive table here in line with common practice but with this caveat in mind.

	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
0.02																	
0.02	-0.07																
-0.02	-0.20	-0.06															
-0.02	-0.10	-0.15	0.02														
0.24	-0.12	0	-0.31	-0.08													
0.07	-0.08	-0.02	0	-0.28	0.39												
0.21	0.12	-0.20	0	0.04	0.2	-0.07											
-0.07	0.05	-0.12	0.15	0.08	0.14	0.47	0.14										
-0.47	-0.12	0.04	0	-0.35	-0.27	-0.11	-0.31	0.09									
0.24	-0.09	0.07	0.09	0.13	0.19	-0.05	0.01	-0.06	-0.18								
-0.16	0.17	0.02	-0.07	0.07	0.12	0	0.14	-0.01	-0.14	0.02							
0.24	-0.05	0.04	0.1	0.2	0.33	-0.06	0.04	0.03	-0.26	0.91	0.12						
-0.02	0.06	0	-0.09	0.17	0.27	0.09	0.21	0.01	-0.22	0.05	0.92	0.18					
0.14	0.1	-0.02	0.03	0.1	0.05	0.12	0.05	0.1	0.03	0.12	-0.13	0.04	-0.03				
-0.14	0.15	-0.06	-0.02	0.03	-0.27	-0.13	0	0.03	0.12	-0.36	-0.06	-0.41	-0.09	0.21			
0.02	-0.08	-0.05	-0.10	-0.03	-0.11	0.03	0.04	-0.29	0.04	-0.34	-0.15	-0.43	-0.11	0.2	0.13		
-0.05	0.28	-0.24	0.13	0.12	-0.26	-0.20	0.06	-0.07	-0.03	-0.32	0.17	-0.31	0.23	0.47	0.26	0.08	
0	0	0	0	0	0	0	0	0	0.13	0	0	0	0	0	0.02	0.02	

Results

In Table 1, we report the descriptive statistics for all the variables of interest. To test for multicollinearity, the variance inflation factor (VIF) was calculated for each model. In all cases, the individual VIF for a given covariate as well as the average VIF for a model are below the threshold level of 10.0, indicating that multicollinearity is not a problem (Cohen, West, & Aiken, 2002; Neter, Wasserman, & Kutner, 1990). Tests using condition index (Belsley, 1991) also find that none of the condition numbers are greater than 30, which is the suggested threshold for multicollinearity.¹¹ For ease of exposition, all means and standard deviations are shown in their original metrics, prior to any transformations. All significance tests reported are two-tailed tests.

Results from the first stage indicate that higher ROA consistently decreases the likelihood of CEO dismissal along with various measures of CEO power (i.e., proportion of appointed directors, proportion of inside directors, and CEO duality). Restatement also increases the likelihood of dismissal with the number of restating firms that replaced their CEO being about three times that of the matched firms. This difference, however, was expected and is in line with past studies. For instance, Arthaud-Day, Certo, Dalton, and Dalton (2006) found that CEOs and CFOs of restating firms were more than two times as likely to depart from their firms than were matched firms. Similarly, Desai et al. (2006, p. 83) found that “60 percent of restating firms experience turnover of at least one top manager within 24 months of the restatement compared to 35 percent among age-size, and industry-matched firms.” The higher rate of CEO dismissal in the restating firms is as it should be because it reflects the greater concern that such firms face as compared to their nonrestating counterparts. Specifically, restating firms must now engage in reputation repair that goes beyond what typical firms would face to consider restoring trust in the firm.

¹¹ For our dependent variables, the largest VIF value is 4.21 for successor CEO’s fWHR-based integrity, 8.27 for analysts’ forecast model, and 5.54 for positive and negative media coverage.

We report the results in Table 2. Table 2 shows the relationship between financial restatement and the successor CEO fWHR, our measure of integrity. Hypothesis 1 posited that firms that replace CEOs following a financial restatement are more likely to name individuals who convey greater integrity through their facial appearances than are firms that replace CEOs for other reasons, and results from Model 2 in Table 2 confirmed this hypothesis ($\beta = -0.06$, $p < .05$). Note that successor CEO facial integrity is associated with a lower fWHR score, which means that a restatement results in the selection of a CEO replacement with a lower fWHR score, and thus, conveys greater integrity.

Table 2
Effects of Restatement on Successor CEO FWHR^{a,b}

Variables	DV = Successor CEO fwhr	
	Model 1	Model 2
Firm age	.03 (.03)	.01 (.02)
Firm size	-.01 (.01)	-.01 (.01)
Year, 2004	-.01 (.06)	.01 (.06)
Year, 2005	-.01 (.05)	-.00 (.03)
Year, 2006	.11* (.06)	.14* (.06)
ROA	1.08 (1.74)	1.82 (1.23)
Incumbent CEO fwhr	.17*** (.04)	.22*** (.06)
Incumbent CEO smile	-.01 (.01)	-.01* (.00)
Successor CEO smile	-.03 (.04)	.01 (.03)
Incumbent difficulty	-.01 (.01)	-.01* (.01)
Successor difficulty	-.02* (.01)	-.01 (.01)
Successor CEO experience	-.08*** (.02)	-.09*** (.03)
Successor CEO elite education	-.03 (.03)	-.02 (.03)
Successor CEO from Fin./Acctg.	.03 (.04)	.03 (.04)
Restatement		-.06* (.03)
Constant	.16*** (.00)	.05*** (.00)
N total	501	501
N uncensored	42	42
Log Lik	-61.94	-59.92
LR test (χ^2)		4.04*
Lambda	-.15*	-.15*
athrho	-14.52 (56.79)	-15.74 (102.33)
Insigma	-1.91*** (.12)	-1.89*** (.12)

^a Regression model is from second stage Heckman; standard errors are in parentheses. ^b For conciseness, the output from the selection equation (first stage) is not shown.

* $p < .05$. ** $p < .01$. *** $p < .001$, two-sided tests.

Hypotheses 2a–c proposed that appointing a CEO successor who conveys integrity following a financial restatement should lead to more favorable reactions from key stakeholders (i.e., higher analysts' forecasts, more positive media coverage) as well as less negative media coverage. Models in Table 3 report our results for these hypotheses. In Hypothesis 2a, we proposed that greater successor CEO facial integrity will be more positively related to changes in investment analysts' forecasts following financial restatements. Model 3 in Table 3 supports this prediction, demonstrating that the interaction between successor CEO fWHR and restatement is significant for the change in analysts' forecasts and in the predicted direction ($\beta = -6.56$, $p < .001$). This interaction is depicted in Figure 1. Simple slope analyses show that, following a financial restatement, an increase in the successor CEO's fWHR (i.e., a decrease in integrity) is negatively related to change in analysts' forecast ($p < .001$), further corroborating Hypothesis 2a. Additionally, we find that among matching firms, an increase in the successor CEO's fWHR is positively related to change in analysts' forecast ($p < .001$).

In Hypothesis 2b, we proposed that greater successor CEO facial integrity will be more positively related to positive media coverage following financial restatements. Model 6 in Table 3 demonstrates that the interaction between successor CEOs' fWHR and restatement is not significant for the positive media coverage ($\beta = 0.41, p > .10$), thus Hypothesis 2b was not supported. We discuss this further below.

In Hypothesis 2c, we proposed that greater successor CEO facial integrity will be more negatively related to negative media coverage following financial restatements. Model 9 in Table 3 supports this prediction, demonstrating that the interaction between successor CEOs' fWHR and restatement is significant for negative media coverage and in the predicted direction ($\beta = 4.31, p < .001$; recall that a greater fWHR refers to less integrity, and as such a positive interaction effect indicates more negative media coverage for a successor CEO with less integrity after a restatement). This interaction is depicted in Figure 2. Simple slope analyses show that, following a financial restatement, an increase in the successor CEO's fWHR (i.e., a decrease in integrity) is positively related to negative media coverage ($p < .001$), further corroborating Hypothesis 2c. Additionally, we find that among matching firms, an increase in the successor CEO's fWHR is negatively related to negative media coverage ($p < .01$).

Table 3
Effects of Restatement and Successor CEO FWHR on External Reactions^{a,b}

Variables	DV = Change in analysts forecasts			DV = Positive coverage			DV = Negative coverage		
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9
Firm age	.34 ⁺ (.19)	.47 [*] (.21)	.47 ^{***} (.10)	-.10 (.07)	-.08 (1.20)	-.09 (.16)	.53 [*] (.24)	.40 ^{**} (.13)	.44 (.27)
Firm size	-.02 (.07)	.02 (.06)	.08 (.06)	.05 ^{**} (.02)	.10 (.19)	.10 ^{***} (.03)	-.03 (.19)	.12 (.08)	.07 (.11)
Year, 2004	-1.64 ^{***} (.45)	-1.83 ^{**} (.57)	-1.79 ^{***} (.23)	.25 ⁺ (.12)	.27 (.44)	.30 (.29)	1.26 (.77)	1.36 ^{***} (.41)	1.22 ^{**} (.45)
Year, 2005	-.07 (.39)	-.02 (.37)	.43 (.34)	.19 ⁺ (.11)	.18 (1.08)	.17 (.25)	1.08 ^{**} (.38)	.93 ⁺ (.46)	.64 ⁺ (.38)
Year, 2006	.79 ⁺ (.34)	.96 ^{***} (.25)	1.93 ^{***} (.15)	.57 ^{***} (.13)	.52 (.80)	.45 (.38)	.63 (.53)	.97 ⁺ (.59)	.44 (.68)
ROA	10.72 (16.18)	13.66 (13.29)	18.70 (13.24)	-4.92 (3.02)	-12.00 (21.10)	-14.16 (13.76)	-14.33 (13.13)	-36.37 ^{***} (10.60)	-39.28 ⁺ (21.11)
Incumbent CEO fwahr	-5.95 ^{**} (2.19)	-6.36 [*] (3.58)	-4.47 ^{**} (1.70)	1.01 (.77)	.02 (.00)	-.93 (1.52)	-7.32 ^{***} (2.14)	-6.59 ^{***} (1.42)	-8.42 ^{***} (1.28)
Incumbent CEO smile	-.35 ^{**} (.14)	-.45 ⁺ (.27)	-.74 ^{***} (.06)	.15 (.12)	.04 (2.38)	.13 (.29)	-.56 (1.07)	-.79 ^{***} (.22)	-.48 (.40)
Successor CEO smile	1.10 ^{**} (.43)	1.04 ^{**} (.39)	1.67 ^{***} (.14)	-.17 ⁺ (.10)	-.28 (2.02)	-.49 ⁺ (.29)	-1.82 ^{***} (.51)	-1.65 ^{***} (.39)	-1.80 ^{***} (.45)
Incumbent difficulty	.33 ^{***} (.08)	.33 ^{***} (.10)	.32 ^{***} (.06)	.13 ^{***} (.02)	.12 (.32)	.09 ⁺ (.05)	.19 ^{***} (.05)	.11 (.09)	.08 (.08)
Successor difficulty	-.08 (.16)	-.17 ⁺ (.09)	-.16 (.10)	.17 ^{***} (.03)	.16 (.59)	.19 ^{**} (.07)	.17 (.22)	.06 (.10)	.07 (.22)
Successor CEO experience	.75 ^{***} (.23)	.77 ⁺ (.32)	.47 ^{***} (.11)	.16 ⁺ (.09)	.01 (.95)	.03 (.15)	-.15 (.49)	-.10 (.15)	-.45 (.37)
Successor CEO elite education	-1.09 ^{***} (.12)	-.96 ^{***} (.22)	-.92 ^{***} (.11)	-.26 ^{***} (.07)	-.32 (.63)	-.34 ⁺ (.21)	-.05 (.27)	-.38 [*] (.18)	-.46 ⁺ (.27)
Successor CEO from Fin./Acctg.	-.31 (.39)	-.14 (.31)	-.33 (.30)	.39 ⁺ (.23)	.34 (.41)	.29 ⁺ (.17)	-1.73 ^{***} (.38)	-1.49 ^{***} (.31)	-1.45 ^{***} (.35)
Restatement	-.05 (.15)	.02 (.22)	12.15 (.00)	.13 (.10)	.12 (2.51)	-.28 (3.13)	-.81 (.76)	-1.05 ^{**} (.34)	-8.96 (.00)
Change in number of forecast	-.31 ^{***} (.09)	-.25 ^{**} (.08)	-.28 ^{**} (.09)						
Duration from last forecast	.01 (.01)	.02 (.03)	.07 ⁺ (.04)						
Successor CEO fwahr		-.91 ⁺ (.41)	4.22 ^{***} (.24)		.21 (6.28)	.40 (1.27)		1.45 ^{***} (.31)	-1.71 ^{**} (.56)
Restatement × Successor CEO FWHR			-6.56 ^{***} (.13)			.14 (1.63)			4.31 ^{***} (.24)
Constant	-1.99 ^{***} (.00)	-.18 ^{***} (.00)	-11.97 ^{***} (1.85)	-.90 ⁺ (.45)	-1.69 (7.36)	-1.68 (3.09)	3.02 ^{***} (.00)	1.42 ^{***} (.00)	7.52 ^{***} (1.90)
N total	484	483	483	494	493	493	495	494	494
N uncensored	26	25	25	36	35	35	36	35	35
Log Lik	-63.40	-58.71	-52.32	-103.3	-86.74	-81.11	-134.9	-127.8	-126.8
LR test (χ^2)		9.38 ^{**}	22.16 ^{***}		33.12 ^{***}	44.38 ^{***}		14.2 ^{***}	16.2 ^{***}
Lambda	.38 ^{***}	.33 ^{***}	.25 ^{***}	-.14 ^{***}	.34	.36 ^{***}	-.150 ^{**}	-.136 [*]	-.136 ⁺
athrho	13.73 ^{***} (.17)	13.45 ^{***} (.17)	11.94 ^{***} (.18)	-.73 ^{***} (.00)	7.56 ^{***} (.79)	11.00 ^{***} (.13)	-15.58 ^{***} (.14)	-17.43 ^{***} (.14)	-13.09 ^{***} (.14)
Insigma	-.97 ^{***} (.16)	-1.09 ^{***} (.17)	-1.38 ^{***} (.27)	-1.45 ^{***} (.14)	-1.07 (3.83)	-1.03 ^{***} (.16)	.41 ^{**} (.15)	.31 [*] (.15)	.30 (.19)

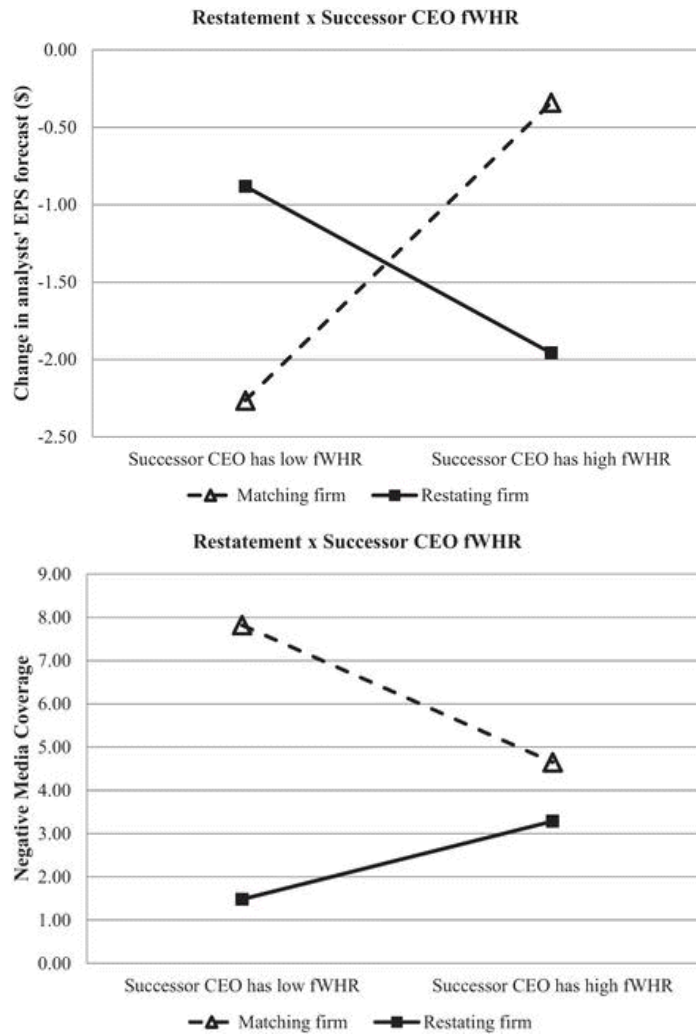
^a Regression model is from second stage Heckman; standard errors are in parentheses. ^b For conciseness, the output from the selection equation (first stage) is not shown.
⁺ $p < .10$. ^{*} $p < .05$. ^{**} $p < .01$. ^{***} $p < .001$, two-sided tests.

On change in analysts' forecasts

From Figures 1 and 2, we can see that the effect of successor CEO fWHR for a restated firm is substantially different from that for a matched firm. Regarding their impact on the change in analysts' forecasts and for matched firms, Figure 1 shows that when successor CEO fWHR increases from one standard deviation below the mean to one standard deviation above, analysts increase their forecasts for firm earnings per share from a loss of \$2.26 per share to a loss of \$0.34 per share, an increase of \$1.92. This finding suggests that in a normal situation, a successor CEO with high fWHR is favored by analysts.

However, in a context where firms have restated their earnings, the relationship goes in the opposite direction. Figure 1 shows that for restated firms, analysts' forecasts for firm earnings per share decrease from a loss of \$0.88 per share to a loss of \$1.96 per share. This is a decrease of \$1.08 or more than the initial forecast suggesting that in a restating context, a successor CEO with high fWHR, which raises concerns of lack of integrity, is not favored.

Comparing the difference between the two lines indicates a bigger change in analysts' forecast due to an increase in successor CEO fWHR depending on the contexts. That is, the increase in successor CEO fWHR causes an increase of \$1.92 in EPS forecast for the matched firms versus a decrease of \$1.08 for the restated firms, or a difference of \$3.00 per share.



On negative coverage

Regarding the impact of fWHR on the percentage of negative words in news media and for matched firms, Figure 2 shows that the negative coverage decreases from 7.82% to 4.65%, a decrease of 3.17% or about 50% from the initial value. This finding suggests that in a normal situation, a successor CEO with high fWHR is favored as shown by less negative coverage.

However, in a context where the firms have restated their earnings, the line goes to the opposite direction. Specifically, Figure 2 also shows that for restated firms, the negative coverage increases from 1.48% to

3.29%. This is an increase of 1.80% or more than 100% from the initial value (of 1.48%). This finding suggests that in a restating context, a successor CEO with high fWHR, which raises concerns of lack of integrity, is not favored as shown by a higher percentage of negative coverage.

Comparing the difference between the two lines indicates a bigger change in the negative coverage in news media depending on the contexts. That is, the increase in successor CEO fWHR causes a decrease of about 50% from the initial value for the matched firms but an increase of more than 100% from the initial value for the restated firms.

Supplementary Analyses

Past research on fWHR suggests that fWHR is negatively related to integrity, however, the focus has been more generally on trustworthiness, as well as correlates of integrity (e.g., deceit) but not directly on the link between fWHR and integrity. Thus, as supplemental analyses we examined the link between successor CEO fWHR and perceived successor CEO integrity.

Perceptions of successor CEO integrity

To measure perceptions of the successor CEO's integrity, following previous research (Livingston & Pearce, 2009; Rule & Ambady, 2008), we had 277 participants (70.7% female, 40.7% Caucasian, average age 26.75, SD = 6.64) from the behavioral research laboratory pool at a large British university rate CEO photos for integrity. In Qualtrics, we created five blocks of 40 CEO photos, which were randomly assigned to between 54 to 57 participants. CEO photos were presented one by one in random order. Integrity was rated using a 7-point scale in which 1 = extremely low on integrity and 7 = extremely high on integrity. There was high interrater agreement for ratings of integrity across the five blocks of CEO photos (average Cronbach's alpha across five blocks = .88, range = .85–.91; and average rwg across five blocks = .83, range = .71–.93) and therefore we aggregated participants' integrity ratings for each CEO. The average successor CEO integrity perception rating was 4.25 (SD = .42). Lastly, we also measured and controlled for perceptions of incumbent CEO integrity using the same procedures outlined for successor CEO integrity (i.e., using incumbent CEO fWHR). The average incumbent CEO integrity perception rating was 4.17; SD = .43).

We then regressed this perception of successor CEO integrity on successor CEO fWHR along with other control variables we included previously as well as incumbent CEO integrity. Model 1 in Table 4 shows that successor CEO fWHR is negatively related to successor CEO integrity ($\beta = -0.10$, $p < .001$), as expected.

Table 4
Effects of Successor CEO FWHR on Perceived Successor CEO Characteristics^{a,b}

Variables Model	DV = Successor CEO integrity Model 1	DV = Successor CEO benevolence Model 2	DV = Successor CEO ability Model 3	DV = Successor CEO trustworthiness Model 4	DV = Successor CEO trustworthiness Model 5
Firm age	-.02 (.02)	-.02 (.02)	.00 (.02)	.02** (.01)	.02* (.01)
Firm size	.02** (.01)	.01 (.01)	.01 (.01)	-.00* (.00)	-.01** (.00)
Year, 2004	.04 (.04)	.00 (.05)	.03 (.05)	.00 (.03)	-.01 (.02)
Year, 2005	.02 (.04)	-.01 (.03)	.03 (.04)	-.01 (.03)	-.01 (.02)
Year, 2006	.05 (.07)	.07 (.07)	.06 (.07)	.01 (.05)	.02 (.02)
ROA	2.70 ⁺ (1.55)	.84 (.96)	.34 (1.04)	.81 (.66)	.22 (.49)
Incumbent CEO fwhr	.00 (.15)	.38* (.15)	.00 (.27)	.04 (.07)	.02 (.04)
Incumbent CEO smile	-.00 (.01)	-.07* (.04)	-.01 (.06)	-.01* (.01)	-.00 (.00)
Successor CEO smile	.01 (.00)	.19*** (.04)	-.02 (.05)	-.05*** (.01)	-.04*** (.01)
Restatement	-.17** (.06)	-.16** (.06)	-.07 (.09)	-.07** (.02)	-.04* (.02)
Incumbent difficulty	-.04*** (.01)	-.02*** (.00)	-.02* (.01)	-.01 (.01)	-.00 (.00)
Successor difficulty	-.00 (.01)	-.01 (.01)	.02* (.01)	-.01 (.01)	-.01* (.01)
Successor CEO experience	-.11*** (.03)	-.02** (.01)	.03 (.03)	-.03 (.02)	-.02 (.02)
Successor CEO elite education	-.06*** (.02)	-.08*** (.02)	-.02 (.03)	-.00 (.02)	-.01 (.01)
Successor CEO from Fin./Acctg.	.12* (.06)	.07* (.04)	.02 (.06)	.02 (.02)	-.01 (.02)
Incumbent CEO benevolence		.00 (.05)		-.00 (.05)	.00 (.03)
Successor CEO benevolence				.19*** (.01)	.13*** (.02)
Incumbent CEO ability			-.03 (.03)	.02 (.04)	.02* (.01)
Successor CEO ability				.06* (.02)	.03** (.01)
Incumbent CEO integrity	.09** (.03)			.04 (.07)	.02 (.05)
Successor CEO integrity					.12*** (.02)
Successor CEO fwhr	-.10* (.04)	.03 (.07)	-.11 (.11)	-.08* (.04)	-.06 (.07)
Constant	1.72*** (.00)	1.45*** (.10)	1.90*** (.42)	.54*** (.00)	.37*** (.00)
N total	494	501	501	501	501
N uncensored	42	42	42	42	42
Log Lik	-50.48	-62.55	-81.31	-12.34	.17
Lambda	-.13***	-.16***	-.02	-.05***	-.04***
athrho	-14.45*** (.14)	-17.71*** (.08)	-.24 (1.73)	-17.08*** (.12)	-15.79*** (.12)
Insigna	-2.05*** (.19)	-1.84*** (.12)	-2.58*** (.34)	-2.95*** (.16)	-3.29*** (.19)

^a Regression model is from second stage Heckman; standard errors are in parentheses. ^b For conciseness, the output from the selection equation (first stage) is not shown.

* $p < .10$. ** $p < .05$. *** $p < .01$. **** $p < .001$, two-sided tests.

Perceptions of successor CEO ability, benevolence, and trustworthiness

Although we have focused on integrity perceptions, researchers have conceptualized trustworthiness as a multifaceted construct comprised by ability, benevolence, and integrity (Lewicki & Bunker, 1995, 1996; Mayer et al., 1995; McAllister, 1995). Therefore, we also examine perceptions of overall trustworthiness and its factors to bolster our claim that perceptions of integrity, rather than other aspects of trustworthiness, are salient in the context we investigate here.

We measured perceived successor CEO benevolence, ability, and overall trustworthiness following the same procedure used to examine perceived integrity. Traits were presented in random order. There was high interrater agreement for ratings of benevolence (average Cronbach's alpha across five blocks = .91, range = .84–.94; and average rwg across five blocks = .84, range = .70–.91), ability (average Cronbach's alpha across five blocks = .90, range = .88–.92; and average rwg across five blocks = .84, range = .73–.91), and overall trustworthiness (average Cronbach's alpha across five blocks = .90, range = .87–.93; and average rwg across five blocks = .84, range = .72–.93). Therefore, we aggregated participants' trait ratings for each CEO. The average successor CEO perception ratings were: benevolence, 4.20 (SD = .48); ability, 4.47 (SD = .42); trustworthiness, 4.11 (SD = .46).

With regard to perceived successor CEO benevolence, Table 4 shows that successor CEO fWHR is not significantly related to perceived successor CEO benevolence (Model 2, $\beta = 0.03$, $p > .10$) or perceived successor CEO ability (Model 3, $\beta = -0.11$, $p > .10$). In Model 4 in Table 4 we found that, controlling for perceived benevolence and ability, but not perceived successor CEO integrity, successor CEO fWHR continues to be negatively related to successor CEO trustworthiness as predicted although with weaker significance ($\beta = -0.08$, $p < .10$). However, when we included perceived successor CEO integrity as a predictor in Model 5, the effect of successor CEO fWHR on successor CEO trustworthiness loses significance, suggesting that perceived successor CEO integrity replaces the role of successor CEO fWHR.

In summary, our supplementary analyses show that successor CEO fWHR negatively relates to successor CEO integrity, and not successor CEO benevolence and ability. Also, successor CEO fWHR explains the integrity component in overall perceived successor CEO trustworthiness. Altogether, these analyses bolster our overall argument that it is perceived integrity that likely plays a key role in helping a restating firm repair its reputation.

Discussion and Conclusion

For firms that restate earnings, replacing the CEO can be a critical step in regaining the trust of key stakeholders. Our study highlights the importance of selecting a leader who appears high in integrity following financial restatement. Through an archival study of restating firms, we found that restating firms are more likely to appoint CEOs who have narrower facial structures, a facial feature we found associated with integrity. Moreover, we found that following a restatement key stakeholders react more favorably to the appointment of CEOs with narrower facial structures. In particular, we found that investment analysts respond more positively and the media respond less negatively to these successor CEOs because they appear of higher integrity.

Although we expected to find that CEOs with facial appearances that denote greater integrity would evoke less negative, and more positive reactions from the media, we found support only for negative reactions. These results corroborate the findings of past research that negative impressions form more quickly and are more salient than positive impressions (Baumeister et al., 2001). It may also be expected that the announcement of a successor CEO for a firm that had engaged in financial misconduct would elicit relatively fewer positive reactions from the media than a successor event for a firm that had strong performance. Thus, the selection of a CEO who appears to have higher integrity following restatement may function more strongly to ameliorate negative impressions, rather than create positive impressions especially given the difficulties of repairing trust and reestablishing the reputation of the firm following an incident of unethical behavior (Dirks, Lewicki, & Zaheer, 2009; Fulmer & Gelfand, 2012).

Beyond finding that stakeholders responded more favorably to CEOs who appeared to have greater integrity after restatement, we also found that investment analysts responded more favorably to CEOs with facial structures denoting lower integrity and greater dominance in our matched sample. Although we did not form any predictions surrounding the matched firms, these findings corroborate past research on facial structure and its behavioral correlates. Past research finds men with higher fWHRs are more dominant and aggressive (Carré & McCormick, 2008; Carré et al., 2009; Valentine et al., 2014). Moreover, male chief executive officers of United Kingdom businesses have larger fWHRs than a matched sample of similarly aged men and these wider-faced men are also perceived as more dominant (Alrajih & Ward, 2014). Finally, past research finds that wider-faced CEOs are positively related to firm financial performance (Wong et al., 2011). This discussion suggests fWHR can be positively linked to

positive leadership behaviors and outcomes under certain circumstances. One such context may be after CEO replacements that are not related to an integrity violation. For instance, a common reason behind CEO replacements in general is poor performance. Traits that are valued in a general context such as poor performance, which our matched sample likely captures, may differ from those that are valued among the restating firms (cf. Hehman, Leitner et al., 2015; Little, 2014; Little, Roberts, Jones, & DeBruine, 2012; Olivola, Eubanks et al., 2014; Spisak, Homan et al., 2012). In cases of more traditional CEO succession, boards may be inclined to select leaders who appear more dominant (as signaled by wider faces) as opposed to of higher integrity, who are appointed following reputation-damaging events. Future research should further explore the specific links between facial structure and these other contexts.

Our findings have a number of theoretical and practical implications for research on leader selection, reputation repair, and facial appearance. Although research has shown that restating firms often replace their CEO, few studies have considered characteristics that might be associated with the successor CEO appointed after a restatement. One such study found that those successor CEOs hired after restatement had higher levels of elite education, past functional experience, and CEO experience than those successor CEOs hired for other reasons (Gomulya & Boeker, 2014). However, because restatements may be more suitably considered as integrity violations, it is also important to consider CEO successor integrity. In light of the complexity and uncertainty in adequately evaluating CEOs (Wiersema & Zhang, 2011), our research suggests that the use of easily observable characteristics that signal integrity also guide CEO selection. Indeed, our research demonstrates that, above and beyond these competence-related factors, selecting leaders who signal integrity is critical when making leader selection decisions after financial misconduct. Moreover, this signal of integrity through facial appearance is strong enough to influence firm CEO selection processes and stakeholders' reactions.

Second, our work contributes important insights to research on firm reputation repair following misconduct. Past work examining how firms attempt to restore their standing and reputation has almost exclusively focused on single-firm case studies (e.g., Elsbach, 2012). In the present article, we draw on extensive archival data and perceptual measures to quantitatively examine how specific CEO characteristics can significantly affect firm recovery from reputation-damaging events. Examining the reactions of critical outside constituencies such as investment analysts and the media helps us better gauge the effectiveness and success of the perception of successor CEOs' integrity. Also, to the best of our knowledge, no past studies in this domain have integrated both archival and perceptual data as we do here.

Third, our work supports recent research on facial appearance suggesting that "domain-specific facial stereotyping" affects who is selected as the leader in particular contexts (Olivola, Eubanks et al., 2014, p. 830; Little, 2014; Little et al., 2012; Spisak, Dekker et al., 2012; Spisak, Homan et al., 2012) thus further extending contingency theories of leadership (e.g., Fiedler, 1964, 1971). Our research does so by managing the often-discussed tension between leader characteristics and situational factors through leader selection as opposed to leader adaptation. Additionally, within research examining facial appearance and leader selection the focus has primarily been on the type of facial appearance required in different political climates. Our study contributes to this research by examining how a different context, firm misconduct, influences leader selection. In line with research that highlights the breach of trust that is unique to replacements caused by financial misconduct (e.g., Gangloff et al., 2014), our findings demonstrate that stakeholders exhibit a preference for successor CEOs who appear to be of greater integrity following financial misconduct by the firm. Thus, our findings indicate that the appearance of integrity is a key prototypical element for leaders hired following replacements due to misconduct.

Beyond extending the examination of different contexts, we also contribute to this research by examining an objective facial feature: the facial width-to-height-ratio.

Fourth, we contribute to the work on facial structure by illustrating its relevance to a key leadership outcome: CEO selection. Past research has primarily examined individual-level effects of facial structure (e.g., dominance, aggression), with few studies examining facial appearance in relation to firm outcomes (but see Jia et al., 2014; Wong et al., 2011). Our research extends this focus on firm-level effects to examine critical outcomes such as CEO selection and reactions of external audiences to successor appointments. Additionally, our findings show that facial width (in relation to facial height) is related negatively not only to trustworthiness, as past research has shown, but also and more specifically to the integrity dimension of trustworthiness. However, we found that facial structure was related to neither perceived ability nor perceived benevolence dimensions of trustworthiness. As such, our results indicate that narrower-faced individuals may be seen as more trustworthy because they appear to convey greater integrity.

Our research also has practical implications. Although our research suggests that firms that appoint CEOs who appear of higher integrity are more positively perceived, we are not advocating that boards start attending to facial structure when confronted with CEO selection following misconduct. Rather, our research draws attention to the importance of perceptions of integrity in mitigating reputation damage. Perceptions of integrity can be increased not only through the physical face of the organization, but also through one's actions. Leaders who wish to be perceived as having greater integrity might do well to engage in actions that convey their integrity. For example, CEOs hired following financial misconduct could signal their integrity by creating independent committees within the firm that focus on financial transparency.

Another practical implication of our research is its heightened attention to the process of facial stereotyping, or face-ism (Olivola, Funk, & Todorov, 2014), and its impact on individual and organizational outcomes (Zebrowitz & Montepare, 2008). Despite evidence of some ability to detect underlying traits based on minimal information such as facial photos and short videotapes (Zebrowitz & Collins, 1997) and clear links between facial structure and behavior (e.g., aggression and deceit; Haselhuhn & Wong, 2012), people can be not only inaccurate in their assessments based on facial features (Todorov, Olivola, Dotsch, & Mende-Siedlecki, 2015), but also unaware that their inferences based on facial features are inaccurate. As such, using the face in selection decisions may be imprudent.

Additionally, when these facial cues are present individuals may ignore more valid information, which reduces their ability to make accurate judgments about others (Todorov et al., 2015). This suggests that although stakeholders such as investment analysts may respond positively to these leaders, these leaders may not actually be effective at fostering a high integrity culture within the organization or driving the organization to high performance. Therefore, we argue that boards and external observers should be cautious in using facial appearance as an honest signal for underlying traits and behaviors. Instead, boards would do well to be aware of these biases when selecting leaders, especially after financial misconduct, and encourage careful consideration of more valid cues of leader trustworthiness (e.g., their ability to manage relationships and build trust in previous firms). Indeed, research finds that when individuals have access to more relevant information and knowledge they pay less attention to facial features and thus can make more informed decisions (Lenz & Lawson, 2011).

Finally, from the executive's perspective, facial stereotyping may unfairly (dis)advantage them from obtaining desired leadership positions. In particular, as executives may be unaware of the impact their physical appearance (e.g., FWHR) can have on CEO selection decisions, executive search firms may do

well to coach CEO candidates with wider facial structures to signal their trustworthiness, particularly after firm misconduct.

The theoretical and practical implications of the present study should be considered in conjunction with some of the limitations of the study, which also offer future opportunities for research. Although we argue that the importance of naming a successor CEO who appears of greater integrity increases following the disclosure of financial misconduct, a critical limitation of our study is that we cannot examine the actual deliberations that go on in the boardroom when choosing a successor. Instead, like other studies within this domain (e.g., Arthaud-Day et al., 2006; Harris & Bromiley, 2007) we have inferred, but not actually measured, the process of board decision making. An additional limitation of our study is its generalizability to countries outside the United States, which may have different governance and policy structures that could have an important independent influence on the role of the board and the importance of presenting a successor who appears of higher integrity.

There are a number of significant and interesting opportunities for future research that build on this work. One direction for future research is to examine the role of integrity in the CEO selection process within the context of other types of CEO succession events. While we find that successor integrity is particularly important after an integrity violation, we may find that integrity is also important in other contexts related to CEO selection. For instance, there may be particular industries in which appearing of greater integrity is of particular importance, such as nonprofit or charitable organizations. Alternatively, signaling trustworthiness in terms of competence may be particularly important in other contexts such as when the board selects an outside CEO or CEO who has little industry experience.

While our work considered the impact of integrity violations on CEO selection and found that successor CEOs who appear to have higher integrity are more positively perceived by stakeholders, research should also consider how stakeholders respond to incumbent CEOs who appear to have higher integrity after an integrity violation. On the one hand, these incumbent CEOs may be perceived as more capable of managing through this violation and thus may be more likely to be retained. On the other hand, based on research on expectancy violations theory (Burgoon, 1986, 1993), these CEOs who appear to have higher integrity may be even more negatively perceived than CEOs who appear to have lower integrity. As such, future research should explore how CEO characteristics related to perceived integrity influence the board's decision to retain as well as stakeholders' reactions to the incumbent CEO.

Additional work could also delve deeper into the effect of CEO appearance on selection. In the present study, we have drawn on static images to study facial structure, but recent research finds that dynamic elements of the face (e.g., emotional expression) have distinct effects (e.g., Hehman, Flake, & Freeman, 2015). Moreover, given that board members may interview potential successors or watch videos of these leaders speaking, examining these dynamic features is also important. Beyond facial appearance, future research may consider how other attributes of the CEO, such as charisma (Resick, Whitman, Weingarden, & Hiller, 2009) as well as factors related to the firm's misconduct, such as the type of financial restatement, influence the relationship between CEO appearance and selection after firm misconduct. Indeed, the GAO lists nine reasons for firm restatements (e.g., revenue recognition, and securities-related reasons). Our study focused on change in revenues or expenses as these restatements almost always affects earnings thus allowing us to yield samples that have earnings restatements, and specifically downward revisions. However, future research should consider other types of restatements.

Future research into corporate misconduct and successor characteristics should continue to investigate the factors that influence perceptions about the firm. By assessing integrity through facial appearance, we found that restating firms are more likely to appoint CEOs who appear to be higher on integrity and that these appointments were more favorably regarded by key external stakeholders. These findings provide a more complete understanding of CEO selection following financial misconduct and the extent to which such choices aid repair reputation damage. As such, our study goes beyond past research that has focused on CEO replacement as the result of governance and power struggle to more carefully examine how characteristics of the successor, even their appearance, can powerfully mitigate the effects of corporate misconduct.

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APPENDIX A: Variations in Sample Size Across Models

The following factors influenced differences in sample sizes across our models:

1. We dropped observations where the incumbent CEO departed due to nondismissal reasons, for example, retirement or taking up another position (Shen & Cannella, 2002). This reduced our total sample by 8.6% of the original sample.
2. We also dropped observations where the CEO's facial photographs are not available or reliable or the CEO was female. This further reduced the total sample by 8.0%.
3. The use of a two-stage model further decreased our sample because some of the variables in the second stage were not available and the Heckman model drops such cases. The Heckman model is very conservative, treating any missing data as nonrandom (if they are indeed random, it should not affect the analyses besides of course the loss of observations; Wiggins & Gould, n.d.).

Given the automatic exclusion that occurs with using Stata, our sample size experienced the following reduction: Around 9.8% when the final dependent variable (DV) is successors' fWHR; 9.4% when the final DV is positive or negative media coverage; 12.7% when the final DV is change in analysts' forecast (a larger decline because analysts' ratings are not as commonly available as media coverage). The main reason why these data were not available was because the firm was merged or acquired, or no longer followed by analysts.

4. Finally, some observations were dropped because of missing values for some of the control or independent variables (ranging from 0.4% to 3.6%). Ultimately, we had from 483 to 501 cases without any loss of observations and eligible for further analyses.

As an example, in the case of predicting successor CEO fWHR in Table 2 Model 1 (and 2) that has $N_{\text{total}} = 501$ and $N_{\text{uncensored}} = 42$, the following is the breakdown. We started with 746 firms and then dropped these firms: four firms where the duration between analysts' forecasts is too long, 67 firms where the CEO cannot be considered as being terminated for various reasons, 57 firms where the successor's photographs are not available, 73 firms where data of successor CEO experience in the second stage are not available, 22 firms that replaced their CEO prior to the restatement announcement date, and 22 firms that are deleted Listwise due to missing variables. After dropping these 245 firms, our initial 746 firms reduced to 501 firms. From here only 42 firms or 8.6% experienced a CEO replacement and complete data. Of course the actual breakdown varies across models.

Importantly, we did compare the firms that were dropped due to the reasons mentioned above to the remaining firms in terms of size, profitability, and year dummies and found no significant difference.