Winning an Award Could Set You Free:
Earnings Management and the Balance of Power between CEOs and CFOs

August 2019

ABSTRACT

This paper investigates how the balance of power between chief executive officers (CEOs) and chief financial officers (CFOs) influences the use of earnings management. I employ nationwide awards that recognize CFO excellence as shocks to awardees' job-market status and use a regression discontinuity design (RDD) to establish causal effects. I find that, compared to nominees who were close to winning the award, awardee CFOs experience a sharp increase in career opportunities, both outside and inside their own firms. Consistent with the view that shifts in bargaining power between the CEO and CFO can mitigate earnings management, I find that awardee firms have a significantly smaller magnitude of discretionary accruals than nominees in the first two years after the award. In addition, winning the award has a substantially negative effect on positive accruals, while the positive effect on negative accruals is less significant. Moreover, I find no evidence that the rise of CFO power triggers an increase in the use of real earnings management in awardee firms. Overall, my findings suggest that the balance of power between CEOs and CFOs plays an important role in the quality of financial reporting.

Recent news stories like General Electric's (GE's) potential accounting fraud and Kraft Heinz's $181 million misstatement[1] have attracted considerable attention from the public and academia, retriggering concerns about financial reporting bias and earnings manipulation. According to a survey of 169 chief financial officers (CFOs) in public firms by Dichev et al. (2013), 20% of firms manages earnings to misrepresent performance, and the magnitude of misrepresentation achieves 10% of earnings per share in any given period. Misrepresenting performance through earnings management reflects a failure to accurately communicate with external stakeholders about a firm's economic position (e.g., Healy and Wahlen, 1999); such activities imply, at least in part, that insiders extract private benefits at the expense of other stakeholders (e.g., Leuz et al., 2003). Therefore, it is of great practical importance to understand the underlying causes of earnings management. While numerous empirical studies have emphasized the effects of equity incentives on manipulation and misreporting (e.g., Bergstresser and Phillippon, 2006; Burns and Kedia, 2006; Jiang et al., 2010), explorations of the balance of power between the chief executive officer (CEO) and CFO are limited. In particular, we have little empirical evidence about whether the shifts in bargaining power from the CEO to the CFO help mitigate earnings management and improve financial reporting quality. [2]

I employ a quasi-experimental study on the balance of power between CEOs and CFOs and show that a rise in CFO power over the CEO reduces accounting-based earnings management (AEM) without inducing more real activities manipulation. Specifically, I employ a unique dataset

[1] Early in 2018, the Securities and Exchange Commission (SEC) started an investigation into GE's accounting practices, driving the firm to restate earnings for 2016 and 2017. Later that year, the SEC started another investigation into a suspicious $22 billion charge in GE's earnings report. In May 2019, Kraft Heinz restated its financial reports for a near three-year period after investigation (see, e.g., "GE's $22 Billion Charge Intensifies Regulatory Scrutiny," *Wall Street Journal*, October 30, 2018; "Kraft Heinz to Restate Results for Nearly 3 Years," *CFO.Com*, May 6, 2019).
[2] A small handful of works show that CEO/CFO power and earnings management are correlated (e.g., Feng et al. 2011; Baker et al., 2019). My paper differs in that (1) it employs events that shift the power between the CEO and CFO to provide direct evidence on the power-balancing effect on earnings management, and (2) the use of a regression discontinuity design facilitates addressing endogeneity.

of nationwide CFO awards that influence winners' career opportunities and use a sharp regression discontinuity design (RDD) to study their effects on awardee firms' accounting-based and real earnings management. The dataset includes a list of ranked nominees for the "All-America Executive Team" Best CFO awards granted between 2009 and 2018 by *Institutional Investor*, a well-known magazine famous for providing high-quality business rankings. By comparing winners and losers near the award cutoff, I find that winning the award results in a notable increase in CFOs' external and internal job-market opportunities. Since the CEO's bargaining power over subordinates is mainly based on her influence on their promotion and retention, the increase in career opportunities enhances the awardee CFOs' ability to stand up against pressure from the CEO. Consistent with the argument that the balance of power between the CEO and CFO benefits the quality of financial reporting, awardee firms, relative to non-awardees who were close to award status, have a significantly lower level of earnings management, as measured by discretionary accruals. In contrast to concerns that powerful CFOs may substitute accruals-based manipulation for real earnings management (REM), there is no evidence of a rise in REM in awardee firms. Indeed, I find weak evidence that awardee firms conduct less manipulation through abnormal cash flows from operations than the control group does.

Why would the balance of power between CEOs and CFOs matter for earnings management? CEOs, whose compensation is largely based on equity, can greatly benefit from manipulating short-term stock prices (e.g., Cheng and Warfield, 2005; Bergstresser and Philippon, 2006). Since CEOs do not directly participate in financial reporting, the CEO needs cooperation from the CFO. However, the CFO, as the responsible person in financial statements, may not always be willing to cooperate. Becker (1968) suggests that people commit crimes when the expected outcome is greater than the expected cost. On one hand, CFOs have a substantially lower portion of equity-

based compensation than their CEOs, leading to smaller equity incentives to manage earnings. On the other hand, CFOs bear considerable costs after being detected in manipulation, including potential job turnover (Hennes et al., 2008), loss of reputation, and legal punishment (Feng et al., 2011). Therefore, it is reasonable to believe that in some cases CFOs are reluctant to commit earnings management. In this context, CEOs may exert pressure on CFOs to satisfy their own desires. [3] They can do so because they are CFOs' direct supervisors (McAnally et al., 2008) and have considerable influence on CFO retention decisions (Mian, 2001; Fee and Hadlock, 2003).

If CFOs have sufficient job-market opportunities, the bargaining power is expected to shift from CEOs to them. Rajan and Zingales (1998) suggest that agents exert ex ante efforts in specializing their human capital and gain ex post bargaining power from control over it. In the case of CFOs, firm-specific information and associated financial experience are critical human capital for the company. CFOs with sufficient external opportunities are not only less concerned about losing their current job, but they also gain the ability to withhold their human capital, leading to an increase in their bargaining power and ability to mitigate pressure from the CEO. If CEO power over the CFO is a cause of earnings management, one would expect the shifts of power between CEOs and CFOs to induce a lower level of earnings management.

An empirical challenge in exploring the effects of the balance of power is the difficulty of directly observing the CFO's job-market status and her bargaining power relative to the CEO. To address this issue, I use the "All-America Executive Team" Best CFO awards from 2009 to 2018 to capture shocks to CFOs' career opportunities. Every year since 2004[4], *Institutional Investor* has

---

[3] The argument is supported by both the theoretical model and evidence from the field. For instance, Friedman (2014) suggests that powerful CEOs are more likely to force their CFOs to implement an upward bias in financial reporting. Dichev et al. (2013) document that 91% of surveyed CFOs faces inside pressure to influence stock prices. Another survey of 141 public firm CFOs by CFO magazine shows that 17% of the respondents has been pressured to misrepresent accounting results by their CEOs during the past five years.

[4] I focus on 2009 to 2018 because the list of ranked nominees is not available for years before 2009. I manually search winners for 2004-2008 and exclude them from my test sample.

surveyed buy-side analysts and sell-side researchers in the financial sector and requested

nominations for the best executives, including the best CFOs, in each business sector the magazine

defines. The ranking of a candidate is determined by the number of votes she receives relative to

other nominees in the same sector. In general, the top-three ranked candidates in each sector are

granted the award.[5] Though firms may have some influence on nominations, it is difficult to

precisely manipulate ranks immediately around the award cutoff. Moreover, only the names of

awardees are publicly available, not non-awardee nominees. Therefore, the ranking allows for the

use of a sharp RDD that compares firms just above and just below the award cutoff to explore how

a rise in CFO power over the CEO affects earnings management.

I first validate whether winning the award affects awardees' job-market status. I manually

track the promotion history for all awardees and the top-10 ranked non-awardees within a time

interval from the first year after the award to 2019. I compare the ex post career opportunities

between the lowest-ranked awardees and the highest-ranked non-awardees, as well as between all

awardees and all top-10 ranked non-awardees. Consistent with previous findings on award effects

on CEO and director job-market status (Malmendier and Tate, 2009; Chen et al. 2019), I document

that awardee CFOs are more likely to experience an external promotion and, in particular, more

likely to gain a key position[6] in another firm. Inside the current firm, awardees have a significantly

higher chance to experience internal promotion, including to a key position.[7] These results suggest

that not only does the external labor market provide better opportunities to awardees, but current

employers also attempt to retain these star CFOs by enhancing their chance of internal promotion.

---

[5] In 2009, only the highest ranked nominees in each sector received the award. Moreover, to receive the award, candidates must meet the criterion of minimum votes. If the minimum votes criterion is not achieved, a candidate will not receive the award even if he or she is top ranked.

[6] A key position in a firm is defined as the chief executive office, president, and/or chief operating officer (COO).

[7] Details about the definition of external and internal promotion are described in Section 4.

Given that the main power that CEOs have over the CFO is to influence her career opportunities (Matejka, 2007), awardees who become less concerned about losing current job have an increased ability to withhold their human capital and thus gain more bargaining power with their CEOs.

Next, I examine the consequent effects of the shifts in power between CEOs and CFOs on earnings management. Following prior studies (e.g., Bergstresser and Philippon, 2006; Jiang et al., 2010; Chava and Purnanaham, 2010), I use the absolute value of discretionary accruals as a proxy for the magnitude of accounting-based earnings management. Consistent with the view that the balance of power between CEOs and CFOs can reduce earnings management activities, I find that the level of discretionary accruals in the lowest-ranked awardee firms is, on average, 106 basis points less than the highest-ranked non-awardee firms in the two-year period following the award. Given that the average magnitude of discretionary accruals is 0.04 in my sample, the economic significance of this decrease is prominent. Because the absolute value of discretionary accruals cannot completely capture the changes in accruals management (e.g., changes in the sign), I also include signed discretionary accruals in my main tests and divide the sample into positive and negative accruals. Consistent with Friedman's (2014) theoretical model in which powerful CEOs are more likely to push earnings upward, I find that winning the award has a significant and negative effect on positive accruals but a weaker effect on negative accruals. Though prior work suggests that the equity incentives of CEOs and CFOs are associated with earnings management, my results are still significant, both statistically and economically, after controlling for CEO and CFO pay-for-performance sensitivity (PPS).

One possibility is that awardee firms become less involved in earnings management for reasons other than the balance of power between CEOs and CFOs.[8] To address this concern, I

---

[8] One alternative explanation, for example, is that winning an award brings substantial visibility to awardee firms, making the market expect high quality in their financial reporting and thus creating more external pressure.

conduct a subsample comparison between firms with different levels of CEO bargaining power. I generate two subsamples using a CEO power indicator constructed in the spirit of previous literature (e.g., Adams et al., 2005). If a decrease in the CEO's relative power is the main channel of the reduction in discretionary accruals, one would expect a difference between the two subsamples. This is because when a firm has a less powerful CEO, winning the award may have a limited marginal effect on earnings management as the CEO already has weak influence over the CFO. Consistent with this prediction, I find that the award effects are significant only when CFOs face powerful CEOs. In the subsample of powerful CEOs, winning the award reduces the magnitude of the two-year average discretionary accruals by 0.017, significant at the 1% level. In contrast, the award effect is smaller and statistically insignificant in the regular CEO group. Similarly, I find a significant and negative effect of the award on positive accruals in the powerful CEO group, while the effect in the regular CEO group is insignificant.

Another concern is that awardee CFOs may still conduct manipulation to achieve earnings targets, but tend to adopt REM as a substitute for accounting-based methods because the former has a relatively lower risk to be detected by external monitoring (e.g., auditors). Previous studies have documented the use of REM in recent years (e.g., Graham et al., 2005; Roychowdhury, 2006) and find evidence that firms make choices between AEM and REM (e.g., Cohen et al., 2008; Badertscher 2011; Zang, 2012). Baker et al. (2019) suggest that firms use more REM when the CFO is powerful relative to the CEO. However, I find that awardee firms where CFOs have gained more bargaining power over the CEO do not show an increase in the use of REM, as measured by abnormal cash flows from operations, discretionary expenditures, and production costs. Indeed, I find weak evidence that the lowest-ranked awardees conduct less earnings management through abnormal cash flows from operations than the highest-ranked non-awardees. Overall, there is no

evidence that the shifts of power from CEOs to CFOs lead to altering earnings management techniques rather than improving the quality of financial reporting.

My study contributes to the literature in several respects. Using a quasi-experiment, my work is among the first to show direct and clean evidence that the balance of power between CEOs and CFOs helps improve financial reporting quality. Prior empirical studies have used variables like CEO/CFO board status and relative pay share to measure their power and provide valuable insights about the relation between these power proxies and earnings management. For instance, Feng et al. (2011) document that firms with significant financial manipulations have similar CFO equity incentives but more powerful CEOs than their matched counterparts. Baker et al. (2019) show that AEM (REM) is associated with CEO (CFO) power over the CFO (CEO). A challenge in interpreting these results, however, comes from potential endogeneity. For example, the use of financial manipulation may be harmful to the CFO's individual performance and reputation, leading to an increase in the relative power of the CEO; the intensive use of REM, which is negatively associated with future firm performance, may hurt the CEO's performance, driving up the relative power of the CFO. My study employs award events that impair CEO power through improving CFO job-market status and uses RDD to establish the causal effect, thus providing direct and precise evidence of the effect of CEO-CFO power shifts on earnings management.

Second, this work sheds light on the channel through which CEOs can manipulate earnings and suggests a possible solution to the problem. The existing literature documents a significant relation between CEO equity incentives and earnings management (e.g., Cheng and Warfield, 2005; Bergstresser and Phillippon, 2006). However, it is not clear how CEOs respond to such incentives and initiate manipulation. My results suggest that the influence of the CEO on subordinates' career opportunities may force CFOs to manipulate earnings in response to CEOs'

desires. More importantly, the results show the effect of improving CFO career opportunities in offsetting CEO bargaining power and reducing manipulation. These findings have important implications for current corporate governance reform; that is, firms may benefit from increasing CFO independence, adding positions (e.g., chief audit officer) that can provide support for the CFO's independence, and balancing the CEO's power in subordinates' hiring, compensation, and turnover decisions.

The findings of my study also complement the sizable body of literature that explores manipulation through real activities and firms' choices between REM and AEM (e.g., Roychoudhury 2006; Graham et al., 2005; Cohen et al., 2008; Badertscher, 2011; Zang, 2012). Instead of limiting my research to only one type of earnings management technique, my examination includes both AEM and REM and, thus, provides a complete picture of the consequences of improving CFO relative power. Despite previous findings that powerful CFOs may prefer REM (e.g., Baker et al., 2019), I find no support for that an increase in CFO power over the CEO causes a substitute of AEM for REM. This mitigates the concern about whether the decrease in AEM will be offset by a more intensive use of REM. Indeed, my findings suggest that the balance of power between CEOs and CFOs improves the overall quality of financial reporting because it reduces the level of accounting-based earnings management without incurring a jump in manipulation through real activities.

The remainder of the paper is organized as follows. Section 1 develops hypotheses for empirical tests. Section 2 provides details on the award data, the RDD strategy, and key-variable construction. Section 3 presents empirical results. Section 4 concludes.

1. Hypotheses Development

I start by analyzing the impacts of winning the award on awardees' career opportunities. As Frey and Neckermann (2010) show, awards in recognition of excellence function as signals of unobservable individual dedication and ability. As long as the award results are not perfectly predictable, the award conveys new information to the market about an awardee's individual characteristics, such as effort and talent. Given the existence of an active external labor market, awardees are viewed as highly favored job candidates. In other words, if an award represents a substantial shock to reputation capital, it brings more outside career opportunities to awardees. To examine this proposition, I use a regression discontinuity design (RDD) first proposed by Thistlethwaite and Campbell (1960) to estimate the local average treatment effect around the award cutoff. Given that it is hard to manipulate ranks around the cutoff, CFOs whose ranks are just above or just below the cutoff can be assumed as close-to-randomly assigned to a treatment. Then I compare the ex post career opportunities between the lowest-ranked awardees and the highest-ranked non-awardees. The analysis and empirical strategy lead to the following hypothesis:

H1: *The lowest-ranked awardees have more outside job opportunities than the highest-ranked non-awardees.*

Despite an increase in potential outside offers, an awardee does not have to join another firm as long as her promotion opportunity in the current company increases to an equivalent level. Awardees' current employers may be willing to provide the reward because the specialized human capital of these job-market stars are in precious and its withdrawal could lead to a decrease in economic rent. Accordingly, an awardee who is retained in the current company is expected to experience a significant increase in internal promotion and total compensation caused by the increase in external job opportunities.

H2: *The lowest-ranked awardees have a higher likelihood of being promoted inside the firm than the highest-ranked non-awardees.*

Next, I develop hypotheses about how the change in awardee CFOs' job-market status influences the use of earnings management in their firms. According to Rajan and Zingales' (1998) framework, employees gain bargaining power over employers through the ability to withhold their human capital inputs. Though the CEO has critical influence over the CFO's compensation and retention (Matejka, 2007), top CFO awardees who experience a notable increase in external job opportunities might gain bargaining power from their improved ability to withdraw their specialized human capital (e.g., experience and knowledge associated with firm-specific information) from the current firm. In other words, awardees who become less concerned about losing their current jobs have increased bargaining power relative to their CEOs. If CEO power is a cause of earnings management, one would expect to observe a lower level of earnings management in awardees' firms since awardees have gained more bargaining power relative to their CEOs. In the spirit of previous literature, I use the magnitude of discretionary accruals to measure the level of earnings management. I expect the lowest-ranked awardee firms to have less discretionary accruals than the highest-ranked non-awardees. I formalize this hypothesis as follows:

H3: *The magnitude of discretionary accruals decreases in firms of the lowest-ranked awardees, as compared to the highest-ranked non-awardees.*

Moreover, if the shift in power between CEOs and CFOs is the channel for the decrease in earnings management, the award effect should differ among firms with different levels of CEO bargaining power. For firms with powerful CEOs, the award effect is expected to be significant because the decrease in CEO power reduces the CEO's influence over the CFO to fiddle with earnings. In contrast, winning the award may not significantly affect firms with less powerful

CEOs because these CEOs already have weak influence over their CFOs and the marginal effect of further reducing their power is limited. This discussion leads to the following hypothesis:

H4: *The effects of winning an award on the use of discretionary accruals are stronger for firms with powerful CEOs.*

In the case of REM activities, however, the effect of winning an award is not clear. While AEM deals with accounting standards and principles, REM is achieved by real activities and appears as "departures from normal operational practices" with a motivation to reach a certain reporting goals (Roychowdhury, 2006). Though CFOs might be reluctant to conduct AEM due to their responsibility as a monitor of financial reporting, their concerns about the use of REM is much less since it is less likely to be detected by the scrutiny of auditors (Gunny, 2010). Furthermore, Zang (2012) find that firms conduct more REM when the costs of ARM increase. Awardees may prefer REM if winning the award causes more external pressure due to an increase in visibility. On the other hand, CEOs may not prefer REM because it has negative influences on future performance (Zang, 2012). Therefore, an awardee CFO, who gains more power over the CEO, may choose to (and is also able to) substitute AEM for REM to meet earnings targets. This argument is consistent with previous findings that firms with powerful CFOs have a greater level of REM (Baker, et al. 2019) and can be expressed as the following hypothesis:

H5A: *Awardee firms conduct more REM than their non-awardees counterparts.*

An alternative prediction is that awardee CFOs tend not to increase REM while reducing AEM. After all, the use of REM is motivated by the desire to achieve earnings targets even if doing so may mislead other stakeholders and thus violates one of a CFO's primary responsibilities, that is, to accurately communicate with other stakeholders through information provided in financial reports. Awardees, like other CFOs, have smaller equity incentives than the CEO. Moreover, they

face less pressure from the CEO to meet earnings goals after the award. Therefore, they might not consider it necessary to use REM as a substitute when AEM declines. If so, the balance of power between CFOs and CEOs can be considered beneficial to financial reporting quality, because it reduces AEM without causing a more intensive use of REM as a substitute. I formulate the following competing hypothesis of H5A:

H5B: *Awardee firms have no significant increase in REM, compared to non-awardee firms.*

2. Award Data, RDD, and Outcome-Variable Construction

2.1 The "All-America Executive Team" Best CFO Award

The core of my data is a list of ranked nominees for the "All-America Executive Team" Best CFO award granted by *Institutional Investor* magazine between 2009 and 2018.[9] I choose this award because (1) it is national in scope and open to any CFO in the United States, (2) it is granted by a prestigious organization and thus can affect the awardee's subsequent status in the labor market, and (3) the award process is credible and reliable so it is unlikely that the ranks around the award cutoff can be manipulated. More details are provided below.

With a circulation of more than 100,000, *Institutional Investor* is a leading magazine that mainly serves institutional investors (e.g., pension funds, mutual funds, money managers); it is well known for providing global research and rankings often considered industry benchmarks. Every year since 2004, a research team from the magazine sends surveys to investment professionals in both the buy-side and the sell-side, requesting them to nominate the best CFOs across more than 40 business sectors.[10] The award aims to identify "the work of the most

---

[9] Before 2010, the award was named "America's Best CFOs." Since 2010, *Institutional Investor* has terminated the old award category and published the list of the "All-America Executive Team," which separately recognizes the best CEOs, CFOs, investor-relation (IR) professionals, IR programs, and analysts.

[10] The sector is identified by *Institutional Investor*. The yearly number of sectors is from 44 to 58. The variation is mainly because in some years, *Institutional Investor* divides large sectors into several smaller groups (e.g., Banking, large-cap; Banking, mid-cap and small-cap).

noteworthy financial executives" [11] and is considered a great honor by many firms and individuals.[12] Though the organizer does not provide formal criteria for the selection process, it highlights that survey respondents vote for CFOs who effectively communicate with other stakeholders about firm performance and contribute to improving operations and revenues.

Award recipients are determined in a reliable voting process using secure, web-based ballots, with follow-up phone calls for more details when necessary. The number of responses has ranged from 2,000 to more than 3,000 in recent years.[13] Survey respondents are asked to nominate up to four best CFOs across all sectors in their coverage universes without a preset list of candidates. Identities are kept confidential to assure fairness. After receiving feedback, the organizer's own research group ranks nominees within each sector based on the number of votes they received. In most years during my sample period, the top-three ranked nominees become awardees, under the condition that the minimum votes criteria are achieved. In 2009, only the highest-ranked nominees were granted the award. Only the names of awardees are announced to the public, while nominees' identities are kept private.

Every year except for 2009, *Institutional Investor* has separately announced two lists, both online and in print: the buy-side best CFOs and the sell-side best CFOs.[14] Because of possible biases from the sell-side, I use the buy-side list of ranked nominees and exclude sell-side awardees from my sample in robustness tests. Overall, 7,223 CFOs are nominated by buy-side professionals across more than 40 sectors between 2009 and 2018, including 2,843 unique individuals and 2,187 unique firms. A total number of 2,163 unique firms in the list are successfully matched to the

---

[11] "The Best CFOs in America", Institutional Investor, 2004,
http://www.institutionalinvestor.com/article/1026650/the-best-cfos-in-america.html#.WOAgZFUrJtQ
[12] Awardee CFOs and their firms usually include the award news in their profiles or newsletters as proof of excellence; see, for example, https://www.westernalliancebancorporation.com/news/WAL-Institutional-Investor-2018-all-america-executive-team
[13] A total of 3,022 buy-side analysts and portfolio managers at 1,073 firms voted in 2018, according to the magazine.
[14] There was no sell-side voting in 2009.

CRSP/Compustat merged database. I exclude all unmatched nominees from my sample because I rely on CRSP/Compustat to construct earnings management measures. Figure 1 shows the number of awardees, non-awardees, and all nominees by year.

[Insert Figure 1 Here]

The year 2009 has the lowest number of awardees because only the highest-ranked nominees received the award in that year. The relatively small awardee number from 2010 to 2012 is because some awardees failed to achieve the minimum votes caused by a low response rate. To address the problem that the top-three nominees do not necessarily become awardees, I follow Howell (2017) to center ranks on zero. Specifically, the lowest-ranked awardees are re-ranked as 1, and the highest-ranked non-awardees are re-ranked as -1. Each sector-year has at least one [-1, 1] pair. Then I expand the band range to include higher-ranked awardees and lower-ranked non-awardees.[15] Unless otherwise specified, all ranks I use in the paper are centered ranks.

Figure 2 shows the number of nominees whose centered rank is in the range of [-1, 3]. Panel A includes CFOs who are successfully matched to the CRSP/Compustat merged database. As explained earlier, no awardee has a centered rank higher than 1 in 2009, and the number of higher ranked awardees in 2010-2012 is relatively small. After 2012, the difference among the four groups becomes narrower. To assure that treatment does not affect ranks, I exclude all previous awardees, including winners from 2004 to 2008, from my primary tests.

[Insert Figure 2]

Panel B of Figure 2 reports the number of CFOs after excluding previous winners for the top-four groups. Since winning the award can significantly improve an awardee's visibility and status, it is not surprising that many previous awardees regain a high rank in a later competition, leading

---

[15] For instance, rank = 2 is assigned to awardees who are ranked one spot higher than rank = 1, if any, while non-awardees who are ranked one spot lower than rank = -1 have a centered rank = -2.

to a significant decrease in the number of current awardees after excluding previous winners from the sample. The number of CFO-year observations decreases to 4,682. This influence is more significant for the top-two ranked groups (i.e., centered rank = 2 or 3) but less substantial in the two groups immediately around the cutoff, leaving a fairly large number of observations in these two groups (143 and 276, respectively) to allow a comparison between them.

2.2 Empirical Strategy

To identify a causal relation between the rise of CFOs' relative power and earnings management, I use a sharp RDD, in which a treatment (win the award) occurs when the ranking of a nominee reaches a threshold (centered rank = 1 or higher). Because CFOs just above and below the threshold can be considered close-to-randomly assigned to a treatment, one can establish the causal effect of the treatment by comparing the average differences between the two groups.

Following Howell (2017), I employ two different samples in the main tests: the narrow sample which only includes nominees whose rank ranges in [-1, 1] and the complete sample which includes all awardees and non-awardees.[16] The narrow sample compares awardees and non-awardees with only a one-rank difference. For this sample, I estimate the following regression:

$$Outcome_{i,t} = \beta_0 + \beta_1 \times Awardee + \beta_2 \times X_{i,t} + \eta_t + \eta_s + \varepsilon_{i,t} , \quad (1)$$

where $Outcome_{i,t}$ is a given outcome after the award; $Awardee$ indicates rank = 1; $X_{i,t}$ are controls; η_t is the award year dummy; and η_s is the sector dummy.

To extend the sample size, I also pool the nominee data and include a quadratic function of ranks as in Howell (2017). I employ the following model for the complete sample:

$$Outcome_{i,t} = \beta_0 + \beta_1 \times Awardee + \beta_2 \times TransRank + \beta_3 \times TransRank^2 + \beta_4 \times X_{i,t} + \eta_t + \eta_s$$
$$+ \varepsilon_{i,t} , \quad (2)$$

---

[16] When examining ex-post promotions, only the top-10 ranked non-awardees (i.e., rank ∈ [-10,-1]) are included.

where $Awardee$ indicates rank ≥ 1; $TransRank$ is the translated rank calculated by adding the absolute value of the minimum rank to each centered rank; and $TransRank^2$ is the squared term. I use logistics regressions to examine the external and internal promotion because the dependent variable is an indicator for a given type of promotion. I employ ordinary least squares (OLS) in other estimations. I cluster standard errors by sector-year in all specifications.

My RDD is valid for several reasons. First, the award is granted by a famous organization and is used to recognize CFO excellence. Only the list of awardees is publicly available, not the list of non-awardees. Hence, winning the award can be considered a positive shock to a winner's labor market status, satisfying the requirement that treatment should be allowed to affect the outcome. Second, the award decision occurs after ranking, not the other way around. I also exclude from my sample previous winners whose reputation as an awardee could influence the number of future votes. Therefore, ranks in my sample are not caused by the treatment. Last but not least, ranks around the award cutoff cannot readily be manipulated in my setting. Because the number of votes received relative to competitors directly decides one's ranking, and votes are submitted by thousands of investment professionals, this excludes the likelihood that the organizer can determine the results. It is also difficult for candidates to manipulate the results because (1) firms do not know who receives the survey and who responds to it, (2) they have no information on their competitors or their own standing, and (3) an increase in one's actual number of votes does not assure an improvement in her relative ranking because each survey recipient is allowed to nominate up to four candidates; in other words, nominating one candidate does not exclude the chance of another candidate being nominated.

Figure 3 demonstrates continuity in baseline firm/individual attributes in the award year.[17]

Changes around the cutoff are smooth in most cases. I also show smoothness in outcome variables

in the award year in section 4. In addition, I conduct a set of balance tests on the narrow sample.

No significant difference is found between the treatment and control samples. The largest absolute

value of the t-statistic (see Table A1 in the appendix) is 1.4.

[Insert Figure 3]

2.3 Construct Outcome Variables

To measure the job-market status of CFOs in the award list, I manually track the promotion

history for all awardees and the top-10 ranked non-awardees from the first year after the award to

2019. Data sources include Execucomp, Bloomberg Executive Profile and Biography database,

proxy statements, company websites, business news archives, and Google. I group all promotions

into two categories: external and internal. External promotion is defined as the first time that a

CFO experiences one of the following outcomes after receiving the award or attaining a

nomination: (1) gains a key position, including CEO, president, or COO, in another firm, (2)

becomes the CFO of a larger firm[18], or (3) other external job change which can be considered a

promotion (e.g., a CFO becomes a senior vice president and CFO in another firm). I define internal

promotion as, after the award, the CFO is promoted to a key position in her own firm or to

executive director, or the CFO experiences another internal position change that can be considered

a promotion (e.g., a CFO becomes a vice chair, or a vice president and CFO becomes an executive

vice president and CFO).

---

[17] The award year is defined as the fiscal year that ends preceding the announcement of the awardee list.

[18] I consider large in size to be a proxy for firm prestige in the spirit of recent work by Masulis and Mobbs (2014). A larger firm is defined as a firm that holds more total assets than the CFO's existing firm as of the fiscal year-end when the CFO moves.

I rely on Compustat to construct measures for accounting-based and real earnings management. I use the modified Jones model proposed by Dechow et al. (1995) to estimate discretionary accruals.[19] Specifically, I estimate a regression cross-sectionally in each year and SIC two-digit industry group with at least eight observations:

$$TA_{i,t} = \beta_1 \times (1/Ass_{i,t-1}) + \beta_2 \times (\Delta SALE_{i,t} - \Delta REC_{i,t}) + \beta_3 \times PPE_{i,t} + \varepsilon_{i,t}, \quad (3)$$

where $TA_{i,t}$ is total accruals, defined as earnings before extraordinary items and discontinued operations minus cash flows from operations. $Ass_{i,t-1}$ is the lagged total assets. $\Delta SALE_{i,t}$ is the change in sales for firm i in year t. $\Delta REC_{i,t}$ is the change in net receivables in year t. $PPE_{i,t}$ is the gross property and equipment. $TA_{i,t}$, $\Delta SALE_{i,t}$, $\Delta REC_{i,t}$, and $PPE_{i,t}$ are all scaled by $Ass_{i,t-1}$. The predicted value from the regression is defined as normal accruals. Discretionary accruals is then calculated as the difference between the total accruals and the estimated normal accruals. In main tests, I track the changes of discretionary accruals from the award year (t0) to two years after (t2).

Following previous literature (e.g., Roychowdhury, 2006; Cohen et al., 2008), I measure real earnings management using abnormal cash flows from operations, discretionary expenses, and production costs. Specifically, I estimate the following three regressions for the normal level of cash flows from operations, discretionary expenses, and production costs:

$$CF\_O_{i,t} = \beta_1 \times (1/Ass_{i,t-1}) + \beta_2 \times SALE_{i,t} + \beta_3 \times \Delta SALE_{i,t} + \varepsilon_{i,t}, \quad (4)$$

$$DISC_{i,t} = \beta_1 \times (1/Ass_{i,t-1}) + \beta_2 \times SALE_{i,t} + \varepsilon_{i,t}, \quad (5)$$

$$PROD_{i,t} = \beta_1 \times (1/Ass_{i,t-1}) + \beta_2 \times SALE_{i,t} + \beta_3 \times \Delta SALE_{i,t} + \beta_3 \times \Delta SALE_{i,t-1} + \varepsilon_{i,t}, \quad (6)$$

In the above three models, $CF\_O_{i,t}$ is the actual level of cash flows from operations. $DISC_{i,t}$ is the sum of R&D, advertising, and selling, general and administrative (SG&A) expenses.[20] $PROD_{i,t}$

---

[19] I also use the performance-adjusted model as suggested by Kothari et al. (2005) in robustness tests and obtain similar main results.
[20] Missing R&D and advertising expenses are set to zero as long as SG&A is available.

is the sum of costs of goods sold and change in inventory. $CF\_O_{i,t}$, $DISC_{i,t}$, $PROD_{i,t}$, $SALE_{i,t}$, $\Delta SALE_{i,t}$ and $\Delta SALE_{i,t-1}$ are all scaled by $Ass_{i,t-1}$.

I estimate the above cross-sectional regressions by each year-industry with at least eight observations. The abnormal level of cash flows from operations and discretionary accruals are denoted as RM_CFO and RM_DISX and are calculated as the estimated residuals from models (4) and (5), respectively. I multiply RM_CFO and RM_DISX by -1 so that higher values indicate larger level of real earnings management. The estimated residual from model (6) is the abnormal level of production costs, denoted as RM_PROD.

Table 1 reports summary statistics for various outcome variables and key controls, split into lowest-ranked awardees, highest-ranked non-awardees, and all nominees. Panel A shows that, during the years after an award, the lowest-ranked awardees have a noticeably higher chance to experience external/internal promotion or both. The mean percentage of lowest-ranked awardees who experience at least one type of promotion after the award is 35%, in contrast to 26% of the highest-ranked non-awardees and 22% of all nominees whose centered rank is higher than -10.

[Insert Table 1]

Panel B focuses on proxies of AEM and REM and reports their levels at t0 and t2, as well as the (t1, t2) average. While there is no obvious difference in the average level of discretionary accruals in the award year among the three groups, the difference for the post-award period is remarkable. The average magnitude of discretionary accruals decreases from 0.04 to 0.02 within two years after the award for the lowest-ranked awardees, but stays as 0.04 for the highest-ranked non-awardees. However, no clear trend is captured for REM. On one hand, the rank = 1 group has a decrease in RM_CFO and RM_PROD, indicating a decrease in real earnings management. On the other hand, this group also has more RM_DISX, implying an increase in real earnings management.

Panel C demonstrates key controls in the award year for the three groups. Data sources for control variables include CRSP, ExecuComp, BoardEx, and Audit Analytics. I also manually collect missing data of CFO age and tenure from Bloomberg, proxy statements, 10-k files, and Google. It is clear from Panel C that while firms and individuals around the cutoff (rank = 1 and rank = - 1) are visibly different from the rest of the sample along many dimensions, the difference between them is not as apparent, consistent with the continuity in baseline firm/individual attributes around the cutoff, as shown in Figure 3.

3. Main results

3.1 Award Effects on CFO Career Opportunities

In this section, I examine whether the CFO awards have significant effects on awardees' career opportunities outside and inside the firm. I first visually demonstrate the external and internal promotion ever after the award for awardees whose rank = 1 or 2 and non-awardees whose rank ≥ -6. I do not include the highest-ranked awardees in this figure and thereafter because of the considerably small number of observations and large variance in this group, as shown in Figure 2.

Figure 4 reveals that awardees experience more internal promotion after the award than non-awardees. With regard to external promotion, however, the difference between awardees and non-awardees is not as obvious. Meanwhile, all panels in Figure 4 demonstrate a concave shape for nominees whose rank >= -2. This is not surprising since rank is highly related to one's ability and status, and thus the best CFOs may have already gained very good job positions, leaving little room to a further improvement.

[Insert Figure 4 Here]

Next, I turn to regression analysis to conduct a more careful examination. I estimate equation (1) and (2) and use logistic regression in all specifications. Results are reported in Table 2. In Panel

A, I focus on external promotion and employ a subsample of CFOs who leave the company at some point after the award. Column 1 and 2 study the likelihood of gaining a key position in another firm, while column 3 and 4 include any of the 3 types of external promotion, as defined in section 2. In line with H1, coefficients on the awardee indicator are significant and positive for key position in both the narrow group (rank $\in$ [-1, 1]) and the complete group (all nominees). When it comes to external promotion, however, the coefficient is significant only in the narrow group but not in the complete group. This may be because many awardees, in particular the top-two ranked ones, are already in the most prestigious firms and thus have relatively small motivation to join another firm in action. However, this does not imply that awardees face less potential outside offers and job-market opportunities. After all, a CFO does not have to move to another firm as long as they receive equivalent promotion opportunities inside their own firms. Therefore, I examine the award effect on the internal promotion as the next step. I require CFOs to stay in the current firm for at least one year after the award to be included in the test. For robustness, I also require CFOs to stay at least two years after the award in some specifications.

[Insert Table 2 Here]

Panel B confirms the prediction in H2. All coefficients on *Awardees* are significant and positive, suggesting that winners face substantially more promotion opportunities inside the firm. As expected, the likelihood of internal promotion is concave with respect to rank. The coefficient is positive and significant on *TransRank* and negative and significant on $TransRank^2$. However, this does not reduce the extra effect of winning the award. In column 3, 4, 7, and 8, the coefficients on *Awardee* are all positive and significant at 1% level.

Then I combine external and internal promotion to construct two new dependent variables: *At Least One*, an indicator equal to 1 if a CFO experiences at least one type of promotion (i.e., external

or internal) after the award year; and *Any Promotion – Multiclass*, which equals 1 if either type occurs after the award, 2 if both, and 0 if none. Results are shown in Table 3. In Panel A where logit regressions are used, coefficients on *Awardee* are positive and significant in both the narrow group and the complete group, suggesting that awardees are more likely to experience at least one type of promotion after the award. The probability of promotion, on average, is 35% for the lowest-ranked awardees, substantially higher than that of the highest-ranked non-awardees (24%). In Panel B, I use multinomial logistic regressions.[21] The results show that awardees not only have a larger chance to have either type of promotion, but also are more likely to have both.

[Insert Table 3 Here]

3.2 Award Effects on Earnings Management

3.2.1 Discretionary Accruals and CFO Awards

Results in 3.1 suggest that awardees are favored candidates in the labor market both inside and outside their own firms. A substantial increase in career opportunities makes awardees less concerned about losing their current jobs, resulting in extra abilities to withhold critical human capital and an increase in their bargaining power over the CEO. If the balance of power between the CEO and CFO matters for earnings management, a lower level of discretionary accruals is expected to be found in awardee firms. In this section, I examine this prediction.

Figure 5 visually compares the magnitude of discretionary accruals (|DA|) before and after the award. |DA| in Panel A is measured as of the fiscal year-end preceding the award year (t0), while Panel B shows the average of |DA| in the two years following the award (t1 and t2). An obvious drop in |DA| is captured around the award cutoff.

---

[21] I do not control for year and sector dummy because doing so does not permit convergence. In untabulated robustness checks, I find similar results by using OLS with year and sector fixed effects.

[Insert Figure 5 Here]

Next, I estimate variants of equation (1) and (2) in Table 4. I control for |DA| at t0 in all specifications because the pre-assignment dependent variable might be related to the post-assignment ones (see, e.g., Lee and Lemieux, 2010). Column 1-3 in Panel A use the narrow sample and demonstrate a negative award effect on the magnitude of discretionary accruals. Compared to the highest-ranked non-awardees, awardee firms have significantly less |DA| at both t1 and t2. The economic significance is also remarkable. Winning the award reduces the two-year average of |DA| by 106 basis points, noticeably large in relation to the average level in my sample (0.04). In column 4 of Panel A, I expand the sample to include all nominees and control for a quadratic function of rank. The award effect is similarly significant.

[Insert Table 4 Here]

Prior work shows that the equity incentives of CEOs and CFOs are strongly associated with earnings management (e.g., Bergstresser and Phillippon, 2006; Jiang et al., 2010; Chava and Purnanaham, 2010). Therefore, I repeat the above tests in Panel B by adding CFO and CEO PPS as control variables. [22] Doing so further limits my sample to S&P 1500 executives whose compensation information is available in Execucomp. However, the award effect is still significant, while both CFO and CEO incentives are uninformative here.

[Insert Table 5 Here]

The absolute value of discretionary accruals cannot completely capture the changes in accruals management. Therefore, I also investigate the award effect on signed discretionary accruals, divided into positive accruals and negative accruals. In Panel A of Table 5, I use a subsample where firms hold positive discretionary accruals (DA+) in a given period. Column 1 and 2 show

---

[22] CFO and CEO pay-for-performance are defined as described in Appendix 1.

that winning the award has a negative effect on DA+ at t1 and t2. Moreover, among firms which hold positive discretionary accruals in the two-year period following the award, the lowest-ranked awardees have 140 basis points less discretionary accruals than the highest-ranked non-awardees do. As shown in column 4, the award effect still holds after controlling for CFO and CEO incentives. Column 5 and 6 indicate that including all nominees does not change the significance of the coefficients on *Awardee*, either. However, when it comes to negative accruals, the award effect becomes weak. Panel B repeats the above tests by using negative discretionary accruals (DA-). Among the six specifications, the award effect is only significant at 10% for firms that hold negative accruals in t2. Overall, the results suggest that winning the award has a significant effect on smoothing positive accruals, but the effect on negative accruals is much weaker. This finding is in line with theoretical models where powerful CEOs are more likely to push earnings upward.

3.2.2 CEO-Power Subsample Comparison

If the increase in CFO power over the CEO is the main channel of the reduction in discretionary accruals, one would expect a difference between firms with different levels of CEO bargaining power. The CFO award might have limited marginal effects on earnings management in firms with less powerful CEOs as these CEOs already have weak influence over their CFOs. Therefore, I divide the full sample into two subsamples based on CEO power. Following Adams et al. (2005), I define a CEO to be powerful if she (1) is the only insider on the board, (2) is the founder of the company, or (3) holds both the president and the chairman titles. Inspired by prior work on awards and CEO status (e.g., Malmendier and Tate, 2009), I also set the powerful CEO indicator to be 1 if the CEO of a given company wins the "All-America Executive Team" Best CEO award no later than the CFO's nomination. I manually collected the list of CEOs who won the award from 2004 to 2018.

I include sample firms which have powerful CEOs at t0 in the powerful CEO subsample and assign the rest to the regular CEO subsample. Figure 6 shows clear discontinuity of post-award |DA| around the award cutoff in the powerful CEO group. In contrast, the drop at the cutoff is not as obvious in firms with regular CEOs.

[Insert Figure 6 Here]

Table 6 presents regression results. In panel A, the dependent variable is the (t1, t2) average of |DA|. Column 1-4 employs a subsample where the powerful CEO indicator equals 1 at t0. Coefficients on *Awardee* are significant at 1% in all of the four specifications. The economic significance is also considerably large. The lowest-ranked awardee firms hold 168 basis points less |DA| than highest-ranked non-awardees. The difference between awardees and non-awardees is 106 basis points when including all nominees. On the other hand, none of the coefficients on *Awardee* are significant when the regular CEO sample is used, as shown in column 5-8. The magnitude of these coefficients is also small relative to the powerful CEO sample (e.g., 52 basis points in the narrow sample, and 14 basis points in the complete sample).

[Insert and Table 6 Here]

Next, I conduct the subsample comparison of signed accruals and report the results in Panel B. I do not control for CFO/CEO incentives here to avoid a further decrease in the sample size. Column 1-4 examine positive accruals and show that the coefficients on *Awardee* is only significant in the powerful CEO subsample, suggesting that the previously documented award effect is mainly driven by firms with powerful CEOs. Column 5-8 focus on DA- and do not show significance in either subsample.

3.2.3 Real Earnings Management

Results so far suggest that the balance of power between CEO and CFO reduces accounting-based earnings management. However, these results do not necessarily imply a decrease in overall earnings management activities, because firms may substitute accruals management for real activities manipulation. As a next step, therefore, I investigate the influence of winning the award on real earnings management to show a complete picture of the effect of the balance of power.

Figure 7 plots the three proxies of real earnings management before and after the award. *RM_CFO* and *RM_DISX* are calculated by multiplying abnormal cash flows from operations and abnormal discretionary expenses by -1, respectively, so that higher values indicate larger REM. There is no visual evidence in Figure 7 that real earnings management significantly increase after the award. Indeed, there is a slight drop in ex post *RM_CFO* and *RM_PROD* around the cutoff.

[Insert Figure 7 Here]

Table 7 reports results from estimating OLS regressions. Panel A shows that the lowest-ranked awardees have less *RM_CFO* at t2 than the highest-ranked non-awardees, significant at 10%. The (t1, t2) average of *RM_CFO* also appears to be less for the lowest-ranked awardees. After including all nominees, the significance disappears, though the sign of the coefficient keeps negative. Panel B and C suggest that winning the award has no significant effect on either *RM_DISX* or *RM_PROD*.

[Insert Table 7 Here]

If the increase in CFO power over the CEO will lead to a switch from AEM to REM, one would expect a stronger effect in the powerful CEO group because firms with weak CEOs may have already set REM at a high level. In other words, it is possible that firms with less powerful CEOs drive the insignificance documented in Table 7. To address this concern, I conduct a subsample comparison using the narrow sample in Table 8.[23] Column 1-3 use the powerful CEO

---

[23] In untabulated test, I change to the complete sample and the results still hold.

group, while column 5-6 employ the regular CEO sample. None of the coefficients on *Awardee* are significant, suggesting no noticeable difference between the two subsamples. Overall, I find no evidence that awardee firms increase REM after the award.

[Insert Table 8 Here]

4. Conclusion

To conclude, my study provides new evidence on how the balance of power between CEOs and CFOs affects earnings management. I employ a unique dataset of "All America Executive Team" Best CFO awards that influence CFO job-market status and use a sharp regression discontinuity design to establish the causal effect. I document that awardees face significantly better career opportunities inside and outside the firm, which can arguably improve their bargaining power over the CEO. Consistent with the view that the shifts in power between CEOs and CFOs reduce earnings management, I find that awardee firms have significantly smaller magnitude of discretionary accruals, relative to non-awardee counterparts. I also document a significant and negative influence of winning the award on positive discretionary accruals, while the influence on negative accruals is weak. Moreover, the award effects are only significant when firms have powerful CEOs. I find no evidence that these results are driven by that awardees are more aggressively using REM as a substitute of AEM.

My study contributes to understanding causes of earnings management and aggressive financial reporting and has important implications for corporate governance reforms. Researchers and regulators have generally expressed the view that restricting CFO equity incentives may contribute to financial reporting quality. The SEC, for instance, amended disclosure requirements on CFO compensation after SOX. In contrast, my study provides evidence that balancing the

power between CEOs and CFOs could also help reduce earnings management. Firms may benefit from providing more support for the CFO's independence and balancing the CEO's power in decisions regarding subordinates' hiring, compensation, and turnover.

Reference

Adams, R., Almeida, H., and Ferrerira, D., 2005. Powerful CEOs and Their Impact on Corporate Performance. *Review of Financial Studies Volume* 18, 1403-1432.

Badertscher, B., 2011. Overvaluation and the Choice of Alternative Earnings Management Mechanisms. *The Accounting Review* 86: 1491-1518.

Baker, G., Jensen, M., and Murphy, K., 1988. Compensation and Incentives: Practice versus Theory. *Journal of Finance* 43, 593–616.

Baker, T., Lopez, T, Reitenga, A., and Ruch, G., 2019. The Influence of CEO and CFO Power on Accruals and Real Earnings Management. *Review of Quantitative Finance and Accounting* 52: 325-345.

Bakke, T., and Whited, T., 2012. Threshold Events and Identification: A Study of Cash Shortfalls. *Journal of Finance* 67, 1083-1111.

Becker, G., 1968. Crime and punishment: an economic approach. *Journal of Political Economy* 76, 169–217.

Bergstresser, D., Philippon, T., 2006. CEO Incentives and Earnings Management. *Journal of Financial Economics* 80, 511–529.

Burns, N., and Kedia, S., 2006. The Impact of Performance-Based Compensation on Misreporting. Journal *of Financial Economics* 79, 35-67.

Chava, S., and Purnanandam, A., 2010. CEOs versus CFOs: Incentives and Corporate Policies. Journal *of Financial Economics* 97, 263-278.

Chen, M., Tran, H., Wu, Q., and Zhivotova, E., 2019. Director Reputation, Settling-Up, and the Market for Boardroom Talent. Working paper.

Cheng, Q., and Warfield, T., 2005. Equity Incentives and Earnings Management. *The Accounting Review* 80, 441–476.

Cohen, D., Dey, A., and Lys, T., 2008. Real and Accrual-based Earnings Management in the Pre- and Post-Sarbanes Oxley Periods. *The Accounting Review* 83, 757–787.

Coles, J.L., Daniel, N., and Naveen, L., 2006. Managerial Incentives and Risk-Taking. *Journal of Financial Economics* 79, 431-468.

Coles, J.L., Daniel, N., and Naveen, L., 2014. Co-opted Boards. *Review of Financial Studies* 27, 1751-1796.

Collins, D., Masli, A., Reitenga, A., and Sanchez, J., 2009. Earnings Restatements, the Sarbanes–Oxley Act and the Disciplining of Chief Financial Officers. *Journal of Accounting Auditing & Finance 24*, 1–34.

Core, J., and Guay, W., 2002. Estimating the Value of Employee Stock Option Portfolios and Their Sensitivities to Price and Volatility. *Journal of Accounting Research* 40, 613-630.

Core, J., Holthausen, R., and Larcker, D., 1999. Corporate Governance, Chief Executive Officer Compensation, and Firm Performance. *Journal of Financial Economics* 51, 371-406.

Dechow, P., Sloan, R., and Sweeney, A., 1995. Detecting earnings management. *Accounting Review* 70, 193-225.

Desai, H., Hogan, C., and Wilkins, M., 2006. The Reputational Penalty for Aggressive Accounting: Earnings Restatements and Management Turnover. *The Accounting Review* 81, 83-112.

Dichev, I., Graham, J., Harvey, C., and Rajgopal, S., 2013. Earnings Quality: Evidence from the Field. *Journal of Accounting Economics*.56, 1–33.

Doyle, J., Ge, W., and McVay, S., 2007. Determinants of weaknesses in internal control over financial reporting. *Journal of Accounting and Economics* 44: 193–223.

Fama, E., 1980. Agency Problems and the Theory of the Firm. *Journal of Political Economy*, 88, 288-307.

Feng, M., Ge, W., Luo, S., and Shevlin, T., 2011. Why do CFOs Become Involved in Material Accounting Manipulations? Journal *of Accounting and Economics 51*, 21-36.

Fich, E., and Shivdasani, A., 2007. Financial Fraud, Director Reputation, and Shareholder Wealth. *Journal of Financial Economics* 86, 306-336.

Frey, B., and Neckermann, S., 2000. *Awards as Signals.* CESifo Working Paper Series No. 3229. Available at SSRN: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=1709308.

Friedman, H., 2014. Implications of Power: When the CEO Can Pressure the CFO to Bias Reports. *Journal of Accounting and Economics* 58, 117-141.

Graham, J., Harvey, C., and Rajgopal, S., 2005. The economic implications of corporate financial reporting.

Journal of Accounting and Economics 40: 3–73.

Gunny, K., 2010. The relation between earnings management using real activities manipulation and future performance: evidence from meeting earnings benchmarks, *Contemporary Accounting Research* 27, 855–888

Guo, J., Huang, P., Zhang, Y., and Zhou N., 2016. The Effect of Employee Treatment Policies on Internal

Control Weaknesses and Financial Restatements. *The Accounting Review* 91, 1167-1194.

Healy, P., and Wahlen, J., 1999. A Review of the Earnings Management Literature and Its Implications for Standard Setting. *Accounting Horizons* 13, 365-383.

Hennes, K., Leone,A., and Miller,B.,2008. The Importance of Distinguishing Errors and Irregularities In Restatement Research: The Case Of Restatements And CEO/CFO Turnover. *The Accounting Review* 83, 1487-1519.

Holmstrom, B., 1979. Moral Hazard and Observability. *The Bell Journal of Economics* 10, 74-91.

Howell, S., 2017. Financing Innovation: Evidence from R&D Grants. *American Economics Review* 107, 1136-1164.

Imbens, G., and Lemieux, T., 2008. Regression discontinuity designs: A guide to practice. *Journal of Econometrics* 142, 615–635.

Jiang, J., Petroni K., and Wang, I., 2010. CFOs and CEOs: Who Have the Most Influence on Earnings Management? *Journal of Financial Economics* 96, 513-526.

Jones, J., 1991. Earnings Management during Import Relief Investigations. *Journal of Accounting Research* 29, 193–228.

Johnson, S., Ryan H., and Tian Y., 2009. Managerial Incentives and Corporate Fraud: The Sources of Incentives Matter. *Review of Finance* 13, 115-145.

Karpoff, M., Lee D., and Martin G., 2008. The Cost to Firms of Cooking the Books. *Journal of Financial and* Quantitative Analysis 49, 581-612.

Kothari, S. Leone, A., and Wasley. C., 2005. Performance Matched Discretionary Accrual Measures. *Journal of Accounting and Economics* 39, 163-197.

Lee, D., and Lemieux, T., 2010. Regression Discontinuity Designs in Economics. *Journal of Economic Literature* 48: 281–355.

Leone, A., and Liu, M., 2010. Accounting irregularities and executive turnover in founder-managed firms. *The Accounting Review* 85,287–314.

Leuz, C., Nanda, D., and Wysocki, P., 2003. Earnings Management and Investor Protection: an International Comparison. *Journal of Financial Economics* 69, 505-527.

Malmendier, U., and Tate, G., 2009. Superstar CEOs. *The Quarterly Journal of Economics* 4, 1593-1638.

Masulis, R., and Mobbs, S., 2014. Independent Director Incentives: Where Do Talented Directors Spend Their Limited Time and Energy? *Journal of Financial Economics*, 111, 406-429.

Matejka, M., 2007. CFO Compensation Survey. University of Michigan and AICPA Research Report.

McAnally, M., Weaver, C., and Srivastava, A., 2008. Executive Stock Options, Missed Earnings Targets and Earnings Management. *The Accounting Review* 83, 185–216.

Mian, S., 2001. On the Choice and Replacement of Chief Financial Officers. *Journal of Financial Economics* 60, 143–175.

Rajan, R., and Zingales, L., 1998. Power in a Theory of the Firm. *Quarterly Journal of Economics* 113, 387-432.

Roychowdhury, S. 2006. Earnings management through real activities manipulation. *Journal of Accounting and Economics* 42: 335–370.

Thistlethwaite, D., and Campbell, D., 1960. Regression-discontinuity analysis: An alternative to the ex post facto experiment, *Journal of Educational Psychology* 51, 309–317.

Zang, A., 2012. Evidence on the Trade-Off between Real Activities Manipulation and Accrual-Based Earnings Management. *The Accounting Review* 87, 675-703.

Figure 1. Number of Awardees and Nominees by Year

This figure displays the number of recipients of the "All-America Executive Team" Best CFO award (Buy-side) from 2009 to 2018. *Awardees* are CFOs who are recognized by *Institutional Investors* as the winner of the Best CFO award. *Non-Awardees* are CFOs who are nominated but do not win the award during my sample period. *All Nominees* include all CFOs who are nominated as candidates for the award during my sample period, including both awardees and non-awardees.
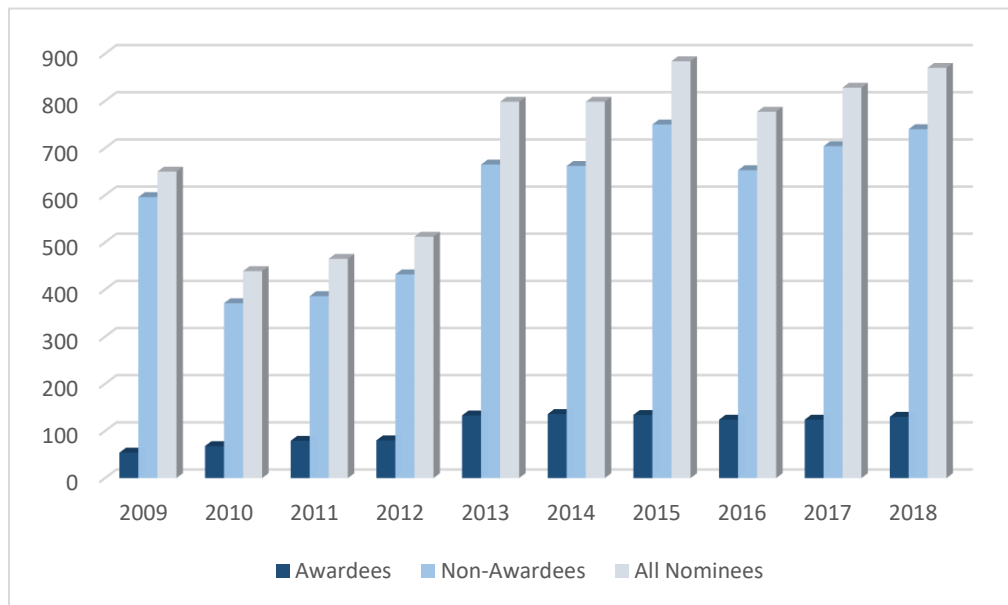
Figure 2. Number of CFOs around the Award Cutoff

This figure shows the number of CFOs whose ranking is around the cutoff for the "All-America Executive Team" Best CFO award from 2009 to 2018. Ranks are centered on zero. *Rank = -1* represents the highest-ranked non-awardees, *rank = 1* indicates the lowest-ranked awardees, *rank = 2* is awardees who are ranked one spot higher than *rank = 1*, and *rank = 3* is awardees who are ranked two spots higher than *rank = 1*. Panel A includes all observations in each of the four ranking groups. Panel B excludes previous winners.

Panel A. All Top-Four Ranked CFOs

Panel B. Excluding Previous Winners
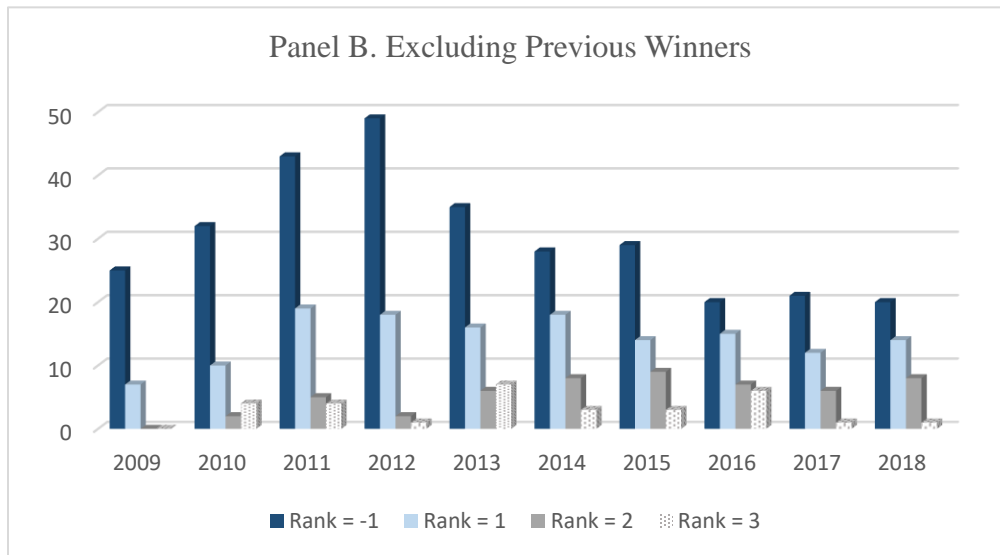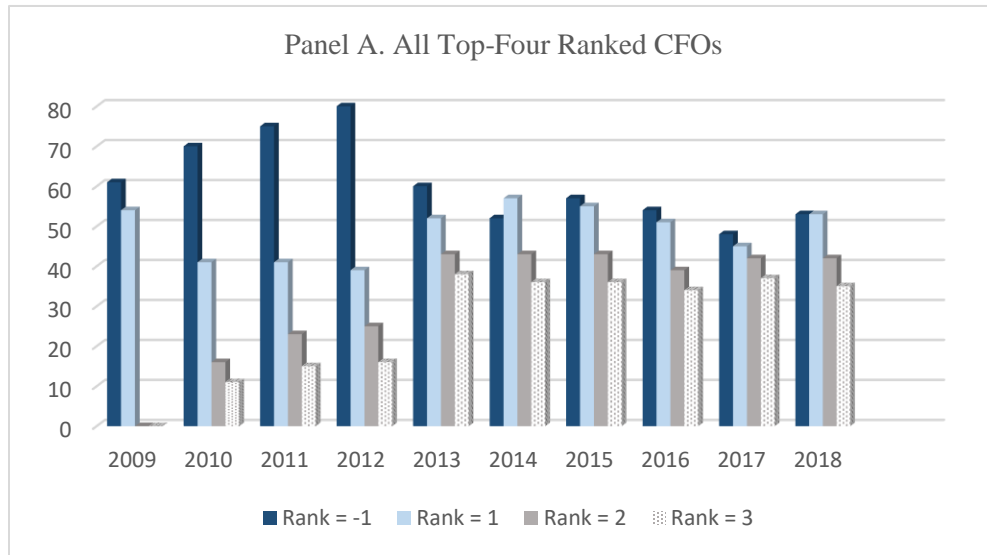
Table 1. Summary Statistics

This table summarizes selected variables for three groups of CFOs. In Panel A, the three groups are the lowest-ranked awardees (*Rank = 1*), the highest-ranked non-awardees (*Rank = -1*), and all nominees whose rank ≥ -10. In Panel B and C, the three groups are *rank = 1*, *rank = -1*, and all CFOs who are nominated during the sample period. Ranks are centered on 0. Panel A reports descriptive statistics of external and internal promotion after the award. *External promotion*, *Internal promotion*, *At least one*, and *Any promotion – multiclass* are defined as described in section 2 and Appendix 1. Panel B presents accounting accruals and proxies of real earnings management from t0 to t2, where t0 is the award year. |*DA*| is the absolute value of discretionary accruals estimated based on the modified Jones model. *RM_CFO* is abnormal cash flows from operations. *RM_DISX* is the abnormal level of discretionary expenses. *RM_PROD* is the abnormal production costs. *RM_CFO* and *RM_DISX* are multiplied by -1 so that larger values indicate greater earnings management. *RM_CFO*, *RM_DISX*, and *RM_PROD* are estimated as described in section 2. Panel C reports the summary statistics of selected control variables. All the variables, except for *book-to-market*, are estimated as of the end of the fiscal year. *Book-to-market* is measured as of the beginning of the fiscal year. All the control variables are defined as described in Appendix 1.

Panel A. Internal and External Promotion after the award

	All CFOs Ranked -10 or Higher				Lowest-Ranked Awardees (Rank = 1)				Highest-Ranked Non-Awardees (Rank = -1)			
	Mean	S.D.	Median	N	Mean	S.D.	Median	N	Mean	S.D.	Median	N
External promotion	0.08	0.26	0	3,011	0.14	0.35	0	143	0.11	0.31	0	301
Internal promotion	0.16	0.36	0	3,011	0.25	0.44	0	143	0.16	0.37	0	301
At Least one	0.22	0.41	0	3,011	0.35	0.48	0	143	0.26	0.44	0	301
Any promotion - multiclass	0.23	0.45	0	3,011	0.39	0.57	0	143	0.27	0.47	0	301

Table 1, Continued

Panel B. Accounting Accruals and Real Earnings Management

	All CFOs in the Ranking list				Lowest-Ranked Awardees (Rank = 1)				Highest-Ranked Non-Awardees (Rank = -1)			
	Mean	S.D.	Median	N	Mean	S.D.	Median	N	Mean	S.D.	Median	N
|DA| at t0	0.04	0.04	0.03	3,456	0.04	0.03	0.02	118	0.04	0.04	0.02	222
|DA| at t2	0.03	0.04	0.02	3,017	0.02	0.02	0.01	103	0.04	0.03	0.03	207
|DA| - t1 t2 average	0.04	0.03	0.03	3,009	0.03	0.02	0.02	103	0.04	0.03	0.03	207
RM_CFO at t0	-0.09	0.14	-0.08	3,733	-0.09	0.14	-0.08	123	-0.10	0.13	-0.07	234
RM_CFO at t2	-0.09	0.13	-0.08	3,443	-0.10	0.11	-0.08	113	-0.09	0.12	-0.07	221
RM_CFO - t1 t2 average	-0.09	0.12	-0.08	3,436	-0.10	0.10	-0.09	113	-0.09	0.11	-0.08	221
RM_DISX at t0	-0.02	0.30	0.00	3,271	0.04	0.29	0.03	112	0.00	0.31	0.00	208
RM_DISX at t2	0.02	0.28	0.01	3,007	0.05	0.27	0.01	103	0.04	0.30	0.03	196
RM_DISX - t1 t2 average	0.01	0.27	0.01	2,996	0.05	0.27	0.03	103	0.04	0.29	0.02	196
RM_PROD at t0	-0.04	0.19	-0.04	3,660	-0.04	0.2	-0.04	120	-0.03	0.2	-0.04	229
RM_PROD at t2	-0.04	0.18	-0.04	3,381	-0.05	0.17	-0.04	111	-0.04	0.19	-0.03	219
RM_PROD - t1 t2 average	-0.04	0.17	-0.04	3,369	-0.05	0.17	-0.04	111	-0.03	0.2	-0.04	218

Table 1, Continued

Panel C. Selected Control Variables

	All CFOs in the Ranking list				Lowest-Ranked Awardees (Rank = 1)				Highest-Ranked Non-Awardees (Rank = -1)			
	Mean	S.D.	Median	N	Mean	S.D.	Median	N	Mean	S.D.	Median	N
Total Assets	6.90	13.14	2.77	3,652	11.54	17.31	5.90	122	10.3	19.18	4.11	232
Market Capitalization	6.66	12.13	3.20	3,650	12.55	17.74	7.48	122	10.02	17.91	4.62	232
Book-to-Market	0.42	0.34	0.36	3,547	0.40	0.32	0.33	119	0.43	0.33	0.37	227
ROA	0.03	0.12	0.04	3,650	0.05	0.12	0.07	122	0.04	0.09	0.05	232
12-Month Stock Return	0.23	0.52	0.17	3,556	0.29	0.47	0.25	119	0.32	0.57	0.24	227
Cash Holding	0.17	0.2	0.10	3,652	0.15	0.15	0.10	122	0.14	0.15	0.10	232
3-Year CF Volatility	0.03	0.04	0.01	4,660	0.02	0.03	0.02	142	0.02	0.03	0.01	275
Leverage	0.27	0.21	0.26	3,642	0.27	0.19	0.27	121	0.26	0.19	0.24	231
Big 4	0.93	0.25	1	3,629	0.98	0.14	1	143	0.96	0.20	1	276
CEO is Chair	0.57	0.50	1	3,712	0.66	0.47	1	143	0.64	0.48	1	276
Board Independence	0.79	0.13	0.83	3,608	0.79	0.14	0.83	122	0.79	0.12	0.83	230
CFO Tenure	6.09	4.67	5	3,480	6.08	4.03	5	143	6.04	4.94	5	276
CFO Age	51.02	6.28	51	2,908	50.09	6.19	51	143	50.37	6.41	50	276
CFO PPS	0.13	0.11	0.10	2,728	0.16	0.11	0.14	97	0.15	0.12	0.13	193
CEO PPS	0.29	0.23	0.24	2,726	0.35	0.21	0.32	98	0.35	0.24	0.30	194

Figure 3. Continuity at Award Year in Various Variables

This figure illustrates various variables for CFOs whose rank ≥ -10 at the award year. Ranks are centered on zero, as described in Figure 2. Means and ninety percent confidence intervals are shown in each panel.
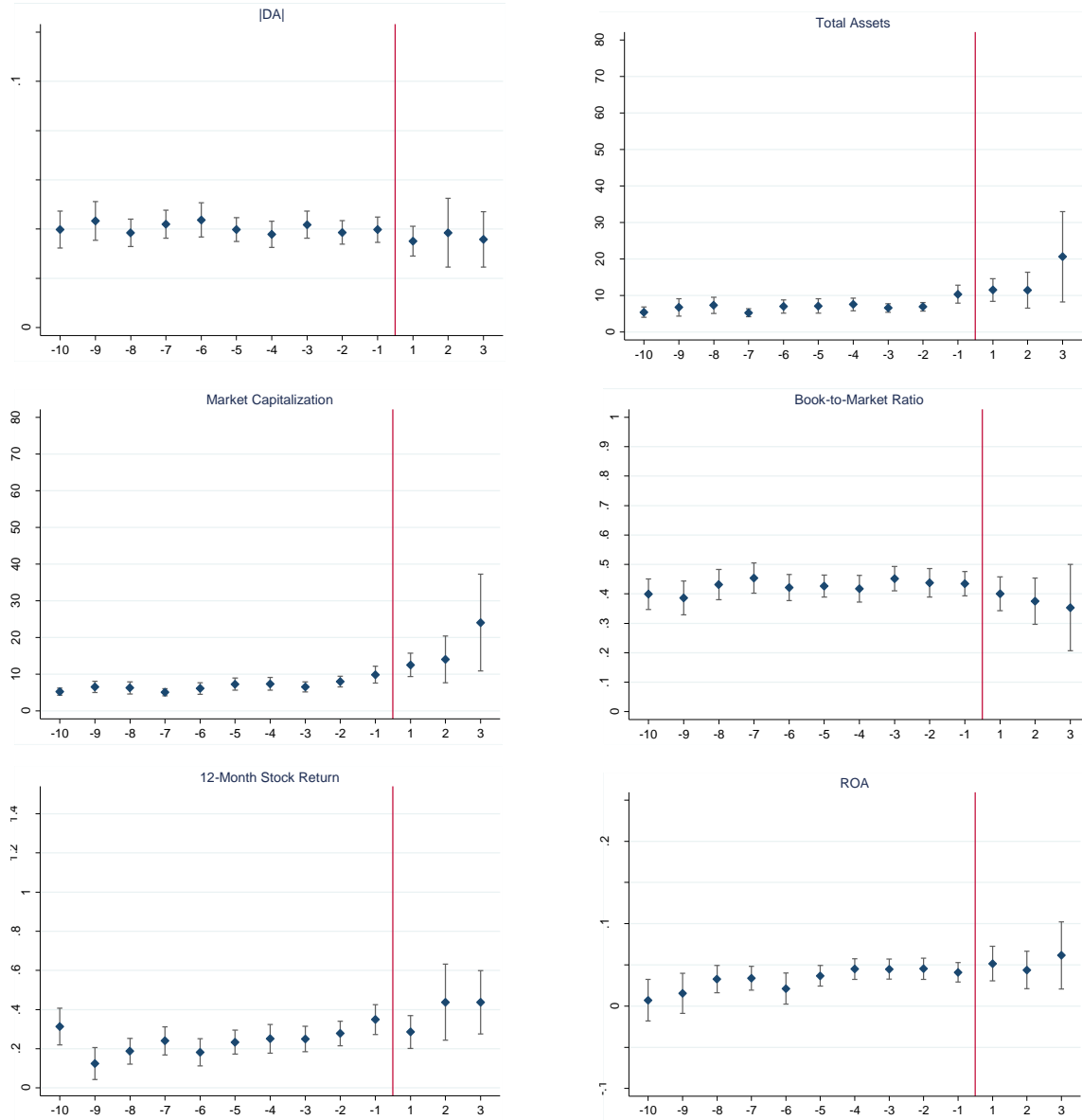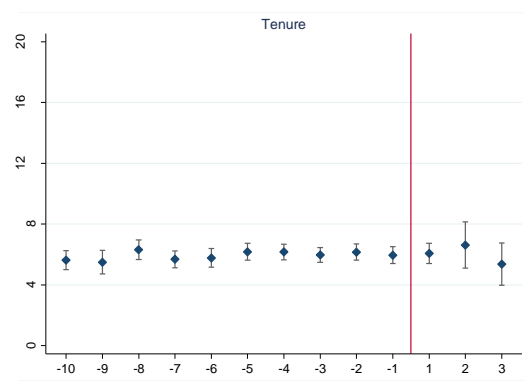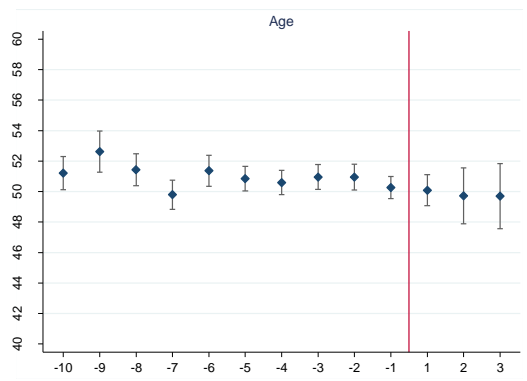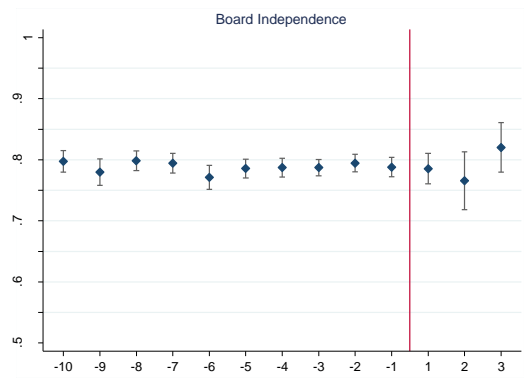
Figure 3, Continued
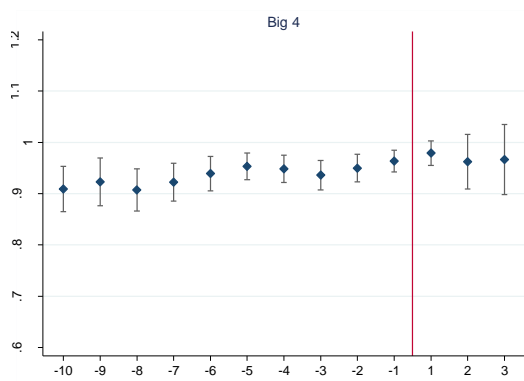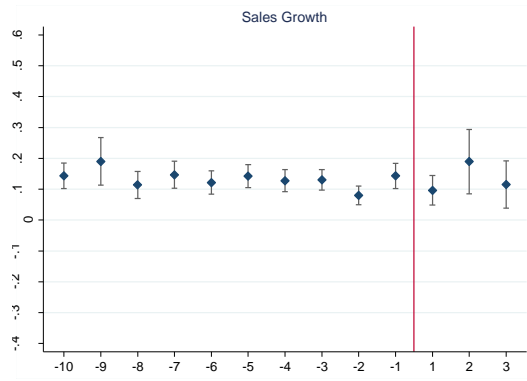
Figure 4. External and Internal Promotion after the award

This figure reports the external and internal promotion after the award for awardees whose *rank = 1* or *2*, and non-awardees who are ranked -6 or higher. Ranks are centered on zero, as describe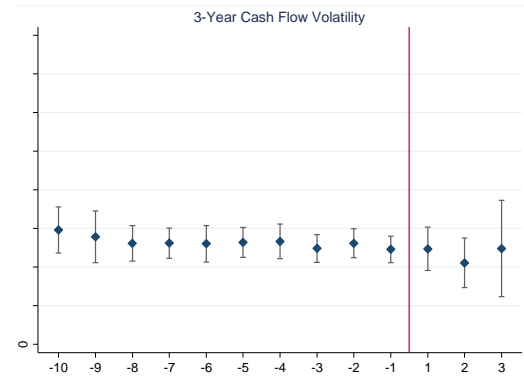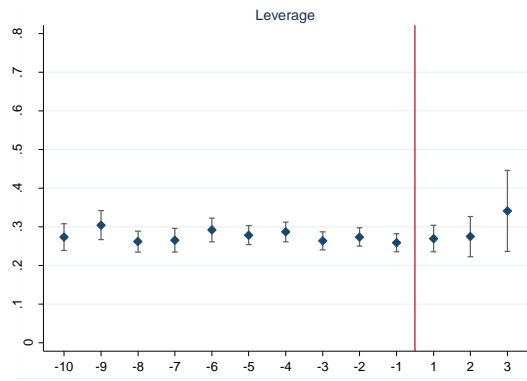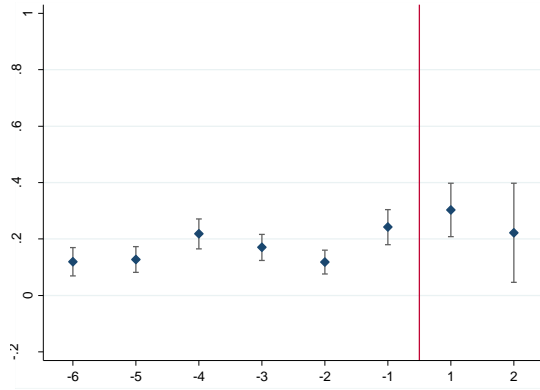d in Figure 2. *External promotion*, *Internal promotion*, *At Least One*, and *Any Promotion- Multiclass* are defined as described in the main text. Previous winners are excluded from the sample. Panel A employs a subsample of CFOs who leave the company at some point after the award. Means and ninety percent confidence intervals are shown in each panel.

Panel A. External Promotion after the Award

Panel B. Internal Promotion after the Award
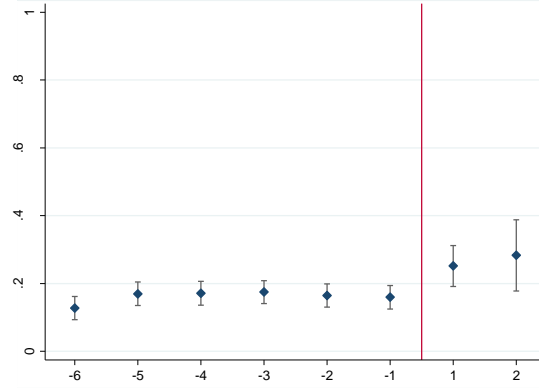
Panel C. At Least One after the Award

Panel D. Any Promotion - Multiclass after the Award

Table 2. External Promotion and Internal Promotion after CFO Awards

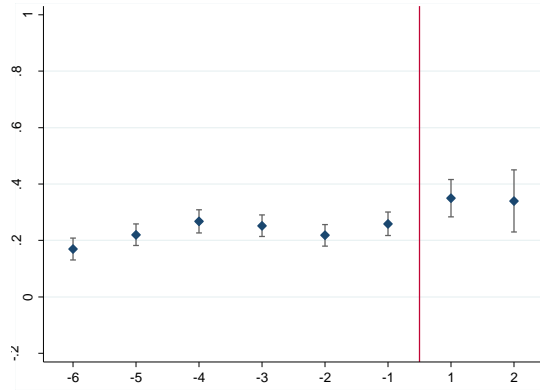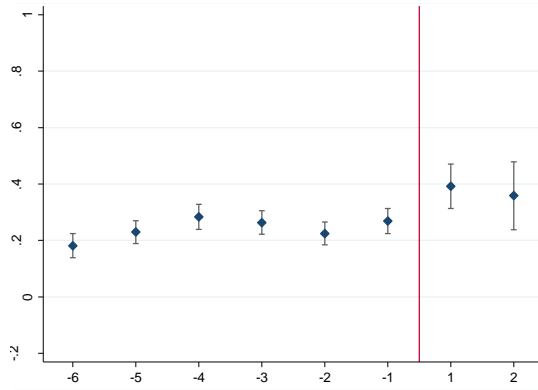This table reports the results of logit regressions explaining the likelihood that a CFO experiences the external and/or internal promotion within the time interval from the first year after the award to 2019. Panel A focuses on external promotion and employs a subsample which only includes individuals who leave the company within the time interval. The dependent variable in column 1 and 2 is an indicator equal to 1 if the CFO becomes the CEO, president, and/or COO of another firm after the award. In column 3 and 4, the dependent variable indicates any type of external promotion, defined as described in the main text. *Rank (-1, 1)* indicates the use of the narrow sample which only includes rank =1 and rank = -1. *Awardee* in this group indicates the lowest-ranked awardees. *All Rank ≥ -10* includes all CFOs who are ranked -10 or higher. *Awardee* in this group indicates all winners. Panel B focuses on the following outcomes inside the CFOs own firm: (1) gaining a key position after the award (column 1 – 4), and (2) experiencing any type of internal promotion, defined as described in the main text (column 5 – 8). *Stay≥1Yr* uses a subsample where CFOs are retained in the current firm for at least one year after the award. *Stay≥2Yrs* limits the sample to CFOs who are retained for at least two years after the award. *TransRank* is calculated by adding the absolute value of the minimum to each centered rank. $TransRank^2$ is the squared term. Other variables are defined as described in Table 1 and Appendix 1. All continuous variables are winsorized at 1st and 99th percent level. Values of z-statistics are reported in parentheses and are based on standard errors clustered at the sector-year level. *, **, *** indicate significance at the 10%, 5%, and 1% level, respectively.

Table 2, Continued

Panel A. CFO Award and External Promotion

	Key Position in Another Firm		Any External Promotion	
	Rank (-1,1) (1)	All Rank ≥ -10 (2)	Rank (-1,1) (3)	All Rank ≥ -10 (4)
Main Variable				
Awardee	4.1215***	2.5996**	1.5349**	0.6999
	(3.280)	(2.484)	(2.211)	(1.166)
Control Variables				
TransRank		0.2321		0.0977
		(0.897)		(0.725)
TransRank^2		-0.0325		-0.0039
		(-1.323)		(-0.315)
Log(Market cap)	-0.3123	0.2264	-0.1770	-0.1145
	(-0.608)	(1.407)	(-0.359)	(-1.258)
12-mon stock return	-4.8785***	-0.5799	0.5971	0.1418
	(-3.124)	(-1.599)	(0.654)	(0.716)
ROA	-1.6235	-0.1056	9.8672**	-0.2101
	(-0.310)	(-0.078)	(1.965)	(-0.256)
Book-to-market	-1.5175	-0.0141	0.9277	-0.1335
	(-0.672)	(-0.031)	(0.518)	(-0.557)
Tenure	-0.2948	-0.0581	-0.4932***	-0.1277***
	(-1.107)	(-1.477)	(-4.602)	(-4.927)
CEO is chair	-2.8613**	-0.0387	-2.2425***	0.0202
	(-2.418)	(-0.110)	(-2.699)	(0.107)
Board Independence	2.2578	1.8677	-8.0775***	-0.1945
	(0.505)	(1.082)	(-3.230)	(-0.224)
Year dummy	Yes	Yes	Yes	Yes
Sector dummy	Yes	Yes	Yes	Yes
Pseudo R^2	0.49	0.19	0.45	0.13
Observations	101	567	110	1,067

Table 2, Continued

Panel B. CFO Award and Internal Promotion

	Key Position in Own Firm				Any Internal Promotion			
	Rank (-1,1)		All Rank ≥ -10		Rank (-1,1)		All Rank ≥ -10	
	Stay≥1Yr (1)	Stay≥2Yrs (2)	Stay≥1Yr (3)	Stay≥2Yrs (4)	Stay≥1Yr (5)	Stay≥2Yrs (6)	Stay≥1Yr (7)	Stay≥2Yrs (8)
Main Variable								
Awardee	1.0505**	1.0839**	1.2742***	1.3629***	0.9477**	0.9619**	1.3712***	1.4300***
	(2.343)	(2.406)	(2.947)	(3.014)	(2.338)	(2.402)	(3.311)	(3.323)
Control Variables								
TransRank			0.1962**	0.2133**			0.2494***	0.2698***
			(2.234)	(2.388)			(2.883)	(3.070)
$TransRank^2$			-0.0197**	-0.0219**			-0.0231***	-0.0254***
			(-2.257)	(-2.434)			(-2.753)	(-2.947)
Log(Market cap)	-0.0869	-0.1204	0.1019	0.1006	0.0855	0.0401	0.1297**	0.1225*
	(-0.449)	(-0.587)	(1.444)	(1.388)	(0.478)	(0.220)	(2.059)	(1.899)
12-mon stock return	-0.5918	-0.5177	0.0091	-0.0333	-0.7205	-0.6952	-0.0704	-0.1056
	(-1.203)	(-1.090)	(0.064)	(-0.231)	(-1.624)	(-1.519)	(-0.519)	(-0.769)
ROA	-0.9131	-1.1345	-1.3007**	-1.4690**	1.5940	1.1170	-1.2711**	-1.4950**
	(-0.320)	(-0.415)	(-2.047)	(-2.183)	(0.659)	(0.483)	(-2.083)	(-2.316)
Book-to-market	-0.2517	-0.5042	0.0117	-0.0102	0.1680	0.0228	0.1118	0.1082
	(-0.348)	(-0.722)	(0.060)	(-0.050)	(0.245)	(0.034)	(0.575)	(0.535)
Tenure	-0.0412	-0.0411	-0.0014	0.0025	0.0075	0.0029	-0.0046	-0.0010
	(-0.993)	(-0.936)	(-0.103)	(0.172)	(0.193)	(0.073)	(-0.350)	(-0.073)
CEO is chair	-0.0018	0.0335	-0.0621	-0.0746	-0.4786	-0.5244	-0.2250*	-0.2531*
	(-0.004)	(0.078)	(-0.434)	(-0.521)	(-1.237)	(-1.329)	(-1.698)	(-1.908)
Board Independence	-2.6827*	-2.9001**	0.2466	0.2041	-1.0904	-1.1559	0.6078	0.6044
	(-1.834)	(-1.965)	(0.399)	(0.321)	(-0.827)	(-0.867)	(1.033)	(0.989)
Year dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Sector dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Pseudo R^2	0.14	0.14	0.08	0.08	0.11	0.12	0.09	0.10
Observations	211	200	2,159	1,925	232	217	2,221	1,980

Table 3. External-Internal Promotion Combined

Panel A presents the results of logit regressions explaining the likelihood that a CFO experiences at least one type of promotion (internal/external) within the time interval from the first year after the award to 2019. The dependent variable is an indicator equals 1 if the CFO experiences at least one of the two types of promotion (external or internal) and 0 otherwise. Panel B presents the results of multinomial logit regressions where the dependent variable is 0 if no promotion occurs after the award, 1 if either type of promotion happens, and 2 if both. *Rank (-1, 1)* indicates the use of the narrow sample which only includes rank =1 and rank = -1. *Awardee* in this group indicates the lowest-ranked awardees. *All Rank ≥ -10* includes all CFOs who are ranked -10 or higher. *Awardee* in this group indicates all winners. *TransRank* and *TransRank²* are defined as described in Table 2. *Other Controls* include log(market cap), 12-month stock return, ROA, book-to-market, CFO tenure, CEO duality, and board independence, and are defined as described in Appendix 1. All continuous variables are winsorized at 1st and 99th percent level. Values of z-statistics are reported in parentheses and are based on standard errors clustered at the sector-year level. ∗, ∗∗, ∗∗∗ indicate significance at the 10%, 5%, and 1% level, respectively.

Panel A. Any Promotion – Logistic Regression

	At Least One	
	Rank (-1,1)	All Rank ≥ -10
	(1)	(2)
Main Variable		
Awardee	0.8390**	1.0944***
	(2.567)	(3.027)
Control Variables		
TransRank/TransRank²	No	Yes
Other Controls	Yes	Yes
Year dummy	Yes	Yes
Sector dummy	Yes	Yes
Pseudo R²	0.14	0.14
Observations	211	200

Panel B. Any Promotion – Multinomial Logistic Regression

	Any Promotion – Multiclass			
	Rank (-1,1)		All Rank ≥ -10	
	Either Type	Both	Either Type	Both
	(1)	(2)	(3)	(4)
Main Variable				
Awardee	0.7348***	2.5818**	0.7041**	2.0930*
	(2.645)	(2.377)	(2.011)	(1.872)
Control Variables				
TransRank/TransRank²	No	No	Yes	Yes
Other Controls	Yes	Yes	Yes	Yes
Year dummy	No	No	No	No
Sector dummy	No	No	No	No
Pseudo R²	0.11	0.12	0.09	0.10
Observations	232	217	2,221	1,980

Figure 5. Discretionary Accruals before and after the Award

This figure shows the magnitude of discretionary accruals (|DA|) before and after the award for *rank =1 and rank =2* awardees and the top-six ranked non-awardees. Ranks are centered on zero. Panel A reports |DA| at the award year, while Panel B shows the (t1, t2) average. Previous winners are excluded from the sample. Means and ninety percent confidence intervals are shown in each panel.

Panel A. |DA| at t0
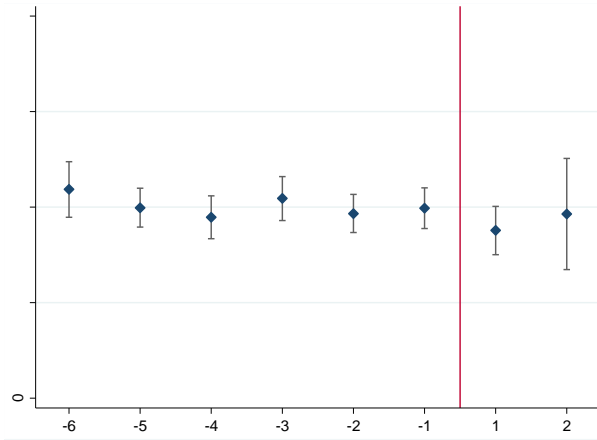
Panel B. T1 t2 average
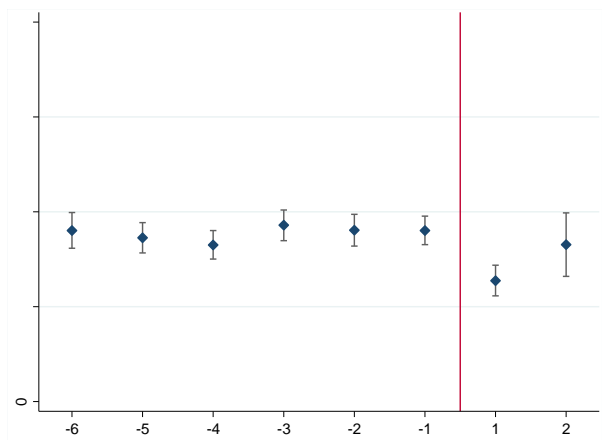
Table 4. The Magnitude of Discretionary Accruals and CFO Awards

This table presents the effects of CFO awards on the magnitude of discretionary accruals. Panel A includes all sample firms whose data of discretionary accruals are available. The dependent variable, *|DA|*, is the absolute value of discretionary accruals. T1 and t2 indicates the first and the second year after the award, respectively. *T1 t2 average* is the average of *|DA|* in the two years following the award. Panel B only includes firms whose discretionary accruals and executive compensation data are available. *Rank (-1, 1)* indicates the use of the narrow sample which only includes rank =1 and rank = -1. *Awardee* in this group indicates the lowest-ranked awardees. *All* includes all CFOs who are nominated as candidates for the award. *Awardee* in this group indicates all winners. *|DA| at t0* is the absolute value of discretionary accruals in the award year. *CFO Incentives* and *CEO Incentives* are the pay-for-performance sensitivity of CFO and CEO, respectively, and are computed as described in Appendix 1. *TransRank* and $TransRank^2$ are defined as described in Table 2. *Other Controls* include log(total assets), book-to-market, ROA, 12-month stock return, cash holding, leverage, big 4, CEO duality, and CFO age, defined as described in Appendix 1. All continuous variables are winsorized at 1st and 99th percent level. Values of t-statistics are reported in parentheses and are based on standard errors clustered at the sector-year level. *, **, *** indicate significance at the 10%, 5%, and 1% level, respectively.

Panel A. The Award Effect on |DA|

	Rank (-1,1)			All
	|DA| at t1 (1)	|DA| at t2 (2)	T1 t2 average (3)	T1 t2 average (4)
Main Variable				
Awardee	-0.0075*	-0.0140***	-0.0106***	-0.0071***
	(-1.772)	(-2.934)	(-3.230)	(-2.817)
Control Variables				
TransRank				-0.0018
				(-1.096)
$TransRank^2$				0.0000
				(1.233)
|DA| at t0	0.2272***	0.0129	0.1154*	0.1386***
	(3.852)	(0.167)	(1.958)	(5.497)
Log(Total Assets)	-0.0005	-0.0042*	-0.0025	-0.0030***
	(-0.246)	(-1.925)	(-1.358)	(-5.211)
Book-to-market	0.0006	-0.0113	-0.0070	-0.0042*
	(0.070)	(-1.372)	(-1.012)	(-1.847)
ROA	-0.0291	-0.0746**	-0.0544**	-0.0405***
	(-0.981)	(-2.325)	(-2.233)	(-3.450)
12-mon stock return	-0.0038	-0.0062	-0.0048	0.0010
	(-0.595)	(-0.968)	(-1.099)	(0.587)
Cash Holding	0.0254	0.0125	0.0273	0.0108*
	(1.144)	(0.512)	(1.556)	(1.727)
Leverage	-0.0076	0.0020	-0.0003	-0.0012
	(-0.645)	(0.133)	(-0.030)	(-0.317)
3-Year CF Volatility	0.1141	0.0482	0.0805	0.0273
	(1.441)	(0.518)	(1.242)	(1.099)
Sales Growth	0.0019	-0.0015	-0.0019	-0.0009
	(0.391)	(-0.192)	(-0.428)	(-0.346)
Big 4	0.0221***	0.0133	0.0190**	0.0029
	(3.259)	(1.054)	(2.508)	(0.942)

Table 4, Continued

CEO is Chair	-0.0071	0.0030	-0.0020	-0.0031***
	(-1.582)	(0.778)	(-0.637)	(-2.689)
Age	-0.0002	-0.0001	-0.0002	-0.0002*
	(0.173)	(-0.445)	(-0.444)	(0.167)
Year dummy	Yes	Yes	Yes	Yes
Sector dummy	Yes	Yes	Yes	Yes
Pseudo R^2	0.45	0.42	0.54	0.27
Observations	313	286	286	2,235

Panel B. The Award Effect on |DA|, Controlling for CFO and CEO Incentives

	Rank (-1,1)	All
	T1 t2 average (1)	T1 t2 average (2)
Main Variable		
Awardee	-0.0093**	-0.0078***
	(-2.479)	(-2.873)
Control Variables		
TransRank		-0.0014
		(-0.879)
TransRank^2		0.0000
		(0.993)
CFO Incentives	0.0086	0.0004
	(0.450)	(0.060)
CEO Incentives	0.0052	0.0025
	(0.421)	(0.778)
|DA| at t0	0.0678	0.1334***
	(1.084)	(5.263)
Other Controls	Yes	Yes
Year dummy	Yes	Yes
Sector dummy	Yes	Yes
Pseudo R^2	0.54	0.26
Observations	246	2,157

Table 5. Signed Discretionary Accruals and CFO Awards

This table presents the effects of CFO awards on signed discretionary accruals. Panel A focuses on positive accruals. Column 1 and 2 limit the sample to firms that hold positive accruals at t1 and t2, respectively. Column 3 – 6 include firms that hold positive discretionary accruals in the two-year period following the award. Panel B reports the results of award effect on negative accruals. Column 1 and 2 limit the sample to firms that hold negative accruals at t1 and t2, respectively. Column 3 – 6 include firms that hold negative discretionary accruals in the two-year period following the award. *Rank (-1, 1)*, *All*, *TransRank*, *TransRank²*, *CFO Incentives,* and *CEO Incentives* are defined as described in Table 4. *Other controls* include log(total assets), book-to-market, ROA, 12 month stock return, cash holding, leverage, 3-year cash flow volatility, sales growth, big 4, CEO duality, and age, defined as described in Table 1 and Appendix 2. All continuous variables are winsorized at 1st and 99th percent level. Values of t-statistics are reported in parentheses and are based on standard errors clustered at the sector-year level. *, **, *** indicate significance at the 10%, 5%, and 1% level, respectively.

Panel A. Positive Accruals

	Rank (-1,1)				All	
	DA+ at t1 (1)	DA+ at t2 (2)	T1 t2 Ave. + (3)	T1 t2 Ave. + (4)	T1 t2 Ave. + (5)	T1 t2 Ave. + (6)
Main Variable						
Awardee	-0.0129*	-0.0165*	-0.0140***	-0.0153**	-0.0061**	-0.0060*
	(-1.958)	(-1.673)	(-2.733)	(-2.251)	(-2.013)	(-1.867)
Control Variables						
TransRank					-0.0039**	-0.0035**
					(-2.466)	(-2.147)
$TransRank^2$					0.0000**	0.0000**
					(2.410)	(2.069)
CFO Incentives	No	No	No	Yes	No	Yes
CEO Incentives	No	No	No	Yes	No	Yes
DA at t0	Yes	Yes	Yes	Yes	Yes	Yes
Other controls	Yes	Yes	Yes	Yes	Yes	Yes
Year dummy	Yes	Yes	Yes	Yes	Yes	Yes
Sector dummy	Yes	Yes	Yes	Yes	Yes	Yes
Pseudo R²	0.58	0.59	0.50	0.61	0.23	0.23
Observations	129	119	120	106	934	906

Table 5, Continued

Panel B. Negative Accruals

|	Rank (-1,1)				All	
	DA- at T1 (1)	DA- at t2 (2)	T1 T2 Ave.- (3)	T1 T2 Ave.- (4)	T1 T2 Ave.- (5)	T1 T2 Ave.- (6)
Main Variable						
Awardee	0.0054	0.0122*	0.0047	0.0033	0.0007	0.0044
	(0.814)	(1.918)	(0.849)	(0.537)	(0.227)	(1.406)
Control Variables						
TransRank					-0.0000	0.0001
					(-0.008)	(0.037)
$TransRank^2$					0.0000	-0.0000
					(0.023)	(-0.053)
CFO Incentives	No	No	No	Yes	No	Yes
CEO Incentives	No	No	No	Yes	No	Yes
DA at t0	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*
Other Controls	Yes	Yes	Yes	Yes	Yes	Yes
Year dummy	Yes	Yes	Yes	Yes	Yes	Yes
Sector dummy	Yes	Yes	Yes	Yes	Yes	Yes
Pseudo R^2	0.56	0.58	0.64	0.70	0.29	0.29
Observations	184	167	166	140	1,344	1,251

Figure 6. CEO Power Subsample Comparison

This figure compares the magnitude of discretionary accruals (|DA|) between two subsamples: firms with powerful CEOs (Panel A and Panel B) and firm with regular CEOs (Panel C and Panel D). Powerful CEOs are defined as described in the main text. Awardees whose rank ≤ 2 and the non-awardees whose rank ≥ -6 are shown. Ranks are centered on zero. Previous winners are excluded from the sample. Means and ninety percent confidence intervals are reported in each panel.
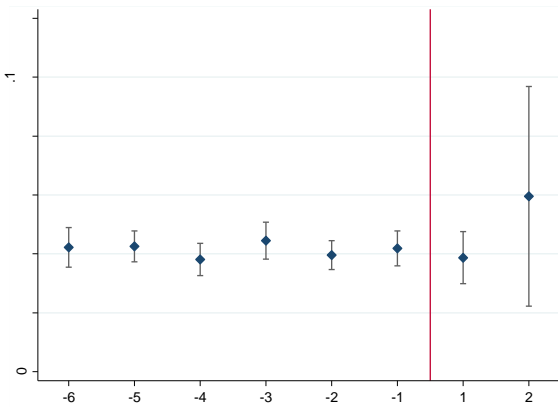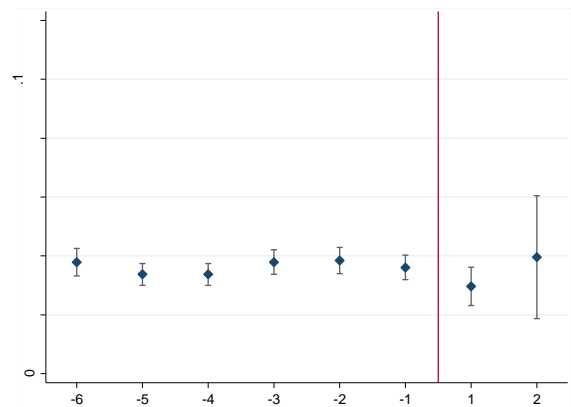
Panel A. |DA| at t0, Powerful CEO Subsample
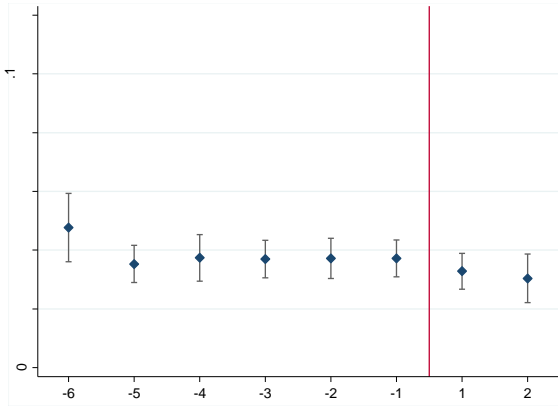
Panel B. T1 t2 average, Powerful CEO Subsample
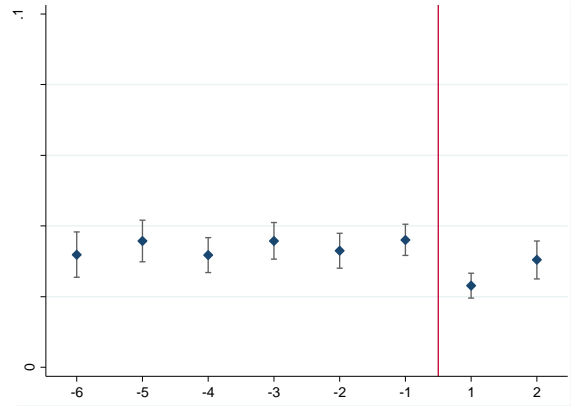
Panel C. |DA| at t0, Regular CEO Subsample

Panel D. T1 t2 Average, Regular CEO Subsample

Table 6. Discretionary Accruals and CFO Awards - CEO Power Subsample Comparison

This table presents a comparison of the CFO award effect between powerful and regular CEO subsamples. Panel A reports the award effects on the magnitude of discretionary accruals. The dependent variable is the average of /DA/ in the two-year period following the award. Panel B reports the effects of CFO awards on signed accruals. Column 1 – 4 of Panel B include firms that hold positive average accruals in the two-year period following the award, while column 5 – 8 focus on negative two-year average accruals. *Powerful CEOs* /*Regular CEOs* indicate a subsample of firms whose CEOs are powerful/less powerful, defined as described in the main text. *Rank (-1, 1)*, *All*, *TransRank, TransRank^2*, *CFO Incentives,* and *CEO Incentives* are defined as described in Table 4. *Other controls* include log(total assets), book-to-market, ROA, 12 month stock return, cash holding, leverage, 3-year cash flow volatility, sales growth, big 4, CEO duality, and age, defined as described in Appendix 2. All continuous variables are winsorized at 1st and 99th percent level. Values of t-statistics are reported in parentheses and are based on standard errors clustered at the sector-year level. ∗, ∗∗, ∗∗∗ indicate significance at the 10%, 5%, and 1% level, respectively.

Panel A. Magnitude of Discretionary Accruals – Powerful CEOs vs. Regular CEOs

	Powerful CEOs				Regular CEOs			
	Rank (-1, 1) (1)	Rank (-1, 1) (2)	All (3)	All (4)	Rank (-1, 1) (5)	Rank (-1, 1) (6)	All (7)	All (8)
Main Variable								
Awardee	-0.0168***	-0.0150***	-0.0106***	-0.0107***	-0.0052	-0.0073	-0.0014	-0.0028
	(-3.240)	(-2.775)	(-2.977)	(-2.960)	(-0.716)	(-0.573)	(-0.370)	(-0.699)
Control Variables								
TransRank			-0.0043	-0.0041			0.0004	0.0008
			(-1.558)	(-1.468)			(0.309)	(0.566)
TransRank^2			0.0000*	0.0000			-0.0000	-0.0000
			(1.668)	(1.564)			(-0.237)	(-0.505)
CFO Incentives	No	Yes	No	Yes	No	Yes	No	Yes
CEO Incentives	No	Yes	No	Yes	No	Yes	No	Yes
/DA/ at t0	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Other Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Sector dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Pseudo R^2	0.67	0.69	0.30	0.30	0.71	0.75	0.31	0.30
Observations	146	137	963	945	140	109	1,272	1,212

Table 6, Continued

Panel B. Signed Discretionary Accruals – Powerful CEOs vs. Regular CEOs

|	DA+, t1 t2 average				DA-, t1 t2 average			
	Powerful CEOs		Regular CEOs		Powerful CEOs		Regular CEOs	
	Rank (-1, 1)	All	Rank (-1, 1)	All	Rank (-1, 1)	All	Rank (-1, 1)	All
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Main Variable								
Awardee	-0.0198**	-0.0066*	-0.0180	-0.0027	0.0131	0.0010	0.0060	-0.0075
	(-2.113)	(-1.883)	(-1.086)	(-0.552)	(1.417)	(0.162)	(0.394)	(-1.168)
Control Variables								
TransRank		-0.0052***		-0.0018		-0.0011	0.0004	-0.0011
		(-2.737)		(-0.745)		(-0.656)	(0.309)	(-0.711)
$TransRank^2$		0.0000***		0.0000		0.0000	-0.0000	0.0000
		(2.724)		(0.709)		(0.762)	(-0.237)	(0.785)
DA at t0	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Other Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Sector dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Pseudo R^2	0.88	0.30	0.85	0.29	0.87	0.20	0.88	0.31
Observations	60	419	60	515	86	1,272	80	757

Figure 7. Real Earnings Management before and after the Award

This figure shows the three proxies of real earnings management before and after the award: *RM_CFO* (Panel A and B), *RM_ DISX* (Panel C and D), and *RM_PROD* (Panel E and F). *RM_CFO*, *RM_ DISX*, and *RM_ PROD* are defined as described in Appendix 1. *RM_CFO* and *RM_ DISX* are calculated as multiplying residuals from model (4) and (5) by -1, respectively, so that a decrease in the value indicates less real earnings management. Awardees whose rank ≤ 2 and the non-awardees whose rank ≥ -6 are shown. Ranks are centered on zero. Previous winners are excluded from the sample. Means and ninety percent confidence intervals are shown in each panel.
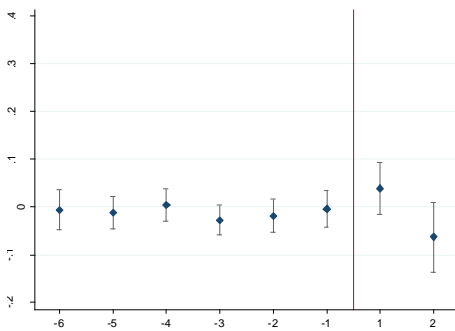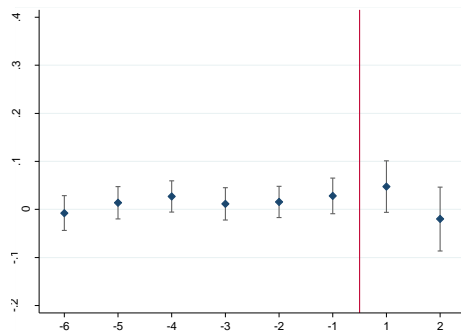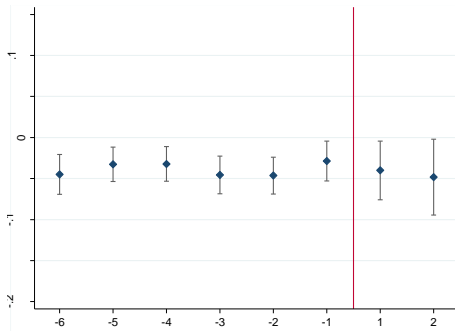
Panel A. RM_CFO at t0
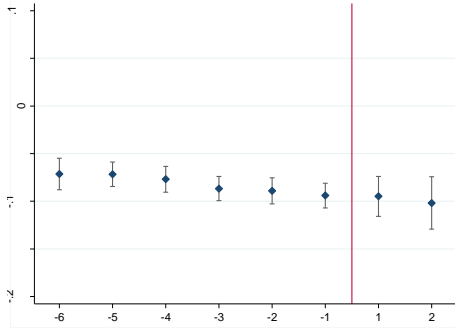
Panel B. RM_CFO, T1 and T2 Average
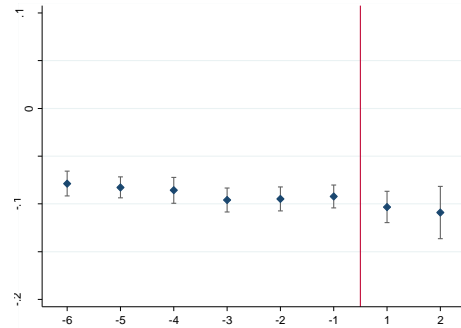
Panel C. RM_DISX at t0

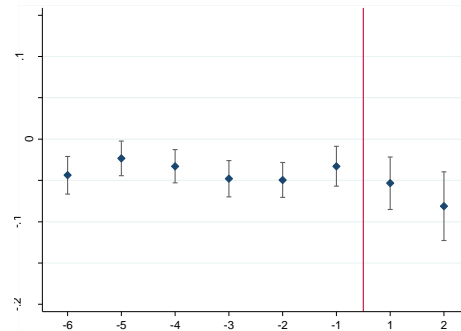Panel D. RM_ DISX, T1 and T2 Average

Panel E. RM_PROD at t0

Panel F. RM_ PROD, T1 and T2 Average

Table 7. Real Earnings Management and CFO Awards

This table presents the effects of CFO awards on the three proxies of real earnings management: abnormal cash flows from operations, abnormal level of discretionary expenses, and the abnormal production costs. The dependent variable in Panel A, Panel B, and Panel C is *RM_CFO*, *RM_ DISX*, and *RM_ PROD*, respectively. *RM_CFO, RM_ DISX*, and *RM_ PROD* are defined as described in the main text. *RM_CFO* and *RM_ DISX* are calculated as multiplying residuals from model (4) and (5) by -1, respectively. *Other controls* in Panel B and C include log(total assets), book-to-market, leverage, 3-year cash flow volatility, CEO duality, and age. *Rank (-1, 1)*, *All*, *TransRank,* and *$TransRank^2$* are defined as described in Table 4. Other variables are defined as described in Appendix 1. All continuous variables are winsorized at 1st and 99th percent level. Values of t-statistics are reported in parentheses and are based on standard errors clustered at the sector-year level. *, **, *** indicate significance at the 10%, 5%, and 1% level, respectively.

Panel A. Abnormal Cash flows from Operations

	Rank (-1,1)			All
	RM_CFO at t1 (1)	RM_CFO at t2 (1)	T1 t2 average (3)	T1 t2 average (4)
Main Variable				
Awardee	-0.0138	-0.0213*	-0.0176*	-0.0046
	(-1.348)	(-1.751)	(-1.841)	(-0.663)
Control Variables				0.0006
TransRank				(0.276)
				-0.0000
$TransRank^2$				(-0.689)
				(1.233)
RM_CFO *at t0*	-0.5396***	-0.4475***	-0.5023***	-0.5354***
	(-5.886)	(-5.779)	(-7.294)	(-22.488)
Log(total assets)	0.0050	0.0100	0.0089	0.0065***
	(0.843)	(1.501)	(1.573)	(4.422)
Book-to-market	0.0002	0.0025	0.0033	0.0283***
	(0.012)	(0.110)	(0.169)	(4.856)
Leverage	0.0257	0.0918**	0.0624*	0.0295***
	(0.631)	(2.198)	(1.718)	(3.280)
3-Year CF Volatility	-0.3134	0.1276	0.0701	-0.0759
	(-0.826)	(0.405)	(0.245)	(-0.974)
CEO is Chair	0.0279*	0.0115	0.0175	0.0055*
	(1.947)	(0.837)	(1.561)	(1.874)
Age	-0.0008	-0.0004	-0.0006	-0.0004
	(-0.951)	(-0.355)	(-0.700)	(-1.625)
Year dummy	Yes	Yes	Yes	Yes
Sector dummy	Yes	Yes	Yes	Yes
Pseudo R^2	0.57	0.55	0.63	0.63
Observations	334	317	317	2,556

Table 7, Continued

Panel B. Discretionary Expenditures

	Rank (-1,1)			All
	RM_ DISX at T1 (1)	RM_ DISX at t2 (1)	T1 t2 average (3)	T1 t2 average (4)
Main Variable				
Awardee	-0.0124	-0.0099	-0.0112	-0.0156
	(-0.560)	(-0.424)	(-0.506)	(-1.126)
Control Variables				
TransRank				-0.0006
				(-0.105)
$TransRank^2$				0.0000
				(0.128)
RM_DISX *at t0*	-0.8011***	-0.7492***	-0.7753***	-0.6785***
	(-12.450)	(-10.891)	(-12.332)	(-27.108)
Other Controls	Yes	Yes	Yes	Yes
Year dummy	Yes	Yes	Yes	Yes
Sector dummy	Yes	Yes	Yes	Yes
Pseudo R^2	0.80	0.75	0.81	0.72
Observations	301	287	287	2,258

Panel C. Discretionary Production Costs

	Rank (-1,1)			All
	RM_ PROD at T1 (1)	RM_ PROD at t2 (1)	T1 t2 average (3)	T1 t2 average (4)
Main Variable				
Awardee	-0.0038	0.0032	-0.0007	-0.0080
	(-0.336)	(0.230)	(-0.061)	(-1.087)
Control Variables				0.0021
TransRank				(0.827)
				-0.0000
$TransRank^2$				(-0.883)
				(1.233)
RM_PROD *at t0*	0.9254***	0.7874***	0.8510***	0.7459***
	(18.826)	(14.089)	(17.017)	(32.243)
Other Controls	Yes	Yes	Yes	Yes
Year dummy	Yes	Yes	Yes	Yes
Sector dummy	Yes	Yes	Yes	Yes
Pseudo R^2	0.84	0.77	0.84	0.73
Observations	328	310	310	2,516

Table 8. Real Earnings Management and CFO Awards- CEO Power Subsample Comparison

This table presents the effects of CFO awards on the three proxies of real earnings management in powerful/regular CEO subsamples. The sample limits to rank = 1 and rank = -1. The dependent variable is the average of *RM_CFO*, *RM_DISC*, and *RM_PROD* in the two years following the award. *RM_CFO* and *RM_ DISX* are calculated as multiplying residuals from model (4) and (5) by -1, respectively. *Powerful CEO* indicates the subsample where CEOs are defined as powerful, while *Regular CEOs* includes firms whose CEOs are not defined as powerful. *Other controls* include log(total assets), book-to-market, leverage, 3-year cash flow volatility, CEO duality, and age and are defined as described in Appendix 1. All continuous variables are winsorized at 1st and 99th percent level. Values of t-statistics are reported in parentheses and are based on standard errors clustered at the sector-year level. *, **, *** indicate significance at the 10%, 5%, and 1% level, respectively.

	Powerful CEOs			Regular CEOs		
	RM_CFO (1)	RM_DISC (2)	RM_PROD (3)	RM_CFO (4)	RM_DISC (5)	RM_PROD (6)
Main Variable						
Awardee	-0.0112	0.0071	-0.0219	-0.0162	-0.0474	-0.0087
	(-0.758)	(0.176)	(-1.449)	(-0.925)	(-1.077)	(-0.473)
RM_CFO at t0	-0.4151***			-0.4812***		
	(-3.221)			(-5.089)		
RM_DISX at t0		-0.7586***			-0.7118***	
		(-6.295)			(-6.445)	
RM_PROD at t0			0.8713***			0.8795***
			(15.588)			(11.638)
Other Controls	Yes	Yes	Yes	Yes	Yes	Yes
Year dummy	Yes	Yes	Yes	Yes	Yes	Yes
Sector dummy	Yes	Yes	Yes	Yes	Yes	Yes
Pseudo R^2	0.70	0.83	0.88	0.65	0.82	0.89
Observations	169	151	167	165	148	160

Appendix 1. Data Sources and Variable Definitions

Variable	Source	Definition
3-year CF volatility	Compustat	The standard deviation of cash flows from operations deflated by total assets over the current year and the past two years.
12-Month Stock Return	CRSP	Total compounded return over 12 months prior to the month of interest.
Big 4	Audit analytics	An indicator equal to 1 if the firm hires a big-4 external auditor in a given fiscal year.
Board independence	BoardEx, RiskMetrics	Percentage of directors on the board who are deemed independent according to the applicable NYSE or Nasdaq regulatory definitions.
Book-to-market	Compustat	Book to market ratio measured as of the beginning of the fiscal year.
Cash holding	Compustat	The ratio of cash and short-term investments to the book value of total assets.
CEO is Chair	BoardEx, RiskMetrics	A dummy variable which is 1 if a senior executive is also the chairman on the board and 0 otherwise.
CFO Tenure	Execucomp, BoardEx, Bloomberg, Equilar, proxies, 10-k, and Google	The period that a given individual holds the CFO position in the given firm, measured in years.
DA	Compustat	Discretionary accruals estimated based on the modified Jones model (equation (1)). Details of the estimation process are described in the text.
Leverage	Compustat	(Long term debt + debt in current liability)/ (long term debt + debt in current liability + market value of equity).
Log(Market cap)	CRSP	Logarithm of market capitalization, as measured by the stock price times shares outstanding.
Log(Total Assets)	Compustat	Logarithm of total assets.
Num. of Analysts-3yr	Audit Analytics	The number of analysts who include the company in their buy/sell recommendations within the past three years.
Num. of Analysts-5yr	Audit Analytics	The number of analysts who include the company in their buy/sell recommendations within the past five years. The 2SLS analysis employ a 2-year lagged variable.
Num. of Segments	Compustat	The number of business segments in a given fiscal year.
Past awardee		An indicator equal to 1 if the CFO is a past awardee who received the award before this event year.
PPS	Execucomp	Delta over the sum of delta, salary and bonus. Delta is the dollar change in wealth associated with a 1% change in the firm's stock price, calculated based on the methodology in Core and Guay (2002) and Coles, Daniel, and Naveen (2006)

Restructure	Compustat	An indicator equal to 1 if the firm has a non-zero value for any of the Comustat restructuring items in a given fiscal year. The restructuring items include RCA, RCD, RCEPS, and RCP.
RM_CFO	Compustat	Abnormal cash flows from operations, calculated by multiply residuals in model (4) by -1. Details of the estimation process are described in the text.
RM_DISX	Compustat	Abnormal level of discretionary expenses, calculated by multiply residuals in model (5) by -1. Details of the estimation process are described in the text.
RM_PROD	Compustat	Abnormal production costs calculated as residuals in model (6). Details of the estimation process are described in the text.
ROA	Compustat	Return on assets, calculated as net income over total assets.
Sales growth	Compustat	One year sales growth.

Appendix 2. Balance Check

Table A1. Covariate Balance within the narrow Sample

Covariate	Mean			t-test	
	Rank=1	Rank=-1	% bias	t	p > |t|
	(1)	(2)	(3)	(4)	(5)
Total Assets	11,537	10,301	6.8	0.6	0.552
Market Capitalization	12,546	10,016	14.2	1.27	0.206
Book-to-market	0.40	0.43	-10.6	-0.93	0.351
ROA	0.05	0.04	9.8	0.91	0.362
12-month stock return	0.29	0.32	-7	-0.6	0.55
Leverage	0.27	0.26	5.6	0.5	0.62
Cash holding	0.13	0.12	2.4	0.22	0.825
3-year cash flow volatility	0.02	0.02	1.1	0.11	0.915
Sales growth	0.10	0.15	-16.4	-1.42	0.157
Big 4	0.98	0.96	11	1.02	0.309
Board independence	0.79	0.79	-5.5	-0.5	0.619
CEO is Chair	0.66	0.64	4.8	0.47	0.64
Age	50.09	50.37	-4.4	-0.42	0.674
Tenure	6.08	6.04	0.8	0.08	0.938
|DA| at t0	0.04	0.04	-13.3	-1.13	0.26