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**Essays on CFO and CEO Communication –  
Evidence from Bank Conference Calls**

Advisor: Claudia IMPERATORE

PhD Thesis by

Elica KRASTEVA

ID number: 3027318

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## **CFOs as Communicators – Evidence from Conference Calls in the Banking Sector**

**Elica Krasteva**

Bocconi University

[elica.krasteva@phd.unibocconi.it](mailto:elica.krasteva@phd.unibocconi.it)

### **ABSTRACT**

This study investigates whether CFOs exhibit a dynamic disclosure style. Using earnings conference calls of U.S. publicly listed banks, I analyze how CFOs evolve as communicators over their tenure. CFO disclosures (forward-looking and uncertainty statements) follow a non-linear pattern, reflecting the process of CFOs adapting to their position as well as to the task of communicating financial information. This pattern is also conditional on the type of labor market opportunities CFOs face (shaped by the type of bank they work for). In essence, CFOs may strategically use their disclosures to signal their labor market potential. Additionally, the results are stronger in the case of internally promoted rather than externally hired CFOs. The study provides confirmatory evidence on the individual effects of CFOs through the dynamic nature of CFO disclosures.

## 1. Introduction

As financial stewards of the company, CFOs are responsible for the decisions influencing the company's financial performance (Zorn, 2004; Geiger & North, 2006). CFOs are distinct in terms of responsibilities, expectations, and incentives from CEOs, who have purview over the company's overall strategy and direction. Notably, although both CEOs and CFOs communicate the rationale behind their respective decisions to various stakeholders, they differ with respect to the benefits and costs of such disclosures, especially in terms of equity compensation and career concerns (Feng et al., 2011; Hui & Matsunaga, 2015). Despite that, prior works have mainly analyzed CEOs but have left CFOs relatively unexamined. I fill this gap by analyzing the role of CFOs as communicators in the context of quarterly earnings conference calls. Specifically, I investigate whether and how CFOs' disclosure style evolves over their tenure and is shaped by CFOs' career opportunities and trajectories. Earnings conference calls are a suitable setting to address the question whether CFO do exhibit a dynamic disclosure style as they give CFOs the opportunity to systematically show their development as communicators of financial information.

Few studies analyze voluntary disclosure styles of CFOs and CEOs. Bamber et al. (2010) and Yang (2012) empirically examine the economic consequences of CFOs having distinct voluntary disclosure styles by using attributes of quarterly management earnings forecasts. Davis et al. (2015) examine the manager-specific component in the tone of earnings conference calls, while Bochkay et al. (2019) examine the changes in forward-looking statements and tone of conference calls over the manager's tenure as evidence of managerial ability uncertainty. Bamber et al. (2010), Yang (2012), and Davis et al. (2015) do not consider potential changes in the manager's disclosure style over time. In contrast, Bochkay et al. (2019) examine the dynamics of disclosure style over the tenure of the manager concluding that CEO tenure is not a determinant of CFO style. My study is different from Bochkay et al. (2019) as I contend that CFOs develop distinct disclosure style over their own tenure.

Building on theoretical insights of Beyer & Dye (2012), according to which managers can be forthcoming or strategic communicators<sup>1</sup>, I hypothesize that CFO disclosure style develops in a non-linear (U-shaped) manner over the CFO tenure. CFOs may start their tenures as forthcoming communicators, using lower levels of disclosures as they may have to learn the intricacies of their position and may be unwilling to set up disclosure precedents they cannot maintain afterwards. As their tenure progresses, CFOs develop their disclosure style as CFOs. In consequence, they realize the importance of disclosing to stakeholders and may purposefully choose to increase their disclosures, thus acting more as strategic communicators. Then, I explore the role of labor market dynamics analyzing whether the relationship between CFO tenure and disclosure style is shaped by opportunities available to CFOs in the labor market. As CFOs may send additional signals to the labor market through observable disclosure events, such as earnings conference calls, they may adapt their disclosures depending on the available labor market opportunities. Specifically, when desirable labor market opportunities are present, CFOs may choose to be more strategic early on in their tenure and transition to being forthcoming communicators later on. Given that, I hypothesize that the availability of different labor market opportunities moderates the relationship between tenure and disclosure style.

I address my research question in a sample of U.S. publicly listed banks in the post-financial crisis period (2010 – 2017), a period during which banks attempted to improve their damaged reputations. The banking industry is a suitable setting to address my research question for a number of reasons. First, the banking industry is a complex and regulated environment (Beatty & Liao, 2014) that augments the importance of CFOs as communicators to ensure their future in the industry. Second, prior literature states that CFO disclosure style may not be easily detectable as CFOs do not participate as much as CEOs in conference calls (Bochkay et al., 2019). This is not necessarily the case in the banking sector. Hence, the banking industry environment provides a unique opportunity to investigate CFO disclosure style. Last, we have limited insights into the voluntary disclosure choices of bank CFOs. This is because the banking industry is

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<sup>1</sup> Forthcoming communicators choose to disclose good and bad information in a timely manner. Conversely, strategic communicators make a strategic choice what information to disclose and when, acting out of self-interest.

generally excluded from accounting research studies and, even in research studies using banks as a setting, the focus is primarily on CEOs, their characteristics and compensation packages (Nguyen et al., 2015).

I test my hypotheses on 1,792 quarterly conference calls of 79 U.S commercial banks over the period 2010–2017. My unit of analysis is the individual CFO participating in bank conference calls in a given year-quarter. In my sample, 150 CFOs and 114 CEOs preside over conference calls. The conference calls data comes from Thomson Reuters StreetEvents, while the background characteristics and compensation of CFOs are from BoardEx and ExecuComp, respectively. The quarterly financial statements, analyst forecasts, and market data come from Compustat, I/B/E/S, and CRSP, respectively.

In line with Bochkay et al.'s (2019) dynamic model of disclosure style, I test the development of CFO disclosure style over a period of time rather than at a point in time. CFO tenure is measured as the natural log of the number of quarters that CFOs participate in earnings conference calls<sup>2</sup>. I define disclosure style, a latent construct, as *what*<sup>3</sup> CFOs disclose during earnings conference calls in terms of forward-looking and uncertain statements, which are closely related to the role of CFOs as financial stewards. In both cases, I use bag-of-words approach to operationalize the level of disclosures<sup>4</sup>.

I find that CFO disclosure style develops in a non-linear manner over the CFO tenure. Furthermore, labor market opportunities CFOs face, captured by the classification of the bank as systemically (SIB) or non-systemically important, influence the development of disclosure style by changing the direction of the non-linearity in the relationship between tenure and style. CFOs of SIBs have more incentives to behave as strategic communicators early on, as they may view the position of CFO as the step towards an upward promotion (possibly as part of the CEO succession plan). Conversely, their non-SIB counterparts may exhibit preference for starting as forthcoming communicators, whose career intentions may be to either remain as CFOs or move laterally as CFOs to another bank. Further analysis dividing CFOs into internally promoted

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<sup>2</sup> Bochkay et al. (2019) operationalize CEO ability with CEO tenure, expressed as the natural log of quarters CEOs serve in their position.

<sup>3</sup> Although Bochkay et al. (2019) rely on *what* (forward-looking statements) and *how* (tone) managers disclose, I focus on *what* CFOs disclose as CFOs are expected to rely more on facts and figures during earnings conference calls, rather than on providing any “coloring” to their disclosures, which could be more readily associated with CEO disclosures.

<sup>4</sup> Bochkay et al. (2019) follow the same approach for their variable for CEO disclosure style by measuring disclosure style in terms of net positivity of CEO disclosures and CEO forward-looking statements during conference calls.

and externally hired provides additional confirmation that labor opportunities of CFOs play a role in shaping disclosure style showing that results only hold for internally promoted CFOs.

The main hypotheses results are robust to the exclusion of retired CFOs as well as to an alternative measure of tenure. Additionally, I run a falsification test using tone as a measure of disclosure style. CFOs are expected to show neutrality and subjectivity in discussing financial decisions. Thus, it is possible that tone carries a different connotation for CFOs rather than signaling their evolution as communicators. The inconsistent results from this test point towards such an explanation.

To understand whether results are due to individual effects or firm dynamics, I investigate whether and how bank CFOs react to events that potentially augment external firm scrutiny, such as the Basel III regulation and release of Q4 results. I do not find that these events influence the disclosure style of CFOs, which may suggest that the results are driven by the individuals rather than the firm. I acknowledge that higher scrutiny events may also increase CFOs' visibility. To this end, I conduct another test that may provide further insight into the higher visibility explanation. Since 2010, some bank CFOs started preparing their banks for an annual Comprehensive Capital Analysis and Review (CCAR) exercise, which examines the capital adequacy and capital planning practices of banks. Using CCAR as a moderating variable, I obtain mixed results, which may indicate that visibility is not necessarily an alternative explanation of the relationship between CFO tenure and disclosure style.

This study contributes to the growing stream of literature exploring the role of individual CFOs in financial reporting outcomes. An increasing number of researchers challenge the view that managers do not exert any influence over corporate decisions, including voluntary disclosures of financial information to stakeholders by arguing that managers, and not the firm, are the ones making disclosure decisions (Healy & Palepu, 2001; Beyer et al., 2010). In line with this idea, prior studies document the influence of CFOs on firm policies and performance (e.g., Aier et al., 2005; Geiger & North, 2006; Dyreng et al., 2010; Ge et al., 2011; Dejong & Ling, 2013; Hoitash et al., 2016), exploring the importance of expertise, knowledge and experience of CFOs in these contexts (e.g., Aier et al., 2005; Hoitash et al., 2016). Furthermore, previous studies provide indirect

evidence on the role of labor market dynamics of CFOs (e.g., Geiger & North, 2006; Hoitash et al., 2016). Contrary to extant literature, which considers disclosure style and labor market opportunities in isolation, this study attempts to combine both constructs and to provide novel evidence of the evolving role of CFOs as communicators, and how labor market opportunities shape this evolution.

In addition, this study provides insights into voluntary disclosures of banks, in general, and of bank CFOs, in particular. Banking literature either discusses CEOs or bank managers in general (Beatty & Liao, 2014; Nguyen et al., 2015), thus leaving bank CFOs relatively unexplored. As the banking industry is important to the economy, it is important to understand how bank CFOs communicate with stakeholders, especially when they are exposed to higher scrutiny. This study attempts to fill this gap by providing evidence of the change of the disclosure style of bank CFOs as well as of CFOs, in general.

The remainder of the paper proceeds as follows. Section 2 provides a review of the prior literature on CFOs and disclosure style, along with the hypotheses development. Section 3 describes the research methodology. Section 4 discusses the results, robustness checks, alternative explanations, and additional analyses. Section 5 concludes the paper.

## **2. Literature Review and Hypotheses Development**

In the past five decades, CFOs in for-profit organizations have gained importance among the corporate elite (Zorn, 2004). Although present-day CFOs continue to be the financial stewards of their companies, CFOs have also become instrumental in key corporate, strategic and operational decisions, turning them into strategic partners of CEOs. Another important role of CFOs is that of communicators. CFOs discuss the reasons and ramifications of the firm's financial performance, along with financial justifications supporting the overall firm strategy. As such, they are expected to deliver facts and numbers that analysts and investors can trust (Banham, 2018).

The empirical accounting literature is growing in line with the idea that CFOs are the overseers of the company's financial reporting (Ge et al., 2010). Researchers have examined the impact of CFOs on tax avoidance (Dyreng et al., 2010), restatements (Aier

et al., 2005), discretionary accruals (Geiger & North, 2006; Ge et al., 2011; Dejong & Ling, 2013), as well as investments and external financing choices (Hoitash et al., 2016). Notably, these studies focus primarily on the CFO financial expertise (e.g., possession of CPA certificate, MBA degree and tenure as CFO, among others), generally excluding the banking industry.

Building upon the notion of the importance of individual managers and the influence of their personal and professional backgrounds, other studies examine managers' voluntary discussions of firm's financial performance. For example, Bamber, Jiang and Wang (2010) and Yang (2012), along with Davis, Ge, Matsumoto and Zhang (2015) analyze whether and how CFOs' unique and economically significant manager style (derived through management-fixed effects) impact on voluntary corporate financial disclosures, i.e. management earnings forecasts and tone, respectively. Bamber et al. (2010) and Yang (2012) examine the voluntary disclosure styles of CFOs and CEOs in terms of management earnings forecast attributes, such as accuracy, frequency, precision, and bias. Both studies find empirical evidence for the existence of voluntary disclosure style of managers. Davis et al. (2015) further confirm the existence of managerial style, arguing that there is a component embedded within voluntary disclosures that is influenced by the individual manager. In particular, the authors find that managerial tone in earnings conference calls reflects not only current performance, future performance, and strategic incentives but also manager-specific tendency to be optimistic or pessimistic.

Notably, Bamber et al. (2010) and Yang (2012) rely on Bertrand and Schoar's (2003) manager-fixed effects (or manager style) structure, which requires managers to have worked in two different firms over the span of six years. The implicit assumption is that manager style is sticky over time and the manager carries the same style from one company to the next. In short, manager style is a somewhat static concept. In this study, I take a different view by investigating whether and how certain attributes of disclosure style exhibit temporal changes, hence, CFO disclosure style evolves. In particular, I focus on the CFOs' tenure as a distinct factor that affects how CFOs communicate. The use of disclosure style reflects how the setting, the theoretical framework, and the empirical methodology of this paper differ from those of Bamber et al. (2010) and Yang (2012).



## **2.2. CFOs and voluntary disclosure styles**

CFOs have strong incentives to voluntarily release reliable information. CFOs have different responsibilities, investor expectations, career concerns, and incentive structures than CEOs (Ernst & Young, 2011; Murphy, 2014). In particular, compared to CEOs, CFOs receive lower equity compensation, face higher litigation risk and incur higher labor costs; additionally, CEOs play an important role in influencing CFOs' career opportunities inside the firm (Feng et al., 2011). In their survey of CFOs, Graham, Harvey and Rajgopal (2005) report that CFOs consider transparent/accurate reporting as the most important motivation for voluntarily disclosing firm information. Furthermore, CFOs in the survey point out the reduction of the information asymmetry between managers and investors and analysts as a separate motivator. Despite its benefits, the voluntary release of information is not costless. Graham et al. (2005) find support for the four costs on voluntary disclosure (litigation risk, proprietary costs, political costs, and agency costs in the form of career concerns and external reputation) identified by Healy and Palepu (2001) in their review of the empirical disclosure literature, along with two additional constraints, i.e. limitations of mandatory disclosure, and setting a disclosure precedent that could be hard to maintain in the future. CFOs consider setting a future disclosure precedent, proprietary costs and litigation risk, as the most important constraints to voluntary disclosure.

Although the majority of CFOs' communication activity is not publicly available, we can get insights by analyzing how they discuss the financial performance of the company during the quarterly earnings conference calls they hold with analysts. Earnings conference calls represent a type of voluntary disclosure (Palmieri et al., 2015; Lee, 2016) that take place at least once during the fiscal year. Matsumoto, Pronk and Roelofsen (2011) show that earnings calls represent an important source of information for analysts. This is because managers convey their knowledge of the firm's financial performance during conference calls, especially in instances of poor financial performance (Matsumoto et al., 2011; Li et al., 2014). Managers are privy to private information about the company that may be too costly to share openly, but they can discuss their views regarding the company's current and future performance during the conference calls (Graham et al., 2005; Palmieri et al., 2015; Lee, 2016). In particular, managers may use forward-looking

statements (Bochkay et al., 2019) and tone (Davis et al., 2015) during the calls to convey information about future prospects of the company. Thus, conference calls, with their unstructured and unregulated nature, provide an environment to study manager-specific factors that influence managerial tone (Davis et al., 2015).

Earnings conference calls consist of a Management Discussion (MD) portion delivered by the CEO and/or the CFO (and other top executives, if necessary), followed by a Q&A portion where the executive managers interact with the call participants (i.e., analysts) (Li et al., 2014). This study focuses on the MD of CFOs during conference calls to detect CFOs' disclosure style for at least two reasons. First, the MD portion consists of scripted presentations delivered by managers, whereas the Q&A part is driven by the analysts as they pose questions to managers. Furthermore, although the MD portion may not be expected to reveal any discernible disclosure attributes (Larcker & Zakolyukina, 2012), detecting such attributes empirically could serve as proof of distinct time-variant disclosure style. Additionally, CFOs may not participate in the Q&A portion as much as CEOs, which limits the availability of Q&A data to explore CFO disclosure style. I build upon the premise that voluntary disclosures of managers during the MD part of conference calls could be used as a signal to the labor market as managers have the opportunity to present themselves as communicators capable of presenting financial information in a way that preempts any questions from analysts. Thus, as regular and observable events, earnings conference calls can provide us with a glimpse into the evolution of CFOs as communicators over their tenure and the role of CFO career trajectory in forming their disclosure style.

### **2.3. Hypotheses development**

According to Finkelstein, Hambrick, and Cannella (2009), managerial tenure is a multi-faceted construct that has both positive and negative aspects. On the one hand, managers become accustomed to the firm and to their position requirements, gain knowledge and expertise, and increase their power. On the other hand, managers with longer tenure tend not to make major changes in their firms (i.e., become inertial), become more committed to the established policies and practices they feel comfortable with as well as more confident in their abilities to make successful decisions based on past

experience. Furthermore, managers with long tenures in their position, in the same firm and industry, are even more committed to the status quo in the company and in the industry, which could translate into convergence towards the average position in the industry.

In the accounting literature, tenure is used to explain managerial experience (Aier et al., 2005), managerial ability (Bochkay et al., 2019), as well as uncertainty about manager type (Carter et al., 2019). Recently, Bochkay, Chychyla and Nanda (2019) examine uncertainty about CEO ability and CEO career concerns over the CEO tenure to reflect the dynamic nature of CEO disclosures, documenting a non-linear relationship between tenure and disclosures. They conclude that the disclosure style of non-CEO managers does not vary over the CEO tenure or that CEO tenure is not a determinant of non-CEO disclosure style. In this vein, the current study builds upon the dynamic nature of conference calls disclosures but in the context of CFOs and their evolution as communicators of financial information.

I contend that CFOs develop their disclosure style over their tenure, with style defined as *what* CFOs say during conference calls, particularly with respect to the uncertainty and future orientation of the financial position of the firm. I argue that, at the beginning of their tenure, CFOs may be cautious about what they disclose because they might be still getting used to, and learning about, their job as well as to communicating with internal and external stakeholders, which explains why they limit their disclosure related to the uncertainty of firm operations and to predictions of future performance. They may also be conscious of not establishing disclosure precedents that they cannot sustain throughout their tenure (Graham et al., 2005). In a sense, CFOs are initially more forthcoming in their communication. However, as their tenure progresses and CFOs become more experienced communicators, CFOs understand that low level of disclosure may signal that they do not provide sufficient useful information during conference calls to reduce the information risk of investors and analysts. Moreover, they start acting with more confidence and capitalizing on any advantage this may bring to them in terms of better job opportunities (and subsequent promotion). In this situation, CFOs become more confident as communicators so they might be less concerned with the verifiability of their

disclosure content. All of the above arguments point to a non-linear (or U-shaped) relationship between disclosure style and tenure. Formally:

*H1: There is U-shaped relationship between CFO tenure and CFO disclosure style.*

The prior argument better applies to CFOs who are not worried about hurting their career opportunities when making a mistake in their disclosure. However, CFOs may face different labor market dynamics, which in turn influence their incentives to disclose (Geiger & North, 2006; Hui & Matsunaga, 2015). In particular, if CFOs perceive that they do not have desirable labor market opportunities beyond their current jobs, they will act in a way that would help them keep their jobs as long as possible. In this situation, CFOs view disclosure as a signal to retain their current position for a longer time. They are cautious about what they disclose as potential mistakes may lead to a job loss as a consequence.

Such expectation of longer-term employment as CFOs in the focal firm may not necessarily hold for CFOs that seek and have promotion opportunities beyond the current job. If CFOs believe that they have more labor market opportunities (inside and outside the focal firm), they can deliberately choose to be more strategic in their disclosures from the beginning of their tenures, thus foregoing the caution their counterparts exhibit. In this case, they start developing as communicators much earlier as they want to make a favorable impression from the beginning and remain as CFOs until they line up an upward promotion (e.g., COO, unit CEO, or CEO).

Thus, as CFOs' development as communicators is key for their career path because it can facilitate upward or lateral promotion (benefits) or involuntary turnover, when it is broken (costs), I hypothesize that the relation between CFO disclosure style and tenure is influenced by both internal<sup>5</sup> and external<sup>6</sup> labor market opportunities of CFOs. In particular, I expect that labor market opportunities influence the shape of the relationship due to the differences in CFOs' incentives to adjust the level of disclosure in keep their desired career trajectory.

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<sup>5</sup> For example, CFO promoted to COO or CEO.

<sup>6</sup> For example, CFO leaves the job and sets up own firm.

*H2: The U-shaped relationship between CFO tenure and CFO disclosure style varies, depending on the labor market opportunities available to CFOs.*

### **3. Data and Methodology**

#### **3.1. Study setting: Banking industry**

I address my hypotheses in a single industry: the banking sector. A single-industry setting allows an in-depth analysis of the decisions CFOs make while reducing cross-industry confounding effects. The U.S. banking industry is an interesting setting to consider for a number of reasons.

First, banks operate in a complex, regulated environment (Beatty & Liao, 2014), which increases the visibility of CFOs<sup>7</sup> and shapes their labor market dynamics. A descriptive analysis of CFO backgrounds and career trajectories presented in Table 1 suggests that bank CFOs spend most of their careers in the banking industry, working for the same or different banks. In this way, they get acquainted with the intricacies of the industry and gather expertise and knowledge that would qualify them to take on the CFO position. Furthermore, choosing a single industry alleviates the matching problem between firm and CFO as bank CFOs generally spend their careers within the same industry.

Second, prior literature suggests that CFO disclosure style may not be easily detectable as CFOs do not participate as much as CEOs in conference calls (Bochkay et al., 2019). This is not necessarily the case in the banking sector. Bank conference calls follow the general structure of earnings calls described in section 2.1. Some banks choose to only have the CFO present at the call or speak most of the time (especially, during the MD portion). Bank CFOs generally discuss the quarterly performance of the bank, the sources of revenues and expenses, and the changes in balance sheet and income statement accounts. Due to the highly regulated nature of the industry, discussion of various regulatory requirements and changes may be also part of the CFO presentation. Hence, the banking industry environment provides a unique opportunity to investigate CFOs' disclosure style.

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<sup>7</sup> Bank CEOs remain the most visible executive in the firm.

Last, banks are usually excluded from accounting research due to the regulatory nature of their environment, yet they play an important role in the economy. The extant literature using banks as a setting provides some insight into the behavior and decisions of bank managers, but the focus is primarily on CEOs, their characteristics and compensation packages (Nguyen et al., 2015), which leaves the roles of CFOs unexplored.

### 3.2. Variable measurement and hypotheses testing

#### 3.2.1. Empirical strategy

This study uses a longitudinal research design, which models CFO disclosure style as a function of CFO tenure and a set of covariates. CFO disclosure style is proxied by the level of CFO forward-looking statements (FLS) and uncertainty words used during conference calls.

Hypothesis 1 (H1) states that there is a U-shaped relationship between CFO disclosure style and tenure. I test the U-shaped relationship by running the following equation:

$$CFODiscStyle_{ijt} = \alpha_0 + \alpha_1 * CFOTenure_{ijt} + \alpha_2 * CFOTenureSq_{ijt} + \alpha_3 * CFOWords_{ijt} + \alpha_4 * CEOTenure_{ijt} + \alpha_5 * CEODiscStyle_{ijt} + \Sigma * CFOControls_{ijt} + \Sigma * FirmControls_{jt} + \varepsilon_{ijt} \quad (1),$$

where *CFODiscStyle* corresponds to CFO FLS [*CFOFLS*] and CFO uncertainty statements [*CFOUncertain*] (see section 3.2.2 for variable measurement details). Subscript *i* denotes the manager, subscript *j* denotes the firm, and subscript *t* denotes the quarter.

The main explanatory variable, *CFOTenure*, is calculated based on the first quarter the CFO and CEO appear on a conference call<sup>8</sup>. I use quarterly tenure as it allows for more precise estimate of trends (Bochkay et al., 2019). I also include the squared term of

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<sup>8</sup> If the first quarter of CFO or CEO falls before the sample period, I check all available conference calls in Thomson Reuters Street Events to determine the quarter and year of the first available call of the respective manager. If that call is not available, the I check the start date in the BoardEx database and infer the most probable first conference call of the executive by relying on the pattern of dates, on which conference calls for each bank are held on.

CFO tenure [*CFOTenureSq*] to test for the U-shaped form of the relationship. According to H1, I expect  $\alpha_1 < 0$  and  $\alpha_2 > 0$ .

Besides tenure, I include three sets of control variables. The first one, CFO-level controls, includes CFO age [*CFOAge*], CFO equity compensation as percentage of total compensation [*CFOEquityComp%*], CPA [*CPA*], membership in industry- and national-level organizations [*SpecialMember*], pre-CFO years spent in company [*PreCFOYrsInComp*], and pre-CFO years spent in industry [*PreCFOYrsInInd*]. The second group of factors is connected with the control that CEOs could exert over CFOs to ensure that their disclosure styles do not negatively impact them and the firm. CEOs and CFOs appear “connected and consistent” in their presentations during conference calls (Banham, 2018), so CEOs could keep the CFO in check if the CFO strays too much from the intended message both managers want to convey to the conference call participants. Furthermore, CFOs, aspiring for upward promotion to CEO in the future, may use this collaboration with CEOs to learn from them what it means to be a CEO. These factors are represented by CEO disclosure style or *CEODiscStyle*, i.e. [*CEOFLS*] and [*CEOUncertain*], and CEO tenure [*CEOTenure*].

The third group of factors includes firm-specific controls. In line with previous literature, I include the following observable firm characteristics<sup>9</sup>: growth opportunities (i.e., firm age [*FirmAge*], firm size [*Size*], book-to-market [*BTM*]), operations (i.e., return on assets [*ROA*], loan-loss provisions [*LLP*], magnitude of special [*SpecialItems*] and restructuring items [*RestrItems*], and returns [*Return*]), balance sheet quality (non-performing assets [*NPA*], net charge-offs [*CO*], leverage [*Leverage*], and tier 1 capital ratio [*T1Cap*]), uncertainty (i.e., CFO litigation risk [*LitigRisk*], unexpected earnings [*UE*]), and the information environment (i.e., analyst following [*AnalystFollow*])<sup>10</sup>.

In all regression specifications, I include CFO fixed effects to account for time-invariant CFO characteristics. For each dependent variable, I run a regression model with a control for time trend or with fiscal year-quarter fixed effects to account for any market-

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<sup>9</sup> Following Bochkay et al. (2019), I control for size, ROA, special items, leverage, UE, returns, and analyst following. Following Beatty and Liao (2014), I control for loan loss provisions, non-performing assets, and net charge-offs. Following, Kleyменова and Tuna (2021), I control for book-to-market and tier 1 capital ratio.

<sup>10</sup> All variables are defined in Appendix C.

wide factors influencing firm-level voluntary disclosures. I use robust standard error specification in all regressions<sup>11</sup>.

Hypothesis 2 (H2) analyzes whether the relationship between CFO disclosure style and tenure is attenuated by labor market opportunities of CFOs. To test it, I run the following model:

$$CFODiscStyle_{ijt} = \alpha_0 + \alpha_1 * CFOTenure_{ijt} + \alpha_2 * CFOTenureSq_{ijt} + \alpha_3 * CFOTenure_{ijt} * SIB_j + \alpha_4 * CFOTenureSq_{ijt} * SIB_j + \alpha_5 * SIB_j + \alpha_6 * CFOWords_{ijt} + \alpha_7 * CEOTenure_{ijt} + \alpha_8 * CEODiscStyle_{ijt} + A * CFOControls_{ijt} + A * FirmControls_{jt} + \varepsilon_{ijt} \quad (2)$$

All variables are the same as in Eq. (1) with the exception of the SIB variable. The SIB variable is a proxy for labor market opportunities; it denotes whether a bank is systemically important or not, as explained in section 3.2.3. As labor market opportunities are difficult to observe, I adopt such indirect measure that is a characteristic of the banking setting. Model specifications are the same as in Eq. (1). I expect  $\alpha_3 > 0$ , and  $\alpha_4 < 0$ .

### 3.2.2. Disclosure style

CFO disclosure style is a latent construct, which reflects the level of CFO-specific forward-looking disclosures and uncertainty statements used in earnings conference calls. Forward-looking disclosures capture information related to the prospects of the company, while uncertainty statements measure the uncertainty within the operating environment of the firm. As constructs, forward-looking and uncertainty statements share a degree of overlap as both consider the future uncertainty the company faces. Given that, I expect both variables to behave in a similar way. This overlap is confirmed by the significant and positive correlation between the two variables (see Table 4, Panel A)<sup>12</sup>.

CFO disclosure style is calculated using the transcript of the MD presentation of CFOs during conference calls. Earnings conference call transcripts are taken from Thomson Reuters StreetEvents<sup>13</sup>. The names and titles of CFOs and CEOs (if present)

<sup>11</sup> I also run the regressions by clustering errors by firm. The results for both hypotheses hold.

<sup>12</sup> Analysis using tone as proxy for disclosure style is included in the robustness tests section. With regards to its relationship to the two main proxies for disclosure style, tone is negatively and significantly correlated with both FLS ( $r = -0.217$ ,  $p < 0.001$ ) and uncertainty statements ( $r = -0.1429$ ,  $p < 0.001$ ).

<sup>13</sup> Not all banks in the merged Compustat and Execucomp sample have available conference calls data.



are extracted from each conference call. I follow the methodology outlined in Muslu et al. (2015) and Bochkay et al. (2019) to extract forward-looking statements (FLS) in the presentation part of the conference calls. Specifically, I use the following list of keywords and phrases capturing the future orientation of the company instead of the current and past orientation<sup>14</sup>:

- Keywords commonly used to refer to the future: “will”, “future”, “next fiscal/month/period/quarter/year”, “incoming fiscal/month/period/quarter/year”, “coming fiscal/month/period/quarter/year”, “upcoming fiscal/month/period/quarter/year”, “subsequent fiscal/month/period/quarter/year”, “following fiscal/month/period/quarter/year”.
- Verb conjugations that relate to the future: “aim”, “anticipate”, “commit”, “estimate”, “expect”, “forecast”, “foresee”, “hope”, “intend”, “plan”, “project”, “seek”, “target”.

I calculate the CFO-specific forward-looking disclosures as the number of words in CFO forward-looking statements divided by total number of CFO words<sup>15</sup>:

$$CFO_{FLS} = 100 \times \frac{CFO \text{ Forward – looking Words}}{CFO \text{ Total Words}}$$

To measure CFO-specific uncertainty statements, I apply Loughran and McDonald’s 2018 financial sentiment dictionary (L&M dictionary)<sup>16</sup> to identify uncertainty disclosures in CFO-specific disclosures during the presentation part of the conference calls<sup>17</sup>. Uncertainty statements are computed in the following way:

$$CFO_{uncertainty} = 100 \times \frac{CFO \text{ Uncertainty Words}}{CFO \text{ Total Words}}$$

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<sup>14</sup> Example (FLS underlined): “Looking at the whole year, we saw significant improvement in charge-offs driven by a 20% to 30% decline in delinquencies and to a lesser extent improving house prices. We expect these positive trends to continue next year, but not necessarily at the same pace as this.” (JPMorgan Q4 2012 Earnings Call)

<sup>15</sup> This measure is based on Bochkay et al. (2019) measurement of CEO forward-looking disclosures.

<sup>16</sup> The dictionary is available through the University of Notre Dame’s Software Repository for Accounting and Finance website (<https://sraf.nd.edu/textual-analysis/resources/>). For an overview of the use of the L&M dictionary and its versions, please refer to Loughran & McDonald (2016).

<sup>17</sup> Example (uncertainty statements underlined): “And to note, the estimate for Basel III of 8.7% includes the full impact of MPR as we understand it compared to 8.4% last quarter and is approximately 150 basis points over last year on a comparable basis. The return on Basel I RWA was 1.9% for the quarter ex-DBA...The net charge-off rate you see of 3.5% is down slightly quarter-on-quarter and down 79 basis points year-on-year and we believe we are at or near the bottom here.” (JPMorgan Q4 2012 Earnings Call)

Forward-looking and uncertainty statements are examples of the bag-of-words method of textual analysis. It is the most common method used in the accounting and finance literature (Loughran & McDonald, 2016; El-Haj et al., 2019), so scholars are familiar with interpreting the results. It is simple in its essence, but it may not entirely capture the full nuances of a construct such as disclosure style. Thus, it represents a proven and intuitive way of representing the level of disclosure of individual managers in a quantitative way.

My particular choice of textual measures to construct CFO disclosure style is two-fold. First, textual measures are tools to test economic hypotheses rather than the driving reason behind answering research questions (Loughran & McDonald, 2016; El-Haj et al., 2019). In this regard, choosing simpler textual measures, such as bag-of-words, could be considered sufficient compared to state-of-the-art techniques borrowed from the field of computational linguistics if they help addressing the underlying research question. The bag-of-words approach has been used in the accounting and finance literature to address questions related to voluntary disclosures of managers, especially in the setting of earnings conference calls (e.g., Loughran & McDonald, 2011; Matsumoto et al., 2011; Davis et al., 2015; Huang et al., 2017; Bochkay et al., 2019). The second reason behind my choice of textual measures is the sample size. Since my study focuses on one industry, I cannot benefit from the scale of data that other studies covering all non-financial industries do. Given that, other quantitative textual measures may not be applicable. For example, a topic modeling approach using Latent Dirichlet Allocation (LDA) might be appropriate to measure disclosure style but may be constrained in its results due to lower sample size (Loughran & McDonald, 2016). Moreover, topic modeling may be viewed as a more sophisticated bag-of-words approach (Loughran & McDonald, 2016), whose output may not be easily interpretable, especially in the context of managerial disclosure style.

### **3.2.3. CFO labor market opportunities – SIB variable**

As explained earlier, I proxy labor market opportunities with the SIB indicator variable. The variable equals one for all banks in the sample that are part of the group of

the so-called systemically important or “too big to fail” banks, and zero otherwise<sup>18</sup>. I define SIB banks using the list of U.S. systemically important banks included in Labonte and Perkins (2017). The variable is time-invariant, i.e. a bank is coded as SIB throughout the whole sample period.

As Table 1 suggests, CFOs at SIBs and non-SIBs differ in terms of their background characteristics, which also highlights the differences in their career trajectories. SIB CFOs, on average, spend more time both in the same bank and in the banking industry prior to being promoted to CFO, as well as are more likely to have a membership in industry- or national-level organizations. Due to their longer pre-CFO tenure at the same bank, SIB CFOs have more diverse backgrounds in terms of functional experience, such as commercial, private and investment banking, and asset management. Non-SIB CFOs, on average, may come from other banks (where they have also held the CFO title) or even from outside the industry, but they may have been associated with the banking industry because they had banks as audit clients (CPA designation and auditing background are more prevalent among them). Non-SIB CFOs have longer CFO tenures, which indicates that they spend more time as CFOs in the focal firm.

SIB CFOs have more knowledge of the firm prior to starting their tenure as CFOs, but they may not be that experienced with regards to other aspects of the CFO role. The higher visibility (and more regulatory pressure) but also the higher brand value of SIB banks generates incentives for them to develop as communicators since this could be a contributing factor to post-CFO upward career mobility. In contrast, their non-SIB counterparts may have less knowledge of the bank but come with specific skillsets (or prior related portable skills and knowledge) acquired through experience as CPAs and former CFOs at other banks, which potentially make them more technically ready for the position of CFO.

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<sup>18</sup> The term systemically important banks (or “too big to fail” as they are better known in the business press) came about as part of the Dodd-Frank Act of 2010 in its part to address financial stability in the financial sector. These institutions have annual assets of over \$50 billion and are subject to a number of requirements, e.g. stress tests and capital planning, living wills, liquidity requirements, counterparty limits, risk management, and financial stability. Most of these requirements apply to 30 U.S. bank holding companies or the U.S. operations of foreign banks. This paper uses the list of U.S. banks published in Labonte and Perkins (2017), “Bank Systemic Risk Regulation: The \$50 Billion Threshold in the Dodd-Frank Act” (<https://fas.org/sqp/crs/misc/R45036.pdf>).

[Insert Table 1 around here]

### 3.2.4. Sample selection and sources of data

I test my hypotheses using a sample of publicly listed banks headquartered in the U.S. and holding at least one quarterly earnings conference call per fiscal year during the period 2010-2017 (32 fiscal quarters).<sup>19</sup> The sample period starts after the end of the 2008-2009 financial crisis in order to avoid the confounding effect of the crisis. Moreover, after the crisis, banks worked on improving their reputations damaged during the financial crisis (Augar, 2020) and faced more stringent regulatory pressure with the introduction of the Dodd-Frank Act and the Basel III requirements.

Compustat Bank Quarterly contains 16,503 quarterly observations of 682 banks for the sample period. CFO compensation data come from Execucomp, which decreases the available sample to 3,512 quarterly observations for 128 banks. The control variables related to quarterly financial statement, analyst forecasts, and market data come from Compustat, I/B/E/S, and CRSP, respectively. The source of CFO individual characteristics (e.g., age, CPA certification, special membership in industry-level and national-level organizations, among others) is BoardEx. Thus, after collecting all the data, the final sample used in the main analyses comprises 1,792 quarterly observations for 79 banks, out of which 370 observations (13 banks) and 1,422 observations (66 banks) correspond to systemically important and non-systemically important banks, respectively<sup>20</sup>. This sample represents 150 CFOs and 114 CEOs across all 79 banks.

### 3.3. Descriptive statistics

Table 2<sup>21</sup> presents the descriptive statistics related to the two CFO disclosure style measures (*CFOFLS* and *CFOUncertain*), CFO background characteristics, CEO-level variables and firm-level control variables for the full sample. The mean (median) for *CFOFLS* and *CFOUncertain* are 0.34% (0.30%) and 0.69% (0.60%), respectively. CFO use 1,280 words during conference calls on average.

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<sup>19</sup> Appendix B contains distribution of conference calls per fiscal year.

<sup>20</sup> Appendix A contains the breakdown of the sample selection process and Appendix C describes all variables used in the study.

<sup>21</sup> The descriptive statistics related to CFO and CEO tenure, albeit higher than those the extant accounting literature using conference calls as setting (Green et al., 2019), fall in line in terms of CEOs having longer tenures than CFOs.

*[Insert Table 2 around here]*

Then, I examine the differences in mean and median for all CFO disclosure measures, CFO background characteristics, CEO-level and firm-level control variables for systemically important (SIBs) and non-systemically important (non-SIBs) banks. In Table 3, I observe that CFOs at SIBs utilize more uncertainty words in their presentations, but do not differ in terms of the number of forward-looking disclosures they make. Additionally, CFOs at SIBs speak more than their non-SIB counterparts, which could be a function of the higher scrutiny SIBs are exposed to, leading CFOs to provide more details on the current and future performance of the bank<sup>22</sup>.

*[Insert Table 3 around here]*

Table 4 reports pair-wise correlations for the variables of interest. I document a significant and positive correlation between CFO tenure and the level of CFO uncertainty disclosures ( $r=0.048$ ,  $p<0.001$ ), while the correlation between CFO tenure and the level of forward-looking statements is not statistically significant. Since I am testing a U-shaped relationship between CFO tenure and CFO disclosure level, the lack of linear correlation between these variables may not indicate absence of relationship. It may simply suggest that the relationship is indeed non-linear in nature (Trombetta & Imperatore, 2014).

*[Insert Table 4 around here]*

## **4. Empirical Tests and Results**

### **4.1. Main evidence (H1 and H2)**

According to H1, CFO tenure and level of disclosure exhibit a U-shaped relationship. Table 5, Panel A provides evidence in support of H1, confirming a U-shaped relationship ( $\alpha_1 < 0$  and  $\alpha_2 > 0$ )<sup>23</sup> between tenure and level of disclosure in the case of both FLS (Column 1:  $\alpha_1 = -0.122$ ;  $p = 0.039$ ;  $\alpha_2 = 0.043$ ;  $p = 0.039$ ; Column 2:  $\alpha_1 = -0.087$ ;  $p = 0.175$ ;  $\alpha_2 = 0.032$ ;  $p = 0.182$ ) and uncertainty statements (Column 3:  $\alpha_1 = -0.170$ ;  $p = 0.091$ ;  $\alpha_2 = 0.067$ ;  $p = 0.059$ ; Column 4:  $\alpha_1 = -0.293$ ;  $p = 0.006$ ;  $\alpha_2 = 0.117$ ;  $p = 0.002$ ).

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<sup>22</sup> It could be a concern as CFOs may not be given the opportunity to explain financial performance to analysts. But this may as well be part of the disclosure choice of the firm itself or of the firm CEOs. At the same time, it may not be concerning as CFOs may choose to disclose only when they believe they have something valuable and important to discuss.

<sup>23</sup> Table 5, Panel B contains the results of an additional test confirming the U-shaped relationship.

All coefficients, except for those in column 2 are statistically significant. Table 5, Panel B provides details on the inflection point in the U-shaped relationship. The inflection points for each of the specification models in the FLS and uncertainty statement analyses roughly translate into four fiscal quarters. Graphs 1 and 3 represent the U-shaped relationship between CFO tenure and CFO FLS and CFO uncertainty, respectively.

Thus, in line with H1, I find that, at the beginning of their tenure CFOs use fewer forward-looking and uncertainty statements during their MD presentation. This trend reverses after roughly one fiscal year. CFOs get more accustomed to their position as CFOs because of more regular interactions with analysts as well as greater ability to assess the circumstances surrounding the operations of the company (Bidwell, 2011). Overall, these findings suggest that communication can be viewed as a repetitive task that CFOs perfection with every conference call. This implies that CFOs will change their disclosure style over multi-period disclosure events.

*[Insert Table 5 and Graphs 1 & 3 around here]*

H2 predicts that the relationship between CFO tenure and CFO level of disclosure depends on the labor market opportunities available to CFOs, as proxied by the SIB indicator. As outlined in section 3.2.3, SIB CFOs are, in general, internally promoted, have shorter tenures and aim to transition to a higher position, whereas non-SIB CFOs are, in general, externally hired, have longer tenures and prefer to either remain in their current position or transition laterally as CFOs in another bank.

Table 6 provides results for Eq. (2). I document that the relationship between CFO tenure and CFO level of disclosure changes in shape, depending on SIB for both FLS (Column 1:  $\alpha_1 = -0.227$ ;  $p = 0.001$ ;  $\alpha_2 = 0.077$ ;  $p = 0.001$ ;  $\alpha_3 = 0.335$ ;  $p = 0.001$ ;  $\alpha_4 = -0.091$ ;  $p = 0.001$ ; Column 2:  $\alpha_1 = -0.087$ ;  $p = 0.010$ ;  $\alpha_2 = 0.032$ ;  $p = 0.011$ ;  $\alpha_3 = 0.335$ ;  $p = 0.001$ ;  $\alpha_4 = -0.091$ ;  $p = 0.001$ ) and uncertainty disclosures (Column 1:  $\alpha_1 = -0.227$ ;  $p = 0.068$ ;  $\alpha_2 = 0.077$ ;  $p = 0.029$ ;  $\alpha_3 = 0.335$ ;  $p = 0.329$ ;  $\alpha_4 = -0.091$ ;  $p = 0.131$ ; Column 2:  $\alpha_1 = -0.087$ ;  $p = 0.004$ ;  $\alpha_2 = 0.032$ ;  $p = 0.001$ ;  $\alpha_3 = 0.335$ ;  $p = 0.204$ ;  $\alpha_4 = -0.091$ ;  $p = 0.047$ ). Indeed,  $\alpha_4$  is negative and statistically significant for both FLS and uncertainty. Moreover, the sums of coefficients  $\alpha_1 + \alpha_3$  and  $\alpha_2 + \alpha_4$  are not statistically significant pointing out to a different shape (inverted U-shaped and U-shaped) of the relationship between CFO

level of disclosure and CFO tenure for SIBs and non-SIBs. This is further confirmed by the graphical representation of H2 for SIB and non-SIBs (see Graphs 2 and 4)<sup>24</sup>.

In the case of non-SIB banks, CFOs start as forthcoming communicators by using lower level of FLS and uncertainty disclosures due to their low familiarity with the bank and the analysts following it. Over time, the usage increases as they learn more about the bank, hence are better able to discuss its current and future performance. In contrast, SIB CFOs exhibit behavior of strategic communicators by initially including more forward-looking and uncertainty statements in their presentations as they consider the higher level of FLS and uncertainty disclosures to be an early signal of being more transparent and truthful about the uncertainty of the current and future performance of the bank. As CFOs develop as communicators, they become more cautious about what they reveal as they get closer to the next stage of their careers so mistakes in disclosure bear even more importance. Additionally, they rely on the fact that the labor market has already taken note of them as communicators and of their career advancement potential. The heightened regulatory pressure that SIBs face can be a further incentive to invest in developing as communicators and signaling the labor market of their good fit for promotion.

*[Insert Table 6 and Graphs 2 & 4 around here]*

#### **4.2. Cross-sectional test – specialist vs. generalist CFOs**

In order to better understand how CFO disclosure style evolves over CFOs' tenure and the role of CFO labor market opportunities and career trajectories, I explore cross-sectional CFOs' differences. In the main analyses, time-invariant CFO background characteristics are subsumed in the intercept because of the presence of CFO fixed effects. However, these characteristics could help explaining changes in CFO disclosure style. For example, CPA designation could point to a preference for financial expertise in CFOs, whereas the membership in national- or industry-level organizations could indicate a stronger preference for developing as communicators. Since the effect of such characteristics cannot be directly observed in the tests, the next alternative would be to

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<sup>24</sup> The curves in Graph 2 are almost identical in shape for both SIBs and non-SIBs in the case of FLS. Graph 4 shows a flat curve for SIBs and a U-shaped curve for non-SIBs in the case of uncertainty disclosures. This could potentially point to the existence of some level of difference in terms of the effect of SIBs and non-SIBs on CFO disclosure levels.

identify a group of CFOs where such subsumed characteristics may prevail<sup>25</sup>. Given that, I distinguish between internally promoted and externally hired CFOs. Internally promoted CFOs, with their more extensive firm-specific knowledge, could be considered specialist CFOs<sup>26</sup>. Their externally promoted counterparts could be considered generalist CFOs as they bring with them portable knowledge and skills gathered and improved over their career. As specialist and generalist CFOs experience different career paths, they may also exhibit differences in the way they signal the job market through their development as communicators.

Indeed, internally promoted managers have the advantage of firm-specific knowledge over their externally hired counterparts. In essence, they are not necessarily expected to possess above average expertise upon hiring but could be expected to show potential for further upward promotion (Bidwell, 2011). In particular, in the case of SIB CFOs, they could become part of the internal CEO succession plan (or at least be considered for a higher position within the bank's executive elite), so there is an implicit understanding that their position as CFOs is a temporary step up the career ladder. Hence, it makes sense for them to focus on developing as communicators without delay as that would serve them in the next part of their career. Instead, externally hired managers come in with portable experience and skills related to the position they are hired for, which could help them adapt to the new position faster (Dokko et al., 2009). However, external hires do face a learning curve as they lack firm-specific knowledge, which could make them more cautious in terms of how they behave and perform initially (Bidwell, 2011). Although the banking industry is expected to have a prevalence of specialist CFOs due its highly regulated nature (Custódio et al., 2013), it is still reasonable to assume that both types of CFOs exist in this industry as in non-regulated industries<sup>27</sup>.

I re-run Eq. (1) and Eq. (2) distinguishing between internally promoted and externally hired CFOs. Empirical evidence is reported in Table 7. Notably, the main

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<sup>25</sup> Performing H1 and H2 analyses (untabulated) by splitting the sample by CPA designation and special membership does not yield any differences in terms of tenure and tenure squared. It is possible that there are either no detectable differences or the sample size is not big enough to detect a difference.

<sup>26</sup> The sample size for testing H1 and H2 drops from 1,792 to 1,124 for internally promoted and 668 for externally hired CFOs.

<sup>27</sup> In particular, non-SIBs generally hire external CFOs, possibly because they face a smaller internal CFO job market compared to SIBs but possibly also because they are not as complex in structure as SIBs so they can rely on the pool of external CFO candidates coming from banks with similar level of operational complexity.



findings are statistically significant and in line with predictions only for internally promoted but not for externally hired CFOs. The lack of results for the externally hired CFOs does not necessarily mean that these CFOs do not exhibit dynamic disclosure style. There might be other factors at play that account for the difference in results. Indeed, untabulated results of comparison of means shows that internally promoted and externally hired CFOs have the same tenure and share the same linguistic attributes of style (e.g., FLS, uncertainty statements, and word count), but they do differ in terms of their background characteristics (e.g., age, compensation, CPA, special membership, pre-CFO years in company and industry, and prior experience as CFO) as well as in linguistic attributes of CEO style. This evidence may point to a stronger influence of managerial background characteristics on style for the externally promoted group that does not allow disclosure style to be detected empirically.

*[Insert Table 7 around here]*

#### **4.3. Robustness tests**

I conduct three sets of robustness tests. First, I run my analyses only considering non-retired CFOs to rule out the effect of retired CFOs on my results (see Table 8 for results for both H1 and H2)<sup>28</sup>. Retiring CFOs may view disclosures differently than their non-retiring counterparts as they do not need to signal the labor market through their disclosure style anymore. To ensure that this group of CFOs does not influence the results, I exclude them from the sample of CFOs. Results hold.

*[Insert Table 8 around here]*

Second, I use an alternative measure of tenure (see Table 9 for results for H1 and H2). The original tenure measure contains the number of years spent as CFO, but this is only one type of tenure considered in the literature (see Finkelstein et al., 2009). As an alternative, I add the tenure at the company prior to becoming CFO (in order not to confound the tenure as CFO variable) to form a comprehensive measure of tenure. In this case, the findings hold for FLS (significant and in the expected direction), but they lose statistical significance in the case of uncertainty statements. These results may suggest

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<sup>28</sup> The sample size for this set of tests is 1,775, which is 1% lower than the full sample size.

that adding years spent in the company prior to becoming CFO may be more indicative of disclosure style detected through forward-looking rather than uncertainty statements in conference calls. In other words, spending more years at the company may not necessarily help CFOs describe the uncertainty surrounding current and future firm operations but may certainly help them make future projections, which might be a more difficult task for CFOs.

*[Insert Table 9 around here]*

The third set of tests involves CFO tone as the measure of CFO disclosure style, and it serves as a falsification test. Tone could be an expression of an innate predisposition towards optimism or pessimism on the part of the manager or it could be a way to convey private information of the manager (Davis et al., 2015). Moreover, CFOs base their explanations and conclusions on facts, which involves a certain level of neutrality. Therefore, tone may not be that informative of CFOs as communicators. Hence, I should not observe the same results using CFO tone as a dependent variable.

I measure CFO-specific linguistic tone (or net tone) using Loughran and McDonald's 2018 financial sentiment dictionary. After having identified positive and negative words in CFO-specific disclosures during the presentation part of the conference calls, I compute tone in the in the following way:

$$CFO_{tone} = 100 \times \frac{CFO \text{ Positive Words} - CFO \text{ Negative Words}}{CFO \text{ Total Words}}$$

Empirical evidence is reported in Table 10. As expected, the results for tone are not in line with those reported in Tables 5 and 6. On the one hand, I still document a non-linear relationship between CFO tenure and tone: CFOs are initially less positive during their presentation, but later on become more positive. On the other hand, findings for Eq. (2) do not follow the same pattern as in Table 6. Hence, it is possible that CFOs do not view tone as a veritable signal to the job market about their career intentions. The findings for Eq. (1) are interesting as the expectation is that CFOs maintain an overall neutral tone in their conference call presentations. The fact that they become more positive may indicate that they do use tone as a signaling tool. However, the lack of results for Eq. (2)

may suggest that CFOs do not use tone as a signal to the labor market as I do not find that the availability of labor market opportunities influences tone in the predicted pattern.

*[Insert Table 10 around here]*

#### **4.4. Alternative explanations (Basel III, Q4 and CCAR)**

Disclosure style of managers may be an individual-level construct but may also be a firm-level one. In order to rule out this alternative explanation, I consider the effect of two firm-level phenomena occurring in my sample period: Basel III bank regulation and the release of financial results in the last fiscal quarter (Q4). The introduction of Basel III bank regulation is a one-time event that took place in July 2013 (Beatty & Liao, 2014). Instead, the release of Q4 results is a recurring event. Results of the last fiscal quarter are the only audited quarterly results of the firm (the remaining three quarters are not subject to a mandatory audit). Hence, in Q4 companies have more incentives to truthfully disclose information than in other quarters (Brown & Pinello, 2007). Despite the different nature, both phenomena are expected to influence the firm rather than individual CFOs. Hence, if there is an individual component in CFO disclosure style as evidenced in Davis et al. (2015), I do not expect to see different results depending on the occurrence of the two events.

To test my conjecture, I introduce the two phenomena and their interaction terms with CFO tenure, squared CFO tenure and SIB in Eq. (2)<sup>29</sup>. Table 11, Panel A, shows that the influence of CFO tenure on CFO disclosure levels is not affected by the introduction of Basel III or release of Q4 results. In both cases, the three-way interaction terms are not statistically significant. These findings suggest that CFO disclosure style is shaped more by individual managers rather than by firm-level factors, in line with evidence of Davis et al. (2015).

The different availability of labor market opportunities may not be the only factor shaping CFO disclosure style in SIBs and non-SIBs. Another possibility is the higher visibility of CFOs in SIBs than in non-SIBs. In order to better understand the role of CFOs' visibility, I consider the Comprehensive Capital Analysis and Review (CCAR). The Dodd-

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<sup>29</sup> Eq. (2) tests H2, therefore CFO tenure and CFO tenure squared are interacted with the indicator variable SIB. By adding indicator variables for Basel III and Q4, Eq. (2) results in a three-way interaction term between CFO tenure, SIB and Basel III/Q4. The Basel III regulation influences all U.S. banks, although there are different requirements for SIBs and non-SIBs, which further explains why the alternative test is performed on Eq. (2) only.

Frank Act of 2010, which introduced the term systemically important banks (SIBs), specified a number of requirements, to which large U.S. banks are subjected in order to ensure that they can withstand stressful economic and financial conditions. One such requirement is the annual CCAR exercise, which examines the capital adequacy and capital planning practices of banks. Every year since 2011, a number of big U.S. banks undergo the CCAR<sup>30</sup>. In my sample, all SIBs are subject to CCARs but not at the same time<sup>31</sup>. I create a CCAR indicator variable equal to one if the bank has done CCAR in that fiscal year and zero otherwise. Then, I re-run Eq. (2) substituting SIB with CCAR.

Empirical evidence is reported in Table 11, Panel B. I document that the coefficients for the interaction terms between CCAR and tenure (tenure squared) positive (negative) and significant only in the case of forward-looking statements. These results suggest that heightened visibility may be a further factor shaping disclosure style in the case of forward-looking but not in the case of uncertainty statements. CFOs handling CCARs may be pushed to improve as communicators but may also become more cautious about what they discuss. In the case of FLS, which are complex in nature as they involve the discussion of future events, the results may suggest that CFOs take risks as communicators rather than take a more neutral stand. In a way, these findings corroborate the idea that CFO's can strategically use their disclosures to make themselves more visible in the labor market.

*[Insert Table 11 around here]*

## **5. Conclusion**

The role of CFOs as communicators of financial information is important, yet relatively unexplored especially in the banking sector. This paper explores how CFO disclosure style changes as CFOs develop as communicators, evidenced by their usage of forward-looking and uncertainty statements during quarterly conference calls over their tenure. I document that CFO disclosure style changes over CFO tenure in a non-linear manner. I also document that CFOs' labor market opportunities further shape the non-linear relationship between CFO disclosure style and tenure. By splitting the sample into

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<sup>30</sup>The list of banks undergoing CCAR each year is available on the website of the U.S. Federal Reserve, <https://www.federalreserve.gov/supervisionreg/ccar-by-year.htm>.

<sup>31</sup> For example, M&T Bank, Comerica Inc., and Huntington Bancshares did not start the CCAR exercise until 2014.

internally promoted and externally hired CFOs, results further suggest that labor opportunities of CFOs do play a role in shaping disclosure style. Robustness tests excluding retired CFOs and using alternative CFO tenure measure, further confirm the U-shaped relationship between CFO disclosure style and tenure. Additional analyses also rule out the possibility that disclosure style is a firm-level construct, while suggesting that heightened CFO visibility is another factor that can shape the creation of CFO disclosure style over time. All of these results confirm the existence of individual effects of managers and the presence of a personal element in voluntary managerial disclosure.

Despite its contribution, the study has some limitations. Since I consider a single-industry setting characterized by strong economic and regulatory idiosyncrasies, my results may not be generalizable to other firms in other industries. However, CFO disclosures are applicable to all CFOs across industries, and labor market opportunities can shape CFO disclosure style also in other industries. Thus, my evidence enriches our understanding of CFOs as communicators and the role of CFO labor market dynamics in disclosure decisions.

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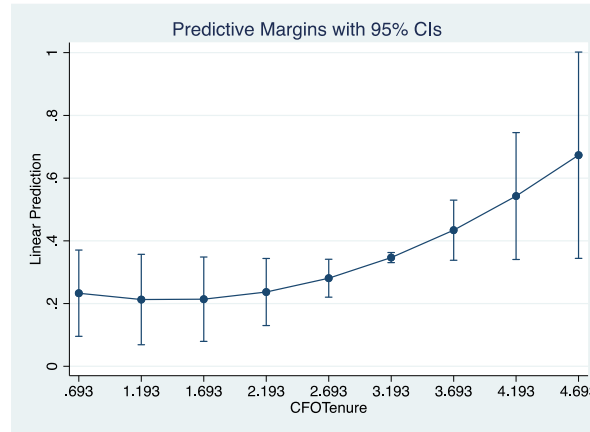
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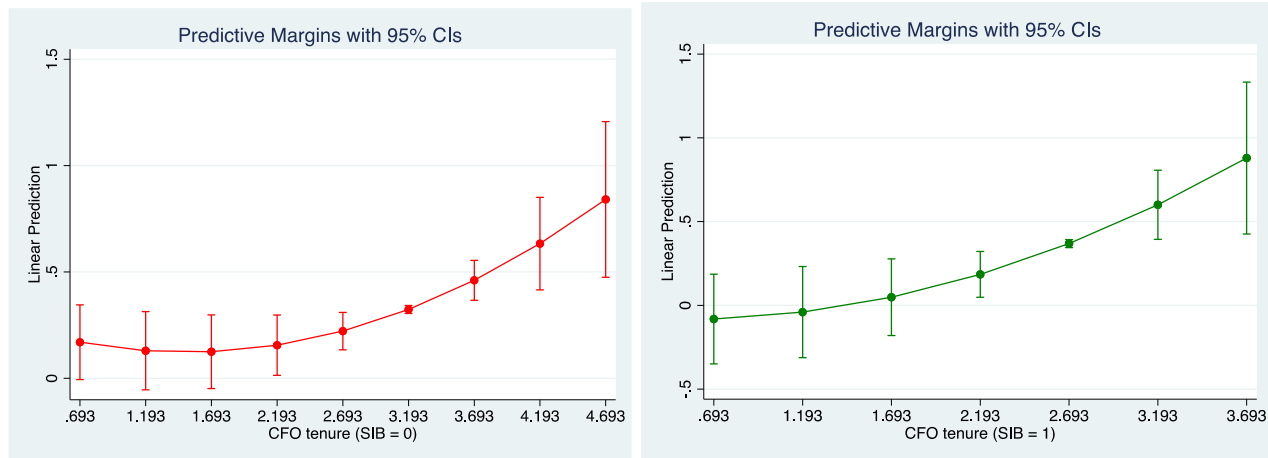
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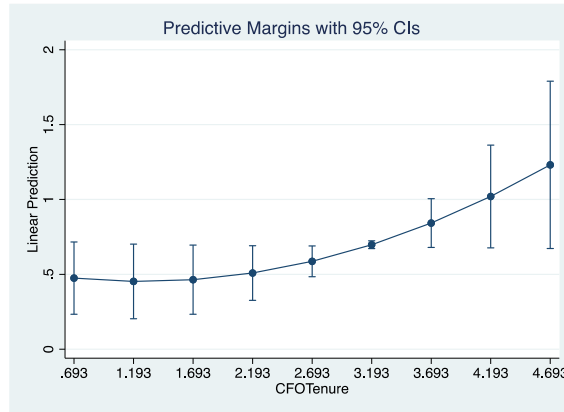
Graph 1. CFO Tenure – FLS – H1



Graph 2. CFO Tenure – FLS with SIB moderator – H2



Graph 3. CFO Tenure – Uncertainty – H1



Graph 4. CFO Tenure – Uncertainty with SIB moderator – H2

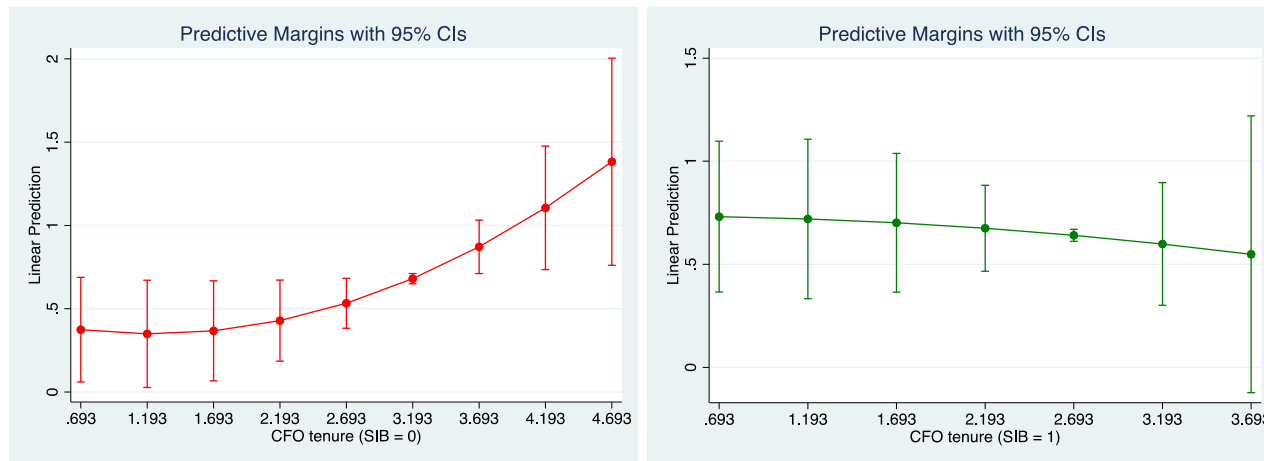


Table 1. Descriptive evidence of career paths of bank CFOs at systemically important (SIB) and non-systemically important banks (non-SIB)

Variables	non-SIB	non-SIB	SIB	SIB	mean diff	<i>t-test</i>	<i>p-val</i>	median diff	<i>z-test</i>	<i>p-val</i>
	mean	median	mean	median						
<i>CFOTenure</i>	2.954	3.135	2.445	2.565	<b>0.509</b>	8.855	0.001	<b>0.570</b>	9.368	0.001
<i>CFOAge</i>	3.985	4.007	3.979	3.970	0.006	0.791	0.429	<b>0.037</b>	2.865	0.004
<i>CPA</i>	0.628	1	0.273	0	<b>0.355</b>	12.779	0.001	<b>1</b>	12.236	0.001
<i>SpecialMember</i>	0.093	0	0.457	0	<b>(0.364)</b>	(18.139)	0.001	<b>0</b>	(16.676)	0.001
<i>PreCFOYrsInComp</i>	1.097	0.693	1.817	2.197	<b>(0.720)</b>	(11.066)	0.001	<b>(1.504)</b>	(10.512)	0.001
<i>PreCFOYrsInInd</i>	2.476	2.708	2.903	3.135	<b>(0.427)</b>	(8.779)	0.001	<b>(0.427)</b>	(8.966)	0.001
<i>CommercialBanking</i>	0.047	0	0.473	0	<b>(0.426)</b>	(24.712)	0.001	<b>0</b>	(21.345)	0.001
<i>PrivateBanking</i>	0.060	0	0.270	0	<b>(0.211)</b>	(12.341)	0.001	<b>0</b>	(11.851)	0.001
<i>InvestmentBanking</i>	0.199	0	0.360	0	<b>(0.161)</b>	(6.586)	0.001	<b>0</b>	(6.510)	0.001
<i>AssetManagement</i>	0.030	0	0.149	0	<b>(0.118)</b>	(9.124)	0.001	<b>0</b>	(8.921)	0.001
<i>GeneralFinance/Accg</i>	0.991	1	0.746	1	<b>0.245</b>	19.489	0.001	<b>0</b>	17.706	0.001
<i>Auditing</i>	0.567	1	0.373	0	<b>0.194</b>	6.732	0.001	<b>1</b>	6.650	0.001
<i>CFOEquityComp</i>	0.238	0.247	0.376	0.391	<b>(0.138)</b>	(18.965)	0.001	<b>(0.144)</b>	(17.756)	0.001
<i>RepeatCFO</i>	0.430	0	0.222	0	<b>0.208</b>	7.428	0.001	<b>0</b>	7.318	0.001
<i>RetiredCFO</i>	0.008	0	0.014	0	(0.005)	(0.897)	0.370	0	(0.897)	0.370
<i>InsideCFO</i>	0.588	1	0.778	1	<b>(0.191)</b>	(6.833)	0.001	<b>0</b>	(6.748)	0.001

This table shows mean and median values for variables used in the main analyses for the period 2010 – 2017 for the SIB (370 obs.) and non-SIB (1,422 obs.) groups, along with the differences in means and medians for each variable across groups. Items in bold represent statistically significant ( $p \leq 0.1$ ) differences. All variables are defined in Appendix C.

Table 2. Descriptive statistics (full sample)

<b>Variables</b>	<b>Obs.</b>	<b>Mean</b>	<b>S.D.</b>	<b>Min</b>	<b>P1</b>	<b>P25</b>	<b>P50</b>	<b>P75</b>	<b>P99</b>	<b>Max</b>
<i>CFOTenure</i>	1792	2.849	1.004	0.693	0.693	2.079	2.944	3.638	4.554	4.779
<i>CFOWords</i>	1792	1,280	781	87	243	710	1,138	1,622	3,928	4,885
<i>CFOFLS</i>	1792	0.343	0.254	0	0	0.163	0.302	0.473	1.124	1.794
<i>CFOUncertain</i>	1792	0.685	0.465	0	0	0.372	0.595	0.895	2.338	3.365
<i>CEOTenure</i>	1792	3.243	0.909	0.693	0.693	2.708	3.367	3.912	4.771	4.890
<i>CEOFLS</i>	1792	0.551	0.340	0	0	0.295	0.506	0.739	1.577	2.491
<i>CEOUncertain</i>	1792	0.640	0.385	0	0	0.373	0.591	0.856	1.833	2.482
<i>CFOEquityComp</i>	1792	0.267	0.137	0	0	0.193	0.263	0.355	0.562	0.593
<i>CFOAge</i>	1792	3.984	0.137	3.526	3.611	3.912	3.989	4.078	4.234	4.248
<i>CPA</i>	1792	0.555	0.497	0	0	0	1	1	1	1
<i>SpecialMember</i>	1792	0.168	0.374	0	0	0	0	0	1	1
<i>PreCFOYrsInComp</i>	1792	1.246	1.151	0	0	0	1.099	2.197	3.401	3.555
<i>PreCFOYrsInInd</i>	1792	2.565	0.850	0	0	2.303	2.773	3.178	3.526	3.555
<i>RetiredCFO</i>	1792	0.010	0.097	0	0	0	0	0	0	1
<i>InsideCFO</i>	1792	0.627	0.484	0	0	0	1	1	1	1
<i>CFOTenureAlt</i>	1792	2.290	0.803	0.223	0.223	1.833	2.398	2.890	3.577	3.871
<i>FirmAge</i>	1792	4.278	0.865	1.609	2.398	3.497	4.654	5.004	5.236	5.375
<i>Size</i>	1792	9.904	1.520	7.205	7.660	8.824	9.553	10.460	14.610	14.750
<i>BTM</i>	1792	0.917	0.418	0.239	0.371	0.665	0.830	1.052	2.538	4.264
<i>ROA</i>	1792	0.002	0.002	(0.034)	(0.006)	0.002	0.002	0.003	0.005	0.020
<i>LLP</i>	1792	0.002	0.005	(0.010)	(0.001)	0.001	0.001	0.001	0.013	0.146
<i>SpecialItems</i>	1792	0.001	0.001	(0.015)	(0.002)	0	0	0.001	0.003	0.030
<i>RestrItems</i>	1792	0.076	0.265	0	0	0	0	0	1	1
<i>NPA</i>	1792	0.012	0.012	0.001	0.001	0.004	0.008	0.015	0.061	0.101
<i>CO</i>	1792	0.002	0.003	(0.018)	(0.001)	0.001	0.001	0.002	0.014	0.071
<i>Leverage</i>	1792	0.893	0.510	0.020	0.181	0.851	0.881	0.909	1.298	19.350
<i>T1Cap</i>	1792	0.124	0.030	0.037	0.079	0.106	0.119	0.137	0.225	0.480
<i>LitigRisk</i>	1792	0.194	0.196	0	0	0.041	0.151	0.286	0.912	1.358
<i>UE</i>	1792	(0.004)	0.047	(1.641)	(0.086)	(0.001)	0	0.001	0.019	0.172
<i>Return</i>	1792	0.430	0.783	0.039	0.039	0.180	0.302	0.450	4.482	7.897
<i>AnalystFollow</i>	1792	2.354	0.671	0.693	0.693	1.946	2.303	2.890	3.466	3.555

This table shows the descriptive statistics for variables used in the main analyses for the period 2010 – 2017. All variables are defined in Appendix C.

Table 3. Descriptive statistics, split by systemically (SIBs) and non-systemically important (non-SIBs) banks

Variables	non-SIB	non-SIB	non-SIB	SIB	SIB	SIB						
	obs	mean	median	obs	mean	median	mean diff	t-test	p-val	median diff	z-test	p-val
<i>CFOTenure</i>	1422	2.954	3.135	370	2.445	2.565	<b>0.509</b>	8.855	0.001	<b>0.570</b>	9.368	0.001
<i>CFOWords</i>	1422	1,045	964	370	2,182	1,982	<b>(1,137)</b>	(30.885)	0.001	<b>(1,018)</b>	(22.264)	0.001
<i>CFOFLS</i>	1422	0.344	0.300	370	0.336	0.313	0.008	0.518	0.604	(0.012)	(0.935)	0.350
<i>CFOUncertain</i>	1422	0.694	0.592	370	0.648	0.602	<b>0.047</b>	1.714	0.087	(0.010)	(0.699)	0.484
<i>CEOTenure</i>	1422	3.331	3.466	370	2.908	3.045	<b>0.423</b>	8.105	0.001	<b>0.421</b>	9.350	0.001
<i>CEOFLS</i>	1422	0.563	0.515	370	0.504	0.472	<b>0.059</b>	3.001	0.003	<b>0.043</b>	2.811	0.005
<i>CEOUncertain</i>	1422	0.653	0.608	370	0.590	0.535	<b>0.063</b>	2.786	0.005	<b>0.073</b>	2.320	0.020
<i>CFOEquityComp</i>	1422	0.238	0.247	370	0.376	0.391	<b>0.006</b>	(18.965)	0.001	<b>(0.144)</b>	(17.756)	0.001
<i>CFOAge</i>	1422	3.985	4.007	370	3.979	3.970	(0.138)	0.791	0.429	<b>0.037</b>	2.865	0.004
<i>CPA</i>	1422	0.628	1	370	0.273	0	<b>0.355</b>	12.779	0.001	<b>1</b>	12.236	0.001
<i>SpecialMember</i>	1422	0.093	0	370	0.457	0	<b>(0.364)</b>	(18.139)	0.001	<b>0</b>	(16.676)	0.001
<i>PreCFOYrsInComp</i>	1422	1.097	0.693	370	1.817	2.197	<b>(0.720)</b>	(11.066)	0.001	<b>(1.504)</b>	(10.512)	0.001
<i>PreCFOYrsInInd</i>	1422	2.476	2.708	370	2.903	3.135	<b>(0.427)</b>	(8.779)	0.001	<b>(0.427)</b>	(8.966)	0.001
<i>RetiredCFO</i>	1422	0.008	0	370	0.014	0	(0.005)	(0.897)	0.370	0	(0.897)	0.370
<i>InsideCFO</i>	1422	0.588	1	370	0.778	1	<b>(0.191)</b>	(6.833)	0.001	<b>0</b>	(6.748)	0.001
<i>CFOTenureAlt</i>	1422	2.249	2.375	370	2.449	2.474	<b>(0.200)</b>	(4.279)	0.001	<b>(0.099)</b>	(4.178)	0.001
<i>FirmAge</i>	1422	4.080	4.357	370	5.039	5.069	<b>(0.959)</b>	(21.233)	0.001	<b>(0.712)</b>	(22.757)	0.001
<i>Size</i>	1422	9.263	9.202	370	12.370	12.060	<b>(3.107)</b>	(62.250)	0.001	<b>(2.858)</b>	(29.454)	0.001
<i>BTM</i>	1422	0.874	0.797	370	1.085	0.974	<b>(0.212)</b>	(8.857)	0.001	<b>(0.177)</b>	(10.575)	0.001
<i>ROA</i>	1422	0.002	0.002	370	0.002	0.003	<b>(0.001)</b>	(2.675)	0.008	<b>(0.001)</b>	(3.792)	0.001
<i>LLP</i>	1422	0.001	0.001	370	0.002	0.001	<b>(0.001)</b>	(3.560)	0.001	<b>(0.001)</b>	(8.674)	0.001
<i>SpecialItems</i>	1422	0.001	0	370	0.001	0	0	0.046	0.964	0	(0.603)	0.546
<i>RestrItems</i>	1422	0.075	0	370	0.081	0	(0.007)	(0.423)	0.673	0	(0.423)	0.672
<i>NPA</i>	1422	0.012	0.008	370	0.011	0.008	<b>0.002</b>	2.486	0.013	(0.001)	(1.508)	0.132
<i>CO</i>	1422	0.001	0.001	370	0.002	0.001	<b>(0.001)</b>	(4.551)	0.001	<b>(0.001)</b>	(14.643)	0.001
<i>Leverage</i>	1422	0.871	0.876	370	0.978	0.893	<b>(0.107)</b>	(3.606)	0.001	<b>(0.016)</b>	(6.317)	0.001
<i>T1Cap</i>	1422	0.126	0.122	370	0.117	0.117	0.009	5.419	0.001	<b>0.006</b>	4.347	0.001
<i>LitigRisk</i>	1422	0.192	0.147	370	0.203	0.173	(0.012)	(1.019)	0.308	<b>(0.026)</b>	(3.137)	0.002
<i>UE</i>	1422	(0.004)	0	370	(0.001)	0	(0.004)	(1.308)	0.191	<b>0</b>	(3.031)	0.002
<i>Return</i>	1422	0.433	0.255	370	0.420	0.336	0.014	0.295	0.768	<b>(0.081)</b>	(6.539)	0.001
<i>AnalystFollow</i>	1422	2.106	2.079	370	3.307	3.332	(1.201)	(44.576)	0.001	<b>(1.253)</b>	(29.449)	0.001

This table shows mean and median values for variables related to the background characteristics of CFOs at SIB and non-SIB groups for the period 2010-2017, along with the differences in means and medians for each variable across groups. Items in bold represent statistically significant ( $p \leq 0.1$ ) differences. All variables are defined in Appendix C.



Table 5. U-shaped relationship between CFO tenure and level of CFO disclosure (H1) – CFO forward-looking and uncertainty statements

Panel A: Main regression estimates

Variables		(1) <i>CFOFLS</i>	(2) <i>CFOFLS</i>	(3) <i>CFOUncertain</i>	(4) <i>CFOUncertain</i>
<i>CFOTenure</i>	-	-0.122** (0.059)	-0.087 (0.064)	-0.170* (0.100)	-0.293*** (0.106)
<i>CFOTenureSq</i>	+	0.043** (0.021)	0.032 (0.024)	0.067* (0.035)	0.117*** (0.039)
<i>CFOWords</i>		0.001*** (0.001)	0.001*** (0.001)	0.001* (0.001)	0.001** (0.001)
<i>CEOTenure</i>		-0.014 (0.013)	-0.017 (0.013)	-0.015 (0.015)	-0.017 (0.015)
<i>CEOFLS / CEOUncertain</i>		0.074*** (0.017)	0.069*** (0.017)	0.093*** (0.029)	0.086*** (0.030)
<i>CFOEquityComp</i>		0.067 (0.074)	0.077 (0.075)	0.301*** (0.105)	0.289*** (0.107)
<i>CFOAge</i>		-0.999 (0.759)	-0.407 (1.074)	-3.006** (1.181)	-5.836*** (1.703)
<i>FirmAge</i>		0.117 (0.078)	0.126 (0.080)	0.478** (0.225)	0.537** (0.219)
<i>Size</i>		-0.001 (0.020)	-0.009 (0.023)	0.018 (0.030)	0.019 (0.031)
<i>BTM</i>		0.003 (0.020)	0.016 (0.024)	0.037 (0.030)	0.057 (0.035)
<i>ROA</i>		-.938 (3.166)	-1.968 (2.961)	3.912 (4.740)	3.598 (4.524)
<i>LLP</i>		6.224 (4.054)	5.161 (4.246)	9.571** (4.356)	8.294* (4.559)
<i>SpecialItems</i>		9.449** (3.954)	9.657*** (3.718)	-5.019 (5.309)	-3.504 (4.646)
<i>RestrItems</i>		0.002 (0.027)	-0.003 (0.028)	0.036 (0.032)	0.040 (0.032)
<i>NPA</i>		-1.720 (1.083)	-1.257 (1.157)	0.836 (1.742)	0.193 (1.846)
<i>CO</i>		-4.468 (2.965)	-3.854 (3.173)	-5.168 (4.504)	-5.504 (4.564)
<i>Leverage</i>		-0.033* (0.018)	-0.031* (0.018)	0.007 (0.027)	0.014 (0.029)
<i>T1Cap</i>		0.770** (0.304)	0.749** (0.300)	0.624 (0.527)	0.867 (0.529)
<i>LitigRisk</i>		0.046 (0.038)	0.036 (0.038)	0.051 (0.054)	0.064 (0.055)
<i>UE</i>		0.020 (0.086)	0.045 (0.082)	-0.337*** (0.117)	-0.349*** (0.121)
<i>Return</i>		-0.024 (0.063)	-0.017 (0.066)	-0.258** (0.117)	-0.334*** (0.118)
<i>AnalystFollow</i>		0.053 (0.033)	0.064* (0.035)	-0.077 (0.048)	-0.041 (0.049)
Time Trend		Y	N	Y	N
Qtr-Yr FE		N	Y	N	Y
CFO FE		Y	Y	Y	Y
Observations		1,792	1,792	1,792	1,792
Adjusted R-squared		0.305	0.307	0.574	0.576

\*\*\*, \*\*, \* Denote  $p < 0.01$ ,  $p < 0.05$ , and  $p < 0.1$ , respectively.

Panel B: Test confirming U-shaped relationship between CFO tenure and level of CFO disclosure – CFO FLS and CFO uncertainty statements

	(1)	(2)	(3)	(4)
	<b>CFOFLS</b>	<b>CFOFLS</b>	<b>CFOUncertain</b>	<b>CFOUncertain</b>
t-values	1.91	1.26	1.37	2.23
p-values	0.028	0.103	0.085	0.013
extreme point	1.414	1.379	1.273	1.251

Panel A of this table shows the estimated coefficients from panel regressions of the proportion of words in forward-looking statements and the proportion of uncertainty words in earnings conference calls by CFOs (CFO FLS and CFO uncertainty) on logged CFO tenure, logged CFO tenure squared, CEO FLS, CEO uncertainty, logged CEO tenure, CFO and firm characteristics. CFO fixed effects, year-quarter fixed effects, time trend, and the constant are included in each regression but are not reported. A sample of CFOs present during the 2010-2017 period is used for the estimation. Robust standard errors are in parentheses. All variables are defined in Appendix C.

Panel B of this table shows the estimated coefficients from the test confirming the U-shaped relationship between CFO tenure and the proportion of words in forward-looking statements and the proportion of uncertainty words in earnings conference calls by CFOs (CFO FLS and CFO uncertainty).  $p < 0.1$  denote the presence of U-shaped relationship.  $p > 0.1$  denote the presence of monotone or inverse U-shaped relationship.



Table 6. U-shaped relationship between CFO tenure and level of CFO disclosure, depending on systemically important banks (SIBs) (H2) – CFO forward-looking and uncertainty statements

Variables		(1) CFOFLS	(2) CFOFLS	(3) CFOUncertain	(4) CFOUncertain
<i>CFOTenure</i>	-	-0.227*** (0.068)	-0.196*** (0.076)	-0.212* (0.116)	-0.363*** (0.125)
<i>CFOTenureSq</i>	+	0.077*** (0.023)	0.068** (0.027)	0.085** (0.039)	0.149*** (0.044)
<i>CFOTenure x SIB</i>	+	0.335*** (0.082)	0.304*** (0.085)	0.135 (0.139)	0.177 (0.139)
<i>CFOTenureSq x SIB</i>	-	-0.091*** (0.020)	-0.084*** (0.021)	-0.048 (0.032)	-0.065** (0.033)
<i>CFOWords</i>		0.001*** (0.001)	0.001*** (0.001)	0.001* (0.001)	0.001** (0.001)
<i>CEOTenure</i>		-0.012 (0.013)	-0.015 (0.013)	-0.012 (0.015)	-0.014 (0.015)
<i>CEOFLS / CEOUncertain</i>		0.074*** (0.017)	0.070*** (0.017)	0.093*** (0.029)	0.086*** (0.029)
<i>CFOEquityComp</i>		0.025 (0.074)	0.037 (0.075)	0.266** (0.105)	0.239** (0.107)
<i>CFOAge</i>		-1.342* (0.749)	-1.020 (1.092)	-3.253*** (1.205)	-6.532*** (1.772)
<i>FirmAge</i>		0.083 (0.077)	0.100 (0.079)	0.449** (0.226)	0.506** (0.219)
<i>Size</i>		-0.006 (0.020)	-0.015 (0.023)	0.013 (0.030)	0.010 (0.031)
<i>BTM</i>		-0.003 (0.020)	0.011 (0.024)	0.032 (0.031)	0.050 (0.036)
<i>ROA</i>		-3.874 (3.217)	-2.937 (3.012)	2.972 (4.749)	2.232 (4.522)
<i>LLP</i>		5.600 (4.048)	4.451 (4.257)	8.877** (4.350)	7.148 (4.540)
<i>SpecialItems</i>		8.703** (3.996)	8.958** (3.752)	-5.943 (5.272)	-4.748 (4.567)
<i>RestrlItems</i>		0.015 (0.027)	0.011 (0.027)	0.045 (0.033)	0.053 (0.033)
<i>NPA</i>		-1.823* (1.091)	-1.470 (1.181)	0.760 (1.744)	-0.023 (1.853)
<i>CO</i>		-4.634 (2.831)	-4.082 (3.005)	-5.258 (4.425)	-5.650 (4.473)
<i>Leverage</i>		-0.038** (0.019)	-0.036* (0.019)	0.002 (0.025)	0.005 (0.026)
<i>T1Cap</i>		0.889*** (0.315)	0.885*** (0.313)	0.767 (0.541)	1.096** (0.550)
<i>LitigRisk</i>		0.045 (0.038)	0.037 (0.038)	0.050 (0.054)	0.065 (0.055)
<i>UE</i>		0.007 (0.084)	0.031 (0.082)	-0.347*** (0.117)	-0.364*** (0.121)
<i>Return</i>		0.008 (0.062)	0.005 (0.064)	-0.234** (0.119)	-0.311*** (0.118)
<i>AnalystFollow</i>		0.061* (0.032)	0.074** (0.035)	-0.072 (0.048)	-0.030 (0.048)
Time Trend		Y	N	Y	N
Qtr-Yr FE		N	Y	N	Y
CFO FE		Y	Y	Y	Y
<i>CFOTenure + CFOTenure x SIB</i>		0.109	0.108	-0.076	-0.186

	(0.072)	(0.076)	(0.126)	(0.127)
<i>CFOTenureSq + CFOTenureSq x SIB</i>	-0.014	-0.015	0.037	0.084**
	(0.022)	(0.024)	(0.037)	(0.040)
Observations	1,792	1,792	1,792	1,792
Adjusted R-squared	0.311	0.312	0.575	0.578

\*\*\*, \*\*, \* Denote  $p < 0.01$ ,  $p < 0.05$ , and  $p < 0.1$ , respectively.

This table shows the estimated coefficients from panel regressions of the proportion of words in forward-looking statements and the proportion of uncertainty words in earnings conference calls by CFOs (CFO FLS and CFO uncertainty) on logged CFO tenure (with and without SIB interaction), logged CFO tenure squared (with and without SIB interaction), CEO FLS, CEO uncertainty, logged CEO tenure, CFO and firm characteristics. CFO fixed effects, year-quarter fixed effects, time trend, and the constant are included in each regression but are not reported. The results of the combination of coefficients related to CFO tenure, CFO tenure squared and SIB interaction are reported after the main regression results. A sample of CFOs present during the 2010-2017 period is used for the estimation. Robust standard errors are in parentheses. All variables are defined in Appendix C.

Table 7. U-shaped relationship between CFO tenure and level of CFO disclosure for specialist (internally promoted) and generalist (externally hired) CFOs – CFO forward-looking and uncertainty statements

Panel A: Regression estimates – H1

Variables	Specialist CFOs/Internally Promoted CFOs				Generalist CFOs/Externally Hired CFOs			
	(1) CFOFLS	(2) CFOFLS	(3) CFOUncertain	(4) CFOUncertain	(5) CFOFLS	(6) CFOFLS	(7) CFOUncertain	(8) CFOUncertain
<i>CFOTenure</i>	-0.146* (0.078)	-0.109 (0.090)	-0.197 (0.135)	-0.317** (0.147)	-0.073 (0.100)	-0.078 (0.105)	-0.148 (0.153)	-0.189 (0.157)
<i>CFOTenureSq</i>	0.053* (0.028)	0.040 (0.033)	0.079 (0.050)	0.131** (0.056)	0.023 (0.037)	0.029 (0.039)	0.070 (0.054)	0.083 (0.055)
<i>CFOWords</i>	0.001*** (0.001)	0.001*** (0.001)	0.001 (0.001)	0.001 (0.001)	0.001 (0.001)	0.001 (0.001)	0.001** (0.001)	0.001** (0.001)
<i>CEOTenure</i>	-0.013 (0.016)	-0.015 (0.016)	-0.008 (0.017)	-0.014 (0.017)	-0.014 (0.023)	-0.013 (0.022)	-0.030 (0.033)	-0.018 (0.032)
<i>CEOFLS / CEOUncertain</i>	0.099*** (0.022)	0.091*** (0.022)	0.139*** (0.038)	0.134*** (0.039)	0.028 (0.030)	0.041 (0.031)	0.030 (0.045)	0.025 (0.047)
CFO Controls	Y	Y	Y	Y	Y	Y	Y	Y
Firm Controls	Y	Y	Y	Y	Y	Y	Y	Y
Time Trend	Y	N	Y	N	Y	N	Y	N
Year-Qtr FE	N	Y	N	Y	N	Y	N	Y
CFO FE	Y	Y	Y	Y	Y	Y	Y	Y
Observations	1,124	1,124	1,124	1,124	668	668	668	668
Adjusted R-squared	0.259	0.261	0.597	0.600	0.378	0.389	0.537	0.526
<u>Test of U-shaped relationship</u>								
t-values	1.720**	1.150	1.120	1.770**	0.550	0.700	0.600	0.850
p-values	0.043	0.126	0.116	0.039	0.290	0.242	0.275	0.198
extreme point	1.388	1.384	1.246	1.210	1.595	1.353	1.059	1.148

\*\*\*, \*\*, \* Denote  $p < 0.01$ ,  $p < 0.05$ , and  $p < 0.1$ , respectively.

Panel B: Regression estimates – H2

Variables	Specialist CFOs/Internally Promoted CFOs				Generalist CFOs/Externally Hired CFOs			
	(1) CFOFLS	(2) CFOFLS	(3) CFOUncertain	(4) CFOUncertain	(5) CFOFLS	(6) CFOFLS	(7) CFOUncertain	(8) CFOUncertain
<i>CFOTenure</i>	-0.283*** (0.092)	-0.260** (0.108)	-0.291* (0.161)	-0.433** (0.176)	-0.075 (0.109)	-0.050 (0.117)	-0.084 (0.165)	-0.144 (0.168)
<i>CFOTenureSq</i>	0.095*** (0.031)	0.088** (0.038)	0.112** (0.056)	0.177*** (0.063)	0.023 (0.040)	0.020 (0.044)	0.055 (0.058)	0.073 (0.059)
<i>CFOTenure x SIB</i>	0.376*** (0.101)	0.360*** (0.107)	0.262 (0.168)	0.265 (0.172)	0.013 (0.159)	-0.166 (0.160)	-0.385 (0.255)	-0.262 (0.288)
<i>CFOTenureSq x SIB</i>	-0.099***	-0.096***	-0.077**	-0.087**	-0.003	0.046	0.083	0.054

<i>CFOWords</i>	(0.024) 0.001***	(0.025) 0.001***	(0.038) 0.001	(0.039) 0.001	(0.042) 0.001	(0.044) 0.001	(0.066) 0.001*	(0.073) 0.001**
<i>CEOTenure</i>	(0.001) -0.010	(0.001) -0.011	(0.001) -0.005	(0.001) -0.009	(0.001) -0.014	(0.001) -0.013	(0.001) -0.027	(0.001) -0.017
<i>CEOFLS / CEOUncertain</i>	(0.016) 0.097***	(0.016) 0.089***	(0.017) 0.136***	(0.017) 0.130***	(0.023) 0.028	(0.022) 0.041	(0.033) 0.031	(0.032) 0.027
	(0.022)	(0.022)	(0.038)	(0.039)	(0.030)	(0.031)	(0.046)	(0.047)
CFO Controls	Y	Y	Y	Y	Y	Y	Y	Y
Firm Controls	Y	Y	Y	Y	Y	Y	Y	Y
Time Trend	Y	N	Y	N	Y	N	Y	N
Year-Qtr FE	N	Y	N	Y	N	Y	N	Y
CFO FE	Y	Y	Y	Y	Y	Y	Y	Y
<i>CFOTenure + CFOTenure x SIB</i>	0.093 (0.088)	0.100 (0.098)	-0.029 (0.154)	-0.168 (0.162)	-0.062 (0.140)	-0.215 (0.136)	-0.469** (0.233)	-0.407 (0.271)
<i>CFOTenureSq + CFOTenureSq x SIB</i>	-0.004 (0.029)	-0.008 (0.033)	0.035 (0.051)	0.090 (0.056)	0.020 (0.042)	0.065 (0.042)	0.138** (0.067)	0.127* (0.076)
Observations	1,124	1,124	1,124	1,124	668	668	668	668
Adjusted R-squared	0.268	0.268	0.598	0.602	0.376	0.387	0.536	0.525

\*\*\*, \*\*, \* Denote  $p < 0.01$ ,  $p < 0.05$ , and  $p < 0.1$ , respectively.

Panel A of this table shows the estimated coefficients from panel regressions of the proportion of words in forward-looking statements and the proportion of uncertainty words in earnings conference calls by CFOs (CFO FLS and CFO uncertainty) on logged CFO tenure, logged CFO tenure squared, CEO FLS, CEO uncertainty, logged CEO tenure, CFO and firm characteristics. CFO- and firm-level controls, CFO fixed effects, year-quarter fixed effects, time trend, and the constant are included in each regression but are not reported. A sample of specialist and generalist CFOs present during the 2010-2017 period is used for the estimation. Robust standard errors are in parentheses. All variables are defined in Appendix C. Second part of Panel A, below adjusted R-squared, shows the estimated coefficients from the test confirming the U-shaped relationship between CFO tenure and the proportion of words in forward-looking statements and the proportion of uncertainty words in earnings conference calls by CFOs (CFO FLS and CFO uncertainty).  $p < 0.1$  denote the presence of U-shaped relationship.  $p > 0.1$  denote the presence of monotone or inverse U-shaped relationship.

Panel B of this table shows the estimated coefficients from panel regressions of the proportion of words in forward-looking statements and the proportion of uncertainty words in earnings conference calls by CFOs (CFO FLS and CFO uncertainty) on logged CFO tenure (with and without SIB interaction), logged CFO tenure squared (with and without SIB interaction), CEO FLS, CEO uncertainty, logged CEO tenure, CFO and firm characteristics. CFO- and firm-level controls, CFO fixed effects, year-quarter fixed effects, time trend, and the constant are included in each regression, but are not reported. The results of the combination of coefficients related to CFO tenure, CFO tenure squared and SIB interaction are reported after the main regression results. A sample of specialist CFOs present during the 2010-2017 period is used for the estimation. Robust standard errors are in parentheses. All variables are defined in Appendix C. Second part of Panel A, below adjusted R-squared, shows the estimated coefficients from the test confirming the U-shaped relationship between CFO tenure and the proportion of words in forward-looking statements and the proportion of uncertainty words in earnings conference calls by CFOs (CFO FLS and CFO uncertainty).  $p < 0.1$  denote the presence of U-shaped relationship.  $p > 0.1$  denote the presence of monotone or inverse U-shaped relationship.

Table 8. U-shaped relationship between CFO tenure and level of CFO disclosure for non-retired CFOs – CFO forward-looking and uncertainty statements

Variables	H1				H2			
	(1) CFOFLS	(2) CFOFLS	(3) CFOUncertain	(4) CFOUncertain	(5) CFOFLS	(6) CFOFLS	(7) CFOUncertain	(8) CFOUncertain
<i>CFOTenure</i>	-0.121** (0.059)	-0.086 (0.065)	-0.172* (0.101)	-0.302*** (0.107)	-0.224*** (0.069)	-0.193** (0.076)	-0.217* (0.117)	-0.378*** (0.126)
<i>CFOTenureSq</i>	0.043** (0.021)	0.032 (0.024)	0.068* (0.035)	0.121*** (0.039)	0.077*** (0.023)	0.068** (0.027)	0.088** (0.039)	0.155*** (0.044)
<i>CFOTenure x SIB</i>					0.330*** (0.083)	0.297*** (0.086)	0.145 (0.140)	0.190 (0.141)
<i>CFOTenureSq x SIB</i>					-0.090*** (0.020)	-0.082*** (0.021)	-0.051 (0.032)	-0.069** (0.033)
<i>CFOWords</i>	0.001*** (0.001)	0.001*** (0.001)	0.001 (0.001)	0.001** (0.001)	0.001*** (0.001)	0.001*** (0.001)	0.001* (0.001)	0.001** (0.001)
<i>CEOTenure</i>	-0.015 (0.014)	-0.018 (0.013)	-0.014 (0.016)	-0.017 (0.016)	-0.012 (0.013)	-0.016 (0.013)	-0.011 (0.016)	-0.014 (0.016)
<i>CEOFLS / CEOUncertain</i>	0.073*** (0.017)	0.068*** (0.017)	0.091*** (0.030)	0.083*** (0.030)	0.074*** (0.017)	0.069*** (0.017)	0.091*** (0.030)	0.083*** (0.030)
CFO Controls	Y	Y	Y	Y	Y	Y	Y	Y
Firm Controls	Y	Y	Y	Y	Y	Y	Y	Y
Time Trend	Y	N	Y	N	Y	N	Y	N
Year-Qtr FE	N	Y	N	Y	N	Y	N	Y
CFO FE	Y	Y	Y	Y	Y	Y	Y	Y
Observations	1,775	1,775	1,775	1,775	1,775	1,775	1,775	1,775
Adjusted R-squared	0.306	0.308	0.573	0.576	0.312	0.313	0.574	0.577

\*\*\*, \*\*, \* Denote  $p < 0.01$ ,  $p < 0.05$ , and  $p < 0.1$ , respectively.

This table shows the estimated coefficients from panel regressions of the proportion of words in forward-looking statements and the proportion of uncertainty words in earnings conference calls by CFOs (CFO FLS and CFO uncertainty) on logged CFO tenure (with and without SIB interaction), logged CFO tenure squared (with and without SIB interaction), CEO FLS, CEO uncertainty, logged CEO tenure, CFO and firm characteristics. CFO- and firm-level controls, CFO fixed effects, year-quarter fixed effects, time trend, and the constant are included in each regression but are not reported. A sample of non-retired CFOs present during the 2010-2017 period is used for the estimation. Robust standard errors are in parentheses. All variables are defined in Appendix C.

Table 9. U-shaped relationship between CFO tenure and level of CFO disclosure using alternative tenure measure – CFO forward-looking and uncertainty statements

Variables	H1				H2			
	(1) CFOFLS	(2) CFOFLS	(3) CFOUncertain	(4) CFOUncertain	(5) CFOFLS	(6) CFOFLS	(7) CFOUncertain	(8) CFOUncertain
<i>CFOTenureAlt</i>	-0.169** (0.069)	-0.143** (0.071)	-0.041 (0.117)	-0.166 (0.121)	-0.227*** (0.077)	-0.203** (0.081)	0.033 (0.128)	-0.103 (0.133)
<i>CFOTenureAltSq</i>	0.122*** (0.044)	0.102** (0.049)	0.117 (0.078)	0.222*** (0.085)	0.149*** (0.045)	0.132*** (0.050)	0.109 (0.078)	0.221** (0.086)
<i>CFOTenureAlt x SIB</i>					0.295*** (0.103)	0.271** (0.106)	-0.346** (0.166)	-0.304* (0.175)
<i>CFOTenureSqAlt x SIB</i>					-0.129*** (0.038)	-0.120*** (0.038)	0.040 (0.056)	0.018 (0.057)
<i>CFOWords</i>	0.001*** (0.001)	0.001** (0.001)	0.001* (0.001)	0.001** (0.001)	0.001*** (0.001)	0.001** (0.001)	0.001* (0.001)	0.001** (0.001)
<i>CEOTenure</i>	-0.016 (0.013)	-0.018 (0.013)	-0.017 (0.016)	-0.019 (0.016)	-0.013 (0.013)	-0.016 (0.013)	-0.015 (0.016)	-0.017 (0.016)
<i>CEOFLS / CEOUncertain</i>	0.074*** (0.017)	0.069*** (0.017)	0.091*** (0.029)	0.084*** (0.029)	0.075*** (0.017)	0.070*** (0.017)	0.093*** (0.029)	0.085*** (0.029)
CFO Controls	Y	Y	Y	Y	Y	Y	Y	Y
Firm Controls	Y	Y	Y	Y	Y	Y	Y	Y
Time Trend	Y	N	Y	N	Y	N	Y	N
Year-Qtr FE	N	Y	N	Y	N	Y	N	Y
CFO FE	Y	Y	Y	Y	Y	Y	Y	Y
Observations	1,792	1,792	1,792	1,792	1,792	1,792	1,792	1,792
Adjusted R-squared	0.306	0.308	0.575	0.577	0.309	0.310	0.576	0.578

\*\*\*, \*\*, \* Denote  $p < 0.01$ ,  $p < 0.05$ , and  $p < 0.1$ , respectively.

This table shows the estimated coefficients from panel regressions of the proportion of words in forward-looking statements and the proportion of uncertainty words in earnings conference calls by CFOs (CFO FLS and CFO uncertainty) on logged alternative CFO tenure (with and without SIB interaction), logged alternative CFO tenure squared (with and without SIB interaction), CEO FLS, CEO uncertainty, logged CEO tenure, CFO and firm characteristics. CFO- and firm-level controls, CFO fixed effects, year-quarter fixed effects, time trend, and the constant are included in each regression but are not reported. A sample of CFOs present during the 2010-2017 period is used for the estimation. Robust standard errors are in parentheses. All variables are defined in Appendix C.

Table 10. U-shaped relationship between CFO tenure and level of CFO disclosure – CFO net tone

Variables	H1		H2	
	(1) <i>CFOTone</i>	(2) <i>CFOTone</i>	(3) <i>CFOTone</i>	(4) <i>CFOTone</i>
<i>CFOTenure</i>	-0.609** (0.280)	-0.705** (0.277)	-0.656* (0.345)	-0.764** (0.343)
<i>CFOTenureSq</i>	0.173** (0.088)	0.197** (0.088)	0.163 (0.101)	0.191* (0.102)
<i>CFOTenure x SIB</i>			0.148 (0.375)	0.237 (0.376)
<i>CFOTenureSq x SIB</i>			0.017 (0.089)	-0.011 (0.089)
<i>CFOWords</i>	-0.001*** (0.001)	-0.001*** (0.001)	-0.001*** (0.001)	-0.001*** (0.001)
<i>CEOTenure</i>	0.058 (0.039)	0.054 (0.039)	0.053 (0.039)	0.051 (0.039)
<i>CEOTone</i>	0.071*** (0.022)	0.085*** (0.022)	0.072*** (0.022)	0.085*** (0.022)
CFO Controls	Y	Y	Y	Y
Firm Controls	Y	Y	Y	Y
Time Trend	Y	N	Y	N
Year-Qtr FE	N	Y	N	Y
CFO FE	Y	Y	Y	Y
Observations	1,792	1,792	1,792	1,792
Adjusted R-squared	0.482	0.488	0.483	0.489

\*\*\*, \*\*, \* Denote  $p < 0.01$ ,  $p < 0.05$ , and  $p < 0.1$ , respectively.

This table shows the estimated coefficients from panel regressions of the proportion of words in forward-looking statements and the proportion of uncertainty words in earnings conference calls by CFOs (CFO net tone) on logged CFO tenure (with and without SIB interaction), logged CFO tenure squared (with and without SIB interaction), CEO net tone, logged CEO tenure, CFO and firm characteristics. CFO- and firm-level controls, CFO fixed effects, year-quarter fixed effects, time trend, and the constant are included in each regression but are not reported. A sample of CFOs present during the 2010-2017 period is used for the estimation. Robust standard errors are in parentheses. All variables are defined in Appendix C.

Table 11. U-shaped relationship between CFO tenure and level of CFO disclosure, alternative explanations – CFO forward-looking and uncertainty statements

Panel A: Regression estimates – Basel III (bank regulation effective July 2013)/Q4

Variables	(1) CFOFLS	(2) CFOFLS	(3) CFOUncertain	(4) CFOUncertain	(5) CFOFLS	(6) CFOFLS	(7) CFOUncertain	(8) CFOUncertain
<i>CFOTenure</i>	-0.145* (0.077)	-0.130 (0.084)	-0.340** (0.169)	-0.473*** (0.175)	-0.193*** (0.072)	-0.200*** (0.077)	-0.266** (0.131)	-0.336** (0.134)
<i>CFOTenureSq</i>	0.068*** (0.024)	0.063** (0.028)	0.104** (0.044)	0.167*** (0.049)	0.062** (0.025)	0.069** (0.027)	0.115*** (0.043)	0.144*** (0.045)
<i>CFOTenure x SIB</i>	0.209 (0.135)	0.188 (0.136)	-0.046 (0.236)	-0.008 (0.242)	0.346*** (0.089)	0.339*** (0.091)	0.074 (0.149)	0.086 (0.149)
<i>CFOTenureSq x SIB</i>	-0.053 (0.035)	-0.049 (0.035)	0.029 (0.057)	0.012 (0.060)	-0.092*** (0.022)	-0.091*** (0.022)	-0.040 (0.034)	-0.047 (0.034)
<i>CFOTenure x SIB x BaselIII</i>	0.076 (0.160)	0.084 (0.163)	0.120 (0.292)	0.114 (0.295)				
<i>CFOTenureSq x SIB x BaselIII</i>	-0.021 (0.037)	-0.022 (0.038)	-0.061 (0.066)	-0.062 (0.067)				
<i>CFOTenure x SIB x Q4</i>					-0.134 (0.138)	-0.168 (0.144)	0.427 (0.278)	0.401 (0.269)
<i>CFOTenureSq x SIB x Q4</i>					0.028 (0.028)	0.034 (0.029)	-0.086 (0.057)	-0.081 (0.056)
<i>CFOWords</i>	0.001*** (0.001)	0.001*** (0.001)	0.001 (0.001)	0.001** (0.001)	0.001*** (0.001)	0.001*** (0.001)	0.001** (0.001)	0.001** (0.001)
<i>CEOTenure</i>	-0.013 (0.013)	-0.015 (0.013)	-0.008 (0.016)	-0.013 (0.016)	-0.012 (0.013)	-0.016 (0.013)	-0.012 (0.015)	-0.014 (0.015)
<i>CEOFLS / CEOUncertain</i>	0.076*** (0.017)	0.071*** (0.017)	0.097*** 0.001	0.088*** 0.001**	0.073*** (0.017)	0.070*** (0.017)	0.090*** (0.030)	0.084*** (0.030)
CFO Controls	Y	Y	Y	Y	Y	Y	Y	Y
Firm Controls	Y	Y	Y	Y	Y	Y	Y	Y
Time Trend	Y	N	Y	N	Y	N	Y	N
Year-Qtr FE	N	Y	N	Y	N	Y	N	Y
CFO FE	Y	Y	Y	Y	Y	Y	Y	Y
CFO Controls	Y	Y	Y	Y	Y	Y	Y	Y
Observations	1,792	1,792	1,792	1,792	1,792	1,792	1,792	1,792
Adjusted R-squared	0.312	0.312	0.576	0.578	0.311	0.310	0.577	0.577

\*\*\*, \*\*, \* Denote  $p < 0.01$ ,  $p < 0.05$ , and  $p < 0.1$ , respectively.

This table shows the estimated coefficients from panel regressions of the proportion of words in forward-looking statements and the proportion of uncertainty words in earnings conference calls by CFOs (CFO FLS and CFO uncertainty) on logged alternative CFO tenure (with and without SIB and Basel III/Q4 interaction), logged alternative CFO tenure squared (with and without SIB and Basel III/Q4 interaction), CEO FLS, CEO uncertainty, logged CEO tenure, CFO and firm characteristics. CFO- and firm-level controls, CFO fixed effects, year-quarter fixed effects, time trend, and the constant are included in each regression but are not reported. A sample of CFOs present during the 2010-2017 period is used for the estimation. Robust standard errors are in parentheses. All variables are defined in Appendix C.



Panel B: Regression estimates – CCAR (banks undergoing annual Comprehensive Capital Analysis and Review)

Variables	(1) <i>CFOFLS</i>	(2) <i>CFOFLS</i>	(3) <i>CFOUncertain</i>	(4) <i>CFOUncertain</i>
<i>CFOTenure</i>	-0.106 (0.073)	-0.109 (0.079)	-0.256** (0.118)	-0.347*** (0.127)
<i>CFOTenureSq</i>	0.034 (0.026)	0.041 (0.029)	0.116*** (0.044)	0.161*** (0.049)
<i>CFOTenure x CCAR</i>	0.258*** (0.091)	0.236** (0.094)	0.097 (0.147)	0.079 (0.146)
<i>CFOTenureSq x CCAR</i>	-0.069*** (0.023)	-0.063*** (0.024)	-0.046 (0.035)	-0.047 (0.035)
<i>CFOWords</i>	0.001** (0.001)	0.001** (0.001)	0.001 (0.001)	0.001* (0.001)
<i>CEOTenure</i>	-0.021 (0.014)	-0.024* (0.014)	-0.019 (0.016)	-0.023 (0.016)
<i>CEOFLS / CEOUncertain</i>	0.075*** (0.018)	0.073*** (0.018)	0.091*** (0.031)	0.084*** (0.031)
CFO Controls	Y	Y	Y	Y
Firm Controls	Y	Y	Y	Y
Time Trend	Y	N	Y	N
Year-Qtr FE	N	Y	N	Y
CFO FE	Y	Y	Y	Y
CFO Controls	Y	Y	Y	Y
Observations	1,600	1,600	1,600	1,600
Adjusted R-squared	0.305	0.311	0.586	0.592

\*\*\*, \*\*, \* Denote  $p < 0.01$ ,  $p < 0.05$ , and  $p < 0.1$ , respectively.

This table shows the estimated coefficients from panel regressions of the proportion of words in forward-looking statements and the proportion of uncertainty words in earnings conference calls by CFOs (CFO FLS and CFO uncertainty) on logged alternative CFO tenure (with and without CCAR interaction), logged alternative CFO tenure squared (with and without CCAR interaction), CEO FLS, CEO uncertainty, logged CEO tenure, CFO and firm characteristics. CFO- and firm-level controls, CFO fixed effects, year-quarter fixed effects, time trend, and the constant are included in each regression but are not reported. A sample of CFOs present during the 2010-2017 period is used for the estimation. Robust standard errors are in parentheses. All variables are defined in Appendix C.

## Appendix A. Sample selection

	Observations (Companies)
Quarterly observations from Compustat & CRSP bank quarterly	16,503 (682)
Quarterly observations with required Execucomp data (SIC 6020, 6035 and 6036)	3,512 (128)
Quarterly observations with required I/B/E/S, conference call transcripts (at least one available transcript per bank during 2010 – 2017) and BoardEx data	2,209 (85)
Final sample for main analyses (non-missing data)	1,792 (79)
Final sample (systemically important banks)	370 (13)
Final sample (non-systemically important banks)	1,422 (66)
Final sample (individual CFOs)	150
Final sample (individual CEOs)	114

This panel summarizes the sample selection. The sample covers the period of 2010 – 2017.

## Appendix B. Conference call distribution during 2010 – 2017

Fiscal Year	Total Conference Calls	Proportion of Conference Calls
2010	188	10.49%
2011	204	11.38%
2012	210	11.72%
2013	177	9.88%
2014	218	12.17%
2015	255	14.23%
2016	267	14.90%
2017	273	15.23%
	1,792	100.00%

## Appendix C. Variable definitions

Variable	Definition	Source
<i>CFOTenure</i>	natural log of the quarters of CFO tenure (tenure defined as the number of quarters the CFO has participated in earnings conference calls)	Thomson Reuters Street Events
<i>CFOTenureSq</i>	squared term of the natural log of CFO tenure	Thomson Reuters Street Events
<i>CFOAge</i>	natural log of the age of the CFO	BoardEx
<i>CPA</i>	indicator variable equal to 1 if the CFO has a CPA license; 0 otherwise	BoardEx

<i>SpecialMember</i>	indicator variable equal to 1 if the CFO has membership in industry and/or economic organizations; 0 otherwise	BoardEx
<i>PreCFOYrsInComp</i>	natural log of the number of years the CFO has spent in the company prior to CFO commencement	BoardEx
<i>PreCFOYrsInInd</i>	natural log of the number of years the CFO has spent in the banking industry prior to CFO commencement	BoardEx
<i>CFOWords</i>	total number of words of the CFO during the presentation part of each conference call	Thomson Reuters Street Events
<i>CFOFLS</i>	total number of forward-looking (FLS) statements as a percentage of total words of the CFO during the presentation part of each conference call	Thomson Reuters Street Events
<i>CFOUncertain</i>	total number of uncertainty words as a percentage of total words of the CFO during the presentation part of each conference call (Loughran & McDonald's 2018 dictionary)	Thomson Reuters Street Events
<i>CEOTenure</i>	natural log of the quarters of CFO tenure (tenure defined as the number of quarters the CEO has participated in earnings conference calls)	BoardEx
<i>CEOFLS</i>	total number of forward-looking (FLS) statements as a percentage of total words of the CEO during the presentation part of each conference call	Thomson Reuters Street Events
<i>CEOUncertain</i>	total number of uncertainty words as a percentage of total words of the CEO during the presentation part of each conference call (Loughran & McDonald 2018 dictionary)	Thomson Reuters Street Events
<i>CFOEquityComp</i>	natural log of CFO equity compensation as a percentage of total compensation	ExecuComp
<i>RetiredCFO</i>	indicator variable equal to 1 when the CFO retires; 0 otherwise	BoardEx
<i>InsideCFO</i>	indicator variable equal to 1 if the CFO spent at least one year in the same company prior to becoming CFO; 0 otherwise	BoardEx
<i>CFOTenureAlt</i>	natural log of the sum of years spent as CFO and years spent in the company before becoming CFO	Thomson Reuters Street Events; BoardEx
<i>CFOtone</i>	difference between positive and negative words as a percentage of total words of the CFO during the presentation part of each conference call (Loughran & McDonald's 2018 dictionary)	Thomson Reuters Street Events
<i>CEOTone</i>	difference between positive and negative words as a percentage of total words of the CEO during the presentation part of each conference call (Loughran & McDonald's 2018 dictionary)	Thomson Reuters Street Events
<i>FirmAge</i>	natural log of the difference between current fiscal year and year bank founded	Compustat; Yahoo Finance
<i>Size</i>	natural log of lag of total quarterly assets	Compustat Bank Quarterly
<i>BTM</i>	ratio between quarterly lag of book value of equity (total quarterly net assets) and quarterly lag of market value of equity (total number of shares multiplied by the absolute value of end-of-quarter stock price)	Compustat Bank Quarterly; CRSP

<i>ROA</i>	ratio between quarterly EBIT and total quarterly assets	Compustat Bank Quarterly
<i>LLP</i>	ratio between quarterly loan loss provision scaled by lag of quarterly loans net of total allowance of assets	Compustat Bank Quarterly
<i>SpecialItems</i>	ratio between quarterly special items and total quarterly assets scaled by minus one	Compustat Bank Quarterly
<i>RestrItems</i>	indicator variable equal to 1 if the ratio of total quarterly restructuring items and total quarterly assets is different than zero; 0 otherwise	Compustat Bank Quarterly
<i>NPA</i>	ratio between quarterly non-performing assets and total quarterly assets	Compustat Bank Quarterly
<i>CO</i>	ratio between quarterly net charge-offs and total quarterly loans net of total allowance, scaled by minus one	Compustat Bank Quarterly
<i>Leverage</i>	ratio between total quarterly loans and the sum of lagged total quarterly loans and lagged market value of equity	Compustat Bank Quarterly
<i>T1Cap</i>	risk-adjusted capital ratio – Tier 1, divided by 100	Compustat Bank Quarterly
<i>LitigRisk</i>	total number of litigation words as a percentage of total words of the CFO during the presentation part of each conference call (Loughran & McDonald 2018 dictionary)	Thomson Reuters Street Events
<i>UE</i>	unexpected earnings computed as the difference between latest reported EPS and mean EPS scaled by stock price, all in time t	I/B/E/S
<i>Return</i>	quarterly standard deviation of daily stock returns	CRSP
<i>AnalystFollow</i>	natural log of the number of analysts following the firm	I/B/E/S
<i>SIB</i>	indicator variable equal to 1 if the bank is systemically important bank in the United States (assets > \$50 billion); 0 otherwise	Labonte & Perkins (2017)
<i>BASELIII</i>	indicator variable equal to 1 after Q3 2013 when the Basel III regulation was ratified by the U.S. Federal Reserve Bank; 0 otherwise	
<i>Q4</i>	indicator variable equal to 1 if fiscal quarter is Q4; 0 otherwise	
<i>CCAR</i>	indicator variable equal to 1 if the bank has done Comprehensive Capital Analysis and Review (CCAR) during the fiscal year; 0 otherwise	<a href="https://www.federalreserve.gov/supervisionreg/ccar-by-year.htm">https://www.federalreserve.gov/supervisionreg/ccar-by-year.htm</a>

# CEO-CFO Power Relationship, Linguistic Content Matching and Economic Policy Uncertainty: Evidence from Bank Conference Calls

**Claudia Imperatore**

Bocconi University

[claudia.imperatore@unibocconi.it](mailto:claudia.imperatore@unibocconi.it)

**Elica Krasteva**

Bocconi University

[elica.krasteva@phd.unibocconi.it](mailto:elica.krasteva@phd.unibocconi.it)

## ABSTRACT

This study investigates whether and how the CEO-CFO power relationship is associated with disclosure coordination by CEOs and CFOs, especially in the presence of increased economic policy uncertainty. Using earnings conference calls of U.S. publicly listed banks during the 2010 – 2017 period, we analyze the existence of disclosure coordination or linguistic content matching on the part of CEOs and CFOs. We find that CEOs and CFOs coordinate their message in the presence of power distance (absolute or relative) between them. This result is enhanced when economic policy uncertainty increases. The effect is mainly driven by CEO power and it is more pronounced in banks with stronger equity capital ratios. Analyses across groups of internally promoted CFOs as well as CFOs hired after the incumbent CEO (i.e., co-opted CFOs) offer additional corroborating support that CEOs and CFOs coordinate their disclosures when CFOs are internally promoted or co-opted. Our study provides evidence that individual managers relay a unified message that reflects their power dynamics and is useful to alleviate external uncertainty.

## 1. Introduction

This study investigates whether the CEO-CFO power relationship results in disclosure coordination by CEOs and CFOs. CEOs and CFOs react in different ways given their different tasks and incentives, which give rise to the power dynamic between CEOs and CFOs (Feng et al., 2011; Friedman, 2014). CEOs are often in a powerful position with respect to CFOs (Finkelstein, 1992) and this power to pressure CFOs has documented implications for equity compensation, reporting quality, and firm value (e.g., Feng et al., 2011; Friedman, 2014; Dikolli et al., 2020). In this regard, we expect the power relationship between CEOs and CFOs to influence the coordination in disclosure, as well. In particular, when the power distance is greater, one explanation behind this coordination is that CEOs pressure CFOs to align their common message so that greater coordination is observed. Conversely, another explanation is that CEOs and CFOs coordinate but not as a result of the power pressure exerted by the CEO. In such instances, although the CEO still retains a position of power, the CFO has more independence over making and implementing decisions. In essence, CEOs and CFOs develop synergies that allow them to coordinate their conjoined behavior, including their disclosures (Dikolli et al., 2020). In short, we can expect to see CEOs and CFOs coordinating their disclosures, but we do not know *ex ante* whether and how the CEO-CFO relationship influences this coordination as well as what the underlying power dynamics behind this coordination are (i.e., pressure or synergies).

As argued above, CEOs and CFOs transmit a unified and coordinated message. This message meets the greater demand for information and, above all, aims to decrease stakeholders' anxiety, especially in times of high policy uncertainty arising from changes in government economic policies. In particular, as the financial implications of government policies fall under the purview of CFOs, CFOs have a better understanding of these implications. As they are more aware of the implications of economic policy uncertainty for the firm's earnings and cash flows, CFOs are also better able to bias information compared to CEOs. Therefore, in the case of increasing economic uncertainty, CEOs and CFOs still coordinate their disclosures, but it is unclear whether it would enhance or weaken the main effect as well as whether the disclosure coordination is driven by the

developed synergies between CEOs and CFOs or by the power pressure exerted by the more powerful in the CEO-CFO dyad.

There is ample evidence that economic policy uncertainty (EPU) has real negative implications for firms and the economy, as a whole. An increasing number of studies show that economic policy uncertainty also affects financial reporting behavior. Nagar et al. (2019) document that managers react to higher economic policy uncertainty by increasing their disclosures, while Jin et al. (2019) show that banks' earnings opacity increases when economic policy uncertainty is higher. Contrary to prior studies that focus on managers as a whole, we distinguish between CEOs and CFOs and their conjoined behavior by analyzing whether they coordinate their disclosure in the face of higher uncertainty. This is relevant because, when uncertainty increases, information asymmetries are higher and outsiders are more concerned with firm operations. Thus, analyzing whether and how CEOs and CFOs coordinate to meet the stronger demand for information is important to shed new light on how firms communicate in periods of high uncertainty when investors are more concerned and skeptical.

We address our research question in a sample of U.S. banks for the period 2010-2017. We focus on the banking sector as it provides an interesting setting to examine the CEO-CFO power relationship. The complexities of this highly regulated industry provide further disciplining to both CEOs and CFOs, while they also encourage managers to cooperate more in terms of decision-making. Furthermore, the banking industry setting ensures that both CEOs and CFOs are exposed to economic policy uncertainty. Banks are impacted by government policies both directly, as firms, as well as indirectly, as lenders. Given their important role in the economy, banks are also in the unique position as analysts and economic agents can potentially look up to them for guidance and assurance with respect to the impact of government policies. Furthermore, banks often provide macroeconomic forecasts, while their bank executives (CEOs and CFOs) are often part of local-level and national-level economic committees. These features ensure that both bank CFOs and CEOs consider government policies as one of their top concerns<sup>32</sup>. Additionally, CFOs generally aim to reduce the information risk of investors

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<sup>32</sup> This argument is further confirmed by the 2020 quarterly CFO Global Business Outlook survey, administered by Duke University in partnership with The Federal Reserve Banks of Richmond and Atlanta. The survey offers insights

through the voluntary disclosures they make as part of their efforts to address the reduction of uncertainty about the firm's prospects (Graham et al., 2005). We test our hypothesis investigating CEO-CFO disclosure coordination (empirically represented as language content matching or LCM)<sup>33</sup> during earnings conference calls, as extracted from Streets Events. The extant literature generally focuses on the tone of individual CEOs and CFOs rather than on their combined tone<sup>34</sup>, therefore our study provides insights into a phenomenon that has received relatively little attention so far. We proxy economic policy uncertainty using the economic policy uncertainty developed by Baker et al. (2016) as well as the occurrence of presidential elections (Julio & Yook, 2012).

Using variables representing the absolute and relative power distance of CEOs and CFOs (proxied by tenure and age), we find evidence of disclosure coordination, especially when the CEO is the more powerful individual in the relationship. When we distinguish between CEOs and CFOs, we cannot detect a significant pattern between the two types of managers. Furthermore, when economic policy uncertainty increases, CEOs and CFOs exhibit joint solidarity (united front) in their disclosures when economic policy uncertainty is higher in line with the idea that managers attempt to reassure analysts about the implications that economic policy uncertainty can have for their firm. This joint solidarity is especially evident in the presence of a powerful CEO rather than a powerful CFO. In additional cross-sectional analyses, we also document that the effects are more pronounced in banks with higher than median equity ratios. We also examine the effect of CEO-CFO power on disclosure coordination across two groups of CFOs that are expected to be more susceptible to CEO power, i.e. internally promoted and co-opted (CFOs hired after the incumbent CEO) CFOs. Results provide further support that powerful CEOs and their CFOs coordinate disclosures. However, additional analysis of a sub-group of co-opted CFOs, who have spent more than the median tenure in their

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from U.S. business leaders on the financial outlook for their firms, the challenges they face, and their expectations for the economy ([https://www.richmondfed.org/research/national\\_economy/cfo\\_survey/about\\_the\\_survey](https://www.richmondfed.org/research/national_economy/cfo_survey/about_the_survey)).

<sup>33</sup> We rely on a measure called language content matching (or LCM), empirically tested by Shi et al. (2019), to represent disclosure coordination. This measure is calculated using a combination of positive and negative words of CEOs and CFOs, derived through bag-of-words textual analysis technique from Loughran & McDonald's 2018 financial sentiment dictionary. Section 3.2.2 provides further details on the measure.

<sup>34</sup> Bochkay et al. (2019) combine the tone of non-CEO managers during conference calls to construct the measure of tone for these managers as a group. They have a separate tone measure only for CEOs as their research question focuses on CEO managerial ability uncertainty and career concerns.



positions, offers some support to the notion that CEOs and CFOs develop synergies that extend to their disclosure coordination.

This paper makes the following contributions. First, we provide insights into the CEO-CFO power relationship as well as its role in influencing voluntary disclosures of managers, which aim to address the information asymmetry gap between the firm and external stakeholders. The extant literature related to the CEO-CFO power relationship examines the effect of this relationship on earnings management, reporting quality, firm value, and executive compensation (e.g., Feng et al., 2011; Friedman, 2014; Baker et al., 2019; Dikolli et al., 2020). Voluntary disclosure of managers is an interesting setting that showcases the CEO-CFO power relationship, but so far has received little attention. Voluntary disclosures, especially earnings conference calls, are a tool for managers to provide useful information to external stakeholders (Matsumoto et al., 2011). Such information may be conveyed through specific linguistic characteristics of voluntary disclosures (Loughran & McDonald, 2016). Managers, especially CEOs and CFOs, actively coordinate their verbal message to stakeholders (Shi et al., 2019). This is an aspect not widely explored in either the CEO-CFO relationship or voluntary disclosure literatures, but bears some importance in light of recent empirical evidence that managerial disclosures are also a product of team rather than individual effort (Amel-Zadeh et al., 2019).

We also add to the growing literature on economic uncertainty policy (e.g., Baker et al., 2016; Jiang et al., 2019; Jin et al., 2019; Nagar et al., 2019; Bonsall et al., 2020; Ng et al., 2020) by providing evidence how individual managers react to increased economic policy uncertainty in terms of the disclosures they make during quarterly earnings conference calls. Currently, this stream of literature either explores the firm-level reaction or the changes in mandatory and voluntary disclosures of managers to increases in economic policy uncertainty. Managers are considered in aggregate, without distinguishing differences in the reactions of individual executive managers with different titles and responsibilities. As these managers do not have the same incentives to make financial decisions, including voluntary disclosures, we expect that their disclosures are influenced by the difference in incentives (Chava & Purnanandam, 2010; Amel-Zadeh et al., 2019). Our goal is to shed light on the aspect of CEOs and CFOs jointly, instead of

individually, managing the message they convey to external stakeholders during times of higher economic policy uncertainty, especially in view of their power relationship.

The remainder of the paper is organized as follows. Section 2 outlines background literature and hypotheses development. Section 3 describes our research design, sample selection, and descriptive statistics. In Section 4 we present results of main hypotheses testing along with a battery of robustness tests. Section 5 concludes the paper.

## **2. Background Literature and Hypotheses Development**

### **2.1. CEO-CFO power relationship**

CEOs and CFOs have an interesting and complex relationship as both of them are responsible to the board. Although CFOs are also beholden to the CEO (Finkelstein, 1992; Mian, 2001), we can expect CFOs to have some level of independence in taking and executing decisions.

In terms of power dynamics in the CEO-CFO dyad, the initial expectation is of the CEO being more powerful than the CFO as a consequence of their different standing and responsibilities in the company (Feng et al., 2011). In fact, Friedman (2014) models CEO power implications on earnings management in terms of performance incentives, reporting quality, firm value, and information rent. Friedman (2014) focuses on the ability of CEOs to pressure CFOs to produce biased performance measures, assuming that CFOs have purview over the reporting system. CEOs and CFOs independently perform their assigned responsibilities, while considering the costs (cost of biasing reporting quality) and benefits (compensation) of their actions. He concludes that CEOs with increased ability to pressure CFOs (and also with more power) lead to more negative responses (e.g., lower reporting quality, more biasing in reporting, and lower firm value) since CFOs incur higher costs due to biasing (e.g., legal and job market sanctions). Conversely, powerful CEOs willing to pressure CFOs less see more positive responses (e.g., higher reporting quality, less biasing, and higher firm value).

Friedman (2014) also brings attention to the different ways to represent CEO power in empirical settings. One dimension to consider is entrenchment. In this regard, it is important to measure CEO power relative to CFO power as more powerful CEOs are

expected to be more entrenched<sup>35</sup>, but that may be counteracted by CFOs also being entrenched. Another dimension is the hiring history at the firm with regards to preferences of internally vs. externally hired managers. For example, an internally hired CFO during the CEO tenure may be expected to have less power relative to the CEO (e.g., Geiger & North, 2006). In this regard, CFO promoted to CEO at the same or similar or better firm could be considered to have been less susceptible to CEO pressure during the CFO's tenure.

Following Friedman's (2014) notion of relative CEO-CFO power, Dikolli et al. (2020) focus on the case of CFO co-option (i.e., CFO hired after the CEO) and how it influences CEO compensation. The effect of CFO co-option on compensation is stronger during the early years of the CFO tenure, consistent with the power-based rather than synergy-based interpretation<sup>36</sup>.

Voluntary disclosures are examples of decisions made by executive managers. They enhance the quality of information shared with external stakeholders as managers are expected to possess important private information (Matsumoto et al., 2011; Davis et al., 2015). In this sense, we can consider voluntary disclosures as strategic choices made by managers and, as such, they are potentially influenced by CEO-CFO power dynamics (Finkelstein, 1992). Quarterly earnings conference calls with analysts and investors provide an interesting setting to study voluntary disclosures of managers in periods of uncertainty, as they are regular, publicly available disclosure events, where executive managers (especially CEOs and CFOs) have the opportunity to elaborate on and discuss the performance of the company. Moreover, the contribution of each manager on the call is clearly identifiable and it is possible to directly link disclosure to the respective manager.

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<sup>35</sup> Friedman (2014) lists a number of proxies of CEO relative entrenchment along different dimensions used in the extant literature (e.g., Badolato et al., 2014; Bedard et al., 2014), such as founder status, tenure as CEO, social connections to board members inside and outside the firm, service at other boards, education, accounting and finance expertise. These proxies also fall in line with the four dimensions of power that Finkelstein (1992) proposes, i.e. structural (hierarchical authority), ownership (shareholding position in the company), expert (ability to deal with environmental contingencies as well as functional expertise), and prestige (managerial reputation in the institutional environment and among stakeholders).

<sup>36</sup> Dikolli et al. (2020) explain that the power-based interpretation implies that there is a stronger co-option effect in the early years of the CFO tenure since the CFO is more susceptible to the CEO early on. In later years, CFOs build their reputation and possibly become less beholden to the CEO. Conversely, the synergy-based explanation builds on the notion that synergies between the CEO and CFO build over time as they interact repeatedly. In this regard, the co-option effect is stronger in the later years of the CFO tenure.

An increasing number of studies suggest that attributes of conference calls reflect the distinct characteristics of individual managers. For instance, Davis et al. (2015) show that disclosure tone has a proven manager-specific component in it, beyond what can be explained by underlying firm fundamentals (Davis et al., 2015). Additionally, Campbell et al. (2020) find that the volatility of managerial tone is a function of both the firm's operating risk and the manager's disclosure transparency, but investors find tone volatility informative only if it provides incremental information about the firm's operating risk. Notably, tone is not only considered with respect to individual managers, but also in relation to the tone of other managers. Levy et al. (2018) provide evidence that, during conference calls, CFO tone with respect to CEO tone becomes more negative when CFO litigation risk increases. Conversely, Shi et al. (2019) show that CFOs share opinions that are similar to their CEOs, especially when CEOs are the more powerful individuals in the dyad. In particular, they suggest that CFOs and CEOs use similar linguistic attributes, such as function and content words<sup>37</sup> so that a unified message is delivered during conference calls.

Given that, it is reasonable to expect a certain level of coordination in the disclosures that CEOs and CFOs jointly make during the same disclosure event. However, it is unclear ex-ante how and why CEOs and CFOs coordinate their disclosure and to which extent their linguistic matching is the result of power dynamics. CFOs are the agent for CEOs (Graham & Harvey, 2001) and CEOs have the power to replace their CFOs should they not fall in line with the CEOs' preferences (Mian, 2001; Fee & Hadlock, 2004). As CEOs exert a certain level of control and power over CFOs (e.g., Finkelstein, 1992; Fee & Hadlock, 2004; Chava & Purnanandam, 2010; Dikolli et al., 2020), we expect CEOs to require CFOs to make certain disclosures that maximize their personal objectives. If this is the case, we can expect greater level of linguistic content matching as the coordinated message can reinforce the credibility of the CEOs' statements in that particular context. However, we can also expect less linguistic matching if the CEOs want

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<sup>37</sup> Shi et al. (2019) explain that function words (e.g., articles, pronouns, auxiliary verbs, and conjunctions) capture language style, but do not have semantic content outside the context of a sentence. In contrast, content words (e.g., nouns, regular verbs, adjectives, and adverbs) carry meaning beyond the context of a sentence and capture what individuals say. In their study, the authors utilize positive and negative words from Loughran and McDonald's (2011) dictionary to express language content matching of CEOs and CFOs.

to stand up from the crowd. Therefore, it is an empirical question how the CEO-CFO power relationship affects their disclosure coordination.

*H1: The CEO-CFO power relationship influences how CEOs and CFOs coordinate their disclosures.*

Finkelstein (1992) argues that power relations between executive managers are defined by the ability of these managers to cope with internal (e.g., board of directors) and external (e.g., the firm's task and institutional environment) sources of uncertainty. Given that, we shed light on the association between the CEO-CFO power relationship and disclosure coordination (or linguistic content matching) by analyzing the relation under periods of high and low economic policy uncertainty.

## **2.2. Economic policy uncertainty and disclosure coordination**

Policy-related economic uncertainty (EPU)<sup>38</sup> in the United States has been steadily increasing since the 1960s. Baker et al. (2014) specify two explanations for this phenomenon: 1) growth in government spending, taxes and regulation, and 2) political polarization along with its implication for the policy-making process and policy choices. The expanded role of the government in the U.S. economy has had both positive and negative impact on U.S. firms. While the government may implement policies and regulations that result in overall lower economic uncertainty, these same policies and regulations also significantly complicate the environment firms operate in and result in policy-related uncertainty. With regards to political polarization, the existing checks and balances embedded in the U.S. constitution have been found wanting in recent years given the increased instances of divided government, obstructionism, and politicizing of bureaucratic processes by presidents of both parties.

Several studies show that economic policy uncertainty has a negative effect on consumers' consumption and corporate investments (Julio & Yook, 2012; Kang et al.,

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<sup>38</sup> Pastor and Veronesi (2012) define two types of uncertainty about government policy – 1) political uncertainty (uncertainty about whether the current government policy will change) and 2) impact uncertainty (how the change in policy affects firm profitability). The positive or negative effect of policy changes on firm profitability is not clear ex ante and is shaped by a number of factors, such as severity and duration of economic downturns, harmful impact of previous economic policy, and element of surprise in policy change.

2014; Gulen & Ion, 2016). Recently, after the introduction of the Economic Policy Uncertainty Index by Baker et al. (2016), the extant accounting literature has also started exploring how firms adjust their financial reporting choices in response to the increasing level of uncertainty stemming from government policy decisions. Nagar et al. (2019) examine the effect of EPU on information asymmetry among investors as well as the reaction of firm managers to higher EPU. The authors find that EPU increases the level of information asymmetries. In attempt to reduce them, managers increase the level of their management forecasts and 8-K filings. Along similar lines, Jiang et al. (2020) analyze how EPU shapes mandatory and voluntary corporate disclosures (e.g., 10-K, 10-Q, and 8-K filings). By utilizing different attributes of disclosures (e.g., readability, length, uncertainty and negativity), the authors find that textual disclosure exhibits a systematic component related to policy uncertainty. In particular, disclosure documents are longer, more complex, and with more negative and uncertain tone. Baloria and Mamo (2017) explore a different source of economic policy uncertainty, U.S. presidential elections, and how sell-side analysts' performance is affected by EPU. The authors document the difficulties analysts face in performing their forecasting tasks during periods of high policy uncertainty as their information environments become more complex. The described effect is more pronounced when they cover firms more sensitive to policy uncertainty.

With specific reference to the banking sector, Jin et al. (2019) investigate how EPU is related to earnings opacity and conclude that EPU leads to greater opacity, stemming from increased fluctuation in banks' earnings and cash flows. The authors posit that bank managers may engage in distorting financial information as well as in earnings management, during periods of high economic policy uncertainty. Ng et al. (2020) study a different aspect of the impact of EPU on the banking industry, specifically how banks convey information about their loan portfolios to their stakeholders. The authors hypothesize and confirm that loan loss provisions of banks anticipate negative banking conditions.

A common thread in prior studies analyzing the influence of EPU on corporate reporting choices is considering managers as a homogenous category without recognizing that accounting practices are decided by a team of executives that may have different job requirements, expectations, and incentives to make decisions (Chava &

Purnanandam, 2010; Feng et al., 2011). We aim to address this gap in order to better understand whether and how the CEO-CFO power relation is reflected in the disclosure that CEOs and CFOs jointly deliver during the earnings conference calls<sup>39</sup>.

### **2.3. Economic policy uncertainty, disclosure coordination and CEO-CFO power dynamics**

When economic policy uncertainty is high, earnings and cash flows are more volatile, hence managers have more flexibility to exhibit a certain level of conformity in their disclosures and convey more stable future prospects, as well as to decrease stakeholders' anxiety. In particular, as policy uncertainty is associated with greater information asymmetries, we can expect that both CEOs and CFOs coordinate their message to assure outside stakeholders that the company is united in its efforts to reduce the negative impact of uncertainty; however, the underlying reason for this coordination (power pressure or synergies) remains unclear ex-ante, even during periods of higher economic policy uncertainty<sup>40</sup>. However, when policy uncertainty increases, investors and outsiders put more attention on what the firm communicates (Ng et al., 2020). Hence, despite the benefits, the level of CEO-CFO disclosure conformity is costly because of the higher likelihood of detection and the subsequent reputational loss.

Notably, although both the CEO and the CFO reflect on the impact of economic policy, their individual disclosures in terms of positivity/negativity are potentially different given their different roles and responsibilities. Indeed, while CEOs are responsible for the strategic operations of the firm, CFOs are ultimately responsible for the quality of financial reporting (Geiger & North, 2006) and the financial aspect of firm performance. Thus, if CEOs discuss the overall impact of economic policy uncertainty providing higher level details of firm strategy and future orientation, CFOs touch more upon the details related to the financial aspect. Moreover, during times when economic policy creates more

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<sup>39</sup> While disclosures, such as 10-Ks, 10-Qs and 8-Ks, have already been utilized as a setting in the economic policy uncertainty literature, conference calls remain unexplored as a setting (e.g., Nagar et al., 2019; Jiang et al., 2020). Conference calls allow researchers to more readily link disclosure to a particular manager (e.g., CEO or CFO) as well as to observe real-time coordination between CEO and CFO disclosures.

<sup>40</sup> Shi et al. (2019) perform additional tests whether the underlying reason for the linguistic matching between CEOs and CFOs is due to CFO ingratiation (or power pressure in this study) or to CEO-CFO social cohesion (or synergies in this study). The find support for the ingratiation reason (measured by the influence of CEO tenure on CEO-CFO linguistic matching) rather than for the social cohesion reason (measured by the influence of CEO-CFO tenure overlap on CEO-CFO linguistic matching).

uncertain operating environment for companies, CFOs choose to incorporate guidance to address the financial impact of the economic uncertainty, as external stakeholders, especially financial analysts, rely on such information to more accurately perform their forecasting tasks (Baloria & Mamo, 2017).

Given these differences, it is unclear whether disclosure coordination is higher when economic policy uncertainty is higher. We contend that this ultimately depends on the managerial power and managerial power relationships that manifest themselves more strongly when managers are exposed to uncertainty. On the one hand, the differences in roles and responsibilities that reduce disclosure coordination in a period of policy uncertainty weaken when a power relation is in place. In particular, when policy uncertainty is high, the more powerful agent between the CEO and CFO has stronger incentives to coordinate with the less powerful one and send a more unified message that assures investors. On the other hand, differences can still play a role especially if the more powerful agent wants to stand out and show that he/she is able to overcome the situation of uncertainty, resulting in non-conformity or divergence in the joint message.

Given that, we do not specify how EPU influences the relationship between CEO-CFO power and disclosure coordination.

*H2: The CEO-CFO power relationship influences CEO and CFO disclosure coordination in times of higher economic policy uncertainty.*

### **3. Empirical Strategy**

#### **3.1. Setting: banking industry**

We address our hypotheses in the banking industry setting, which is suitable to our study for the following reasons. First, the banking industry is highly regulated (Beatty & Liao, 2014), which has an additional disciplining effect on CEOs and CFOs with regards to the decisions they make as well as to their conjoined behavior. As bank CEOs and CFOs are expected to have long exposure to the industry, we could expect that they are relatively entrenched as managers, although the level of entrenchment may also vary with their career progression within or outside the focal firm. Additionally, the CEO-CFO power relationship might be further complicated by the need of CEOs and CFOs to address the complexities of the industry, which may call into question whether powerful CEOs would



choose to exert pressure on their CFOs or would choose to explore the synergies developed between them. The highly regulated nature of the industry also requires CEOs and CFOs to possess salient knowledge and experience of operating within an environment marked by higher economic policy uncertainty. Furthermore, since banks are also major corporate lenders, they are in the unique position of being both directly and indirectly affected by EPU.

Second, banks, in their role as economic pillars in national and local economies, could provide beneficial insight to both firms and financial analysts with regards to how economic policies may impact firms' financial performance. Specifically, some banks, such as JP Morgan, Wells Fargo, and Bank of America, generate regular economic forecasts, joining a number of renowned for-profit, non-profit, as well as academic forecasting houses. Specifically, CEOs of systemically important banks can choose to make regular pronouncements about the effects of economic policies on the economy. For example, the CEO of JP Morgan, Jamie Dimon, offers such insights in his annual letter to shareholders (JP Morgan Chase & Co., 2020).

## **3.2. Variable measurement and hypotheses testing**

### **3.2.1. Empirical strategy**

This study uses a longitudinal research design, which models CEO-CFO disclosure coordination as a function of the CEO-CFO power relationship, economic policy uncertainty, and a set of covariates. The CEO-CFO relationship is proxied by absolute and relative power difference between CEOs and CFOs in terms of tenure in their position as well as age. CEO-CFO disclosure coordination is proxied by language content matching (LCM), derived through a bag-of-words textual analysis technique using a combination of positive and negative CEO and CFOs words found in quarterly earnings conference calls (see section 3.2.2 for variable measurement details). EPU is proxied by Baker et al.'s (2016) Economic Policy Uncertainty Index as well as the occurrence of U.S. presidential elections during the sample period.

Hypothesis 1 (or H1) states that an association exists between CEOs and CFOs linguistic matching and CEO-CFO power relationship. To test it, we run the following equations, Eq. (1), Eq. (2) and Eq. (3):

$$LCM_{ijt+1} = \alpha_0 + \alpha_1 * AbsPowerDiff_{ijt} + \Sigma FirmControls_{jt} + \Sigma MacroEconControls_t + Time Trend + Firm FE + \varepsilon_{ijt} \quad (1)$$

$$LCM_{ijt+1} = \beta_0 + \beta_1 * CEOPowerVar_{ijt} + \Sigma FirmControls_{jt} + \Sigma MacroEconControls_t + Time Trend + Firm FE + \varepsilon_{ijt} \quad (2)$$

$$LCM_{ijt+1} = \gamma_0 + \gamma_1 * CEOPowerVar_{ijt} + \gamma_2 * CFOPowerVar_{ijt} + \Sigma FirmControls_{jt} + \Sigma MacroEconControls_t + Time Trend + Firm FE + \varepsilon_{ijt} \quad (3),$$

where *LCM* corresponds to the tone-based language matching measure. *AbsPowerDiff* captures the absolute CEO-CFO power relationship in terms of tenure and age, while *CEOPowerVar* and *CFOPowerVar* represent the relative CEO-CFO power relationship in terms of tenure and age. More details are provided in section 3.2.3. Subscript *i* denotes the manager, subscript *j* denotes the firm, and subscript *t* denotes the quarter. We do not make an explicit ex-ante prediction for the signs of  $\alpha_1$ ,  $\beta_1$  and  $\gamma_1$  as the direction of the association is not clear theoretically.

We control for firm-level characteristics along with a set of macroeconomic variables. Firm-level variables include growth opportunities (i.e., firm age [*FirmAge*], firm size [*Size*], book-to-market [*BTM*]), operations (i.e., return on assets [*ROA*] and change in loan-loss provisions [*LLPChg*]), balance sheet quality (non-performing assets [*NPA*], net charge-offs [*CO*], and leverage [*Leverage*]), and the information environment (i.e., analyst following [*AnalystFollow*]). GDP [*GDP*] and Chicago Board Options Exchange's Volatility Index [*VIX*] represent the macroeconomic control variables.

In all regression specifications, we include firm fixed effects to account for time-invariant firm characteristics and a control for time trend to account for any market-wide factors influencing firm-level voluntary disclosures<sup>41</sup>. Lastly, we use clustered robust standard error specification at the firm level in all regressions.

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<sup>41</sup> All continuous variables except for the dependent variable are de-measured in order to capture the average incremental effect of the CEO-CFO power relationship on disclosure coordination, after controlling for other factors influencing disclosure.

Hypothesis 2 (H2) analyzes whether EPU moderates how CEO-CFO power influences disclosure coordination. To test it, we run the following models, Eq. (4), Eq. (5) and Eq. (6):

$$LCM_{ijt+1} = \alpha_0 + \alpha_1 * AbsPowerDiff_{ijt} + \alpha_2 * EPU_{jt} + \alpha_3 * AbsPowerDiff_{ijt} \times EPU_{jt} + \Sigma FirmControls_{jt} + \Sigma MacroEconControls_t + Time Trend + Firm FE + \varepsilon_{ijt} \quad (4)$$

$$LCM_{ijt+1} = \beta_0 + \beta_1 * CEOPowerVar_{ijt} + \beta_2 * EPU_{jt} + \beta_3 * CEOPowerVar_{ijt} \times EPU_{jt} + \Sigma FirmControls_{jt} + \Sigma MacroEconControls_t + Time Trend + Firm FE + \varepsilon_{ijt} \quad (5),$$

$$LCM_{ijt+1} = \gamma_0 + \gamma_1 * EPU_{jt} + \gamma_2 * CEOPowerVar_{ijt} + \gamma_3 * CEOPowerVar_{ijt} \times EPU_{jt} + \gamma_4 * CFOPowerVar_{ijt} + \gamma_5 * CFOPowerVar_{ijt} \times EPU_{jt} + \Sigma FirmControls_{jt} + \Sigma MacroEconControls_t + Time Trend + Firm FE + \varepsilon_{ijt} \quad (6),$$

Variables and model specifications are the same as in Eq. (1), Eq. (2), and Eq. (3), with the exception of *EPU*, which corresponds to either Baker et al.'s (2016) Economic Policy Uncertainty Index or the occurrence of U.S. presidential elections during the sample period (Julio & Yook, 2012). Subscript *i* denotes the manager, subscript *j* denotes the firm, and subscript *t* denotes the quarter. We do not make an explicit ex ante prediction for the sign of  $\alpha_3$ ,  $\beta_3$  and  $\gamma_3$  as the direction of the association is not clear theoretically.

### 3.2.2. CEO-CFO disclosure coordination

To capture CEO-CFO disclosure coordination, we rely on the language content matching (or LCM hereafter) variable outlined in Shi et al. (2019). We choose to focus on language content matching instead of language style matching as Shi et al. (2019) do. Language content matching captures the conscious and context-specific matching of “content words” or *what* people say (e.g., nouns, regular verbs, adjectives). Conversely, language style matching captures the sub-conscious and non-context specific matching of “function words” or *how* people speak (e.g., pronouns, propositions, articles). Since we focus on how the CEO-CFO power relationship influences disclosure coordination, especially in times of higher economic uncertainty, we use language content matching as this construct focuses on the matching of the content of the joint CEO-CFO disclosures,

content that is consciously chosen to convey a specific message to the end-users of the disclosures.

The variable LCM is computed using negative and positive words, found in the presentation (or management discussion) part of the conference call, and is derived from the 2018 Loughran and McDonald financial sentiment dictionary<sup>42</sup> in the following manner<sup>43</sup>:

$$LCM = 1 - [(|positive\_words_{CEO} - negative\_words_{CEO} - positive\_words_{CFO} + negative\_words_{CFO}|) / (positive\_words_{CEO} + negative\_words_{CEO} + positive\_words_{CFO} + negative\_words_{CFO})]$$

In additional tests, we use the separate tone used by CEOs and CFOs to understand how the CEO-CFO power relationship impacts the individual managerial tone. In this case, we rely on Bochkay et al. (2019) computing the measure as follows:

$$Manager_{tone} = 100 \times \frac{Manager\ Positive\ Words - Manager\ Negative\ Words}{Manager\ Total\ Words}$$

### 3.2.3. CEO-CFO power relationship

Following Shi et al. (2019) and Baker et al. (2019)<sup>44</sup>, we calculate the CEO-CFO power relationship in absolute<sup>45</sup> and relative terms as we expect CEOs and CFOs to jointly influence the financial reporting process. In absolute terms, we consider the difference between CEO and CFO tenure<sup>46</sup>, as well as the difference between CEO and CFO age<sup>47</sup>. In relative terms, we construct four indicator variables, reflecting tenure and

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<sup>42</sup> The dictionary is available through the University of Notre Dame's Software Repository for Accounting and Finance website (<https://sraf.nd.edu/textual-analysis/resources/>). For an overview of the use of the L&M dictionary and its versions, please refer to Loughran & McDonald (2016).

<sup>43</sup> Managerial tone is computed as the difference between positive and negative words scaled by total words (e.g., Davis et al., 2015; Bochkay et al., 2019). In their measure of non-CEO tone, Bochkay et al. (2019) sum up the tone for each non-CEO manager to obtain total non-CEO tone. Our measure is different as we scale the difference between positive and negative words by the sum of positive and negative words and we subtract the ratio from one.

<sup>44</sup> These calculations are also in line with the proposed empirical proxy measures of relative CEO-CFO power relationship outlined in Friedman (2014).

<sup>45</sup> The absolute difference does not consider whether the CEO (CFO) has longer/shorter tenure or smaller/big age gap compared to the CFO(CEO) in the CEO-CFO dyad.

<sup>46</sup> CEO and CFO tenure is measured as the number of quarters CEOs and CFOs have participated in conference calls.

<sup>47</sup> Although differences in age point towards a demographic difference between CEOs and CFOs, this difference also influences the power dynamics between CEOs and CFOs. CEOs and CFOs closer in age fall in the same age cohort, hence are exposed to similar economic and political experiences, which can alter their perceived power standing in the CEO-CFO dyad.

age (two for CEOs and CFOs, respectively). The relative CEO tenure (age) difference variables equal the difference between CEO and CFO tenure (age) if this difference is positive and zero otherwise, whereas the relative CFO tenure (age) is equal to the difference between CEO and CFO tenure (age) if this difference is negative or zero and zero otherwise.

#### **3.2.4. Economic policy uncertainty**

Economic policy uncertainty stems not only from the increased impact of U.S. governmental policies and regulations, but also from certain aspects of the U.S. political process. To this end, we use two different measures to capture EPU, namely Baker et al.'s (2016) Economic Policy Uncertainty Index and an indicator variable equal to one for the quarter before, of and after the 2012 and 2016 U.S. presidential elections (Julio & Yook, 2012; Baloria & Mamo, 2017).

The EPU Index is based on newspaper coverage frequency<sup>48</sup> and is sensitive to various events that lead to economic policy uncertainty, such as tight presidential elections. The Index is an aggregate representation of the weighted average of three components that capture the future impact of economic policy uncertainty – fiscal policy (the most heavily weighted component), taxes, and government spending.

#### **3.2.5. Sample selection and sources of data**

We test our hypotheses using a sample of publicly listed banks headquartered in the U.S. and holding during the period 2010-2017 (32 fiscal quarters), which hold at least one quarterly earnings conference call per fiscal year. The sample period starts after the end of the 2008-2009 financial crisis in order to avoid the confounding effect of the crisis.

Compustat Bank Quarterly contains 16,503 quarterly observations of 682 banks for the sample period. CFO and CEO age come from Execucomp, which decreases the available sample to 3,512 quarterly observations for 128 banks. The control variables related to quarterly financial statement and analyst forecasts come from Compustat, and I/B/E/S, respectively. Thus, after collecting all the data, the final sample used in the main

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<sup>48</sup> The index reflects the frequency of articles in 10 leading U.S. newspapers that contain the following trio of terms: "economic" or "economy"; "uncertain" or "uncertainty"; and one or more of "Congress," "deficit," "Federal Reserve," "legislation," "regulation," or "White House."

analyses comprises 1,746 quarterly observations for 79 banks<sup>49</sup>. This sample represents 149 CFOs and 111 CEOs across 79 banks<sup>50</sup>.

### 3.3. Descriptive statistics

Table 1 shows the descriptive statistics. Individual CEOs and CFOs exhibit, on average, positive tone during conference calls, with CEOs having a higher average tone than CFOs (1.17% vs. 0.175%, respectively<sup>51</sup>). The language content matching (LCM) variable, which is derived using CEO and CFO tone, is also, on average, positive, which could indicate that CEOs and CFOs engage in higher disclosure coordination. Additionally, LCM is positively correlated with the measures for CEO and CFO tone ( $r=0.097$ ,  $p<0.001$  and  $r=0.134$ ,  $p<0.001$ , respectively).

*[Insert Table 1 around here]*

Table 2 presents the correlations between the dependent variable, the main explanatory variables and the controls. According to the results, we cannot detect statistically significant univariate evidence whether CEOs and CFOs engage in disclosure coordination during conference calls<sup>52</sup>, but that does not necessarily indicate absent relationship between LCM and the proxies for the CEO-CFO power relationship. With regards to CEO-CFO power, both in absolute and relative terms, no consistent pattern seems to emerge based on univariate results. Preliminary evidence points to more powerful CFOs coordinating less in their joint disclosures ( $r=-0.055$ ,  $p=0.022$  and  $r=-0.042$ ,  $p=0.079$ ), which could indicate that these CFOs are either not under the control of their CEOs or choose to maintain a diverging message from that of CEOs. We need to perform a multivariate test in order to confirm whether these results persist as this is only preliminary evidence.

Considering the impact of economic policy uncertainty on the message relayed by individual CEO and CFO disclosures, we observe a significant positive relationship

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<sup>49</sup> Appendix A contains the breakdown of the sample selection process and Appendix B describes all variables used in the study.

<sup>50</sup> Employment history of CFOs used to compute variables related to internal CFO promotion and CFO hiring after incumbent CEO is from BoardEx. These variables are used in robustness tests and additional analyses.

<sup>51</sup> The correlation between the two variables is 0.283 ( $p < 0.001$ ).

<sup>52</sup> The correlation coefficients between LCM and the absolute and relative measures of the CEO-CFO power relationship are not statistically significant, as presented in Table 2. Additionally, both measures of economic policy uncertainty (EPU index and presidential elections) are not statistically significant either.

between CEO and CFO tone and presidential elections ( $r=0.073$ ,  $p=0.002$  and  $r=0.060$ ,  $p=0.013$ , respectively). In the case of the EPU Index, the relationship is negative for both CEO and CFO tone, but only statistically significant for CEO tone ( $r=-0.055$ ,  $p=0.022$ ). Combined, these results point to a more complex relationship than initially expected, especially in terms of CEO-CFO disclosure coordination.

*[Insert Table 2 around here]*

#### **4. Empirical Tests and Analyses**

##### **4.1. Main evidence – H1 and H2**

Table 3 contains multi-variate regression results for hypothesis 1. We can see that CEOs and CFOs choose to engage in more disclosure coordination under the influence of the CEO-CFO power relationship<sup>53</sup>. This positive, albeit weak, effect persists in terms of both absolute and relative power difference as evidenced by the positive and significant coefficients. The presence of a powerful CEO may be associated with CFOs exhibiting solidarity with their CEOs. This effect, however, is not present in the case of powerful CFOs. When we proxy for the CEO-CFO relationship with age, the effect is not present, which could point to age not being an influential signal of the CEO-CFO power dynamics.

*[Insert Table 3 around here]*

In order to tease out the association between disclosure coordination and the CEO-CFO power relationship, we explore how this association performs in conditions of high and low economic uncertainty. Empirical evidence is reported in Table 4 for the absolute and relative values of the power distance measure.

*[Insert Table 4 around here]*

In Table 4, Panel A we observe that the main effect of the CEO-CFO power relationship is not significant. Although this result may appear contrary to what we find when testing hypothesis 1 (positive and significant coefficients), it does justify exploiting how differences in economic policy uncertainty shape the relationship between CEO-CFO

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<sup>53</sup> The R-squared across all six specifications of the H1 model explains between 1.8 and 2% of the variance. The only variable that shows statistical significance is size, with CEOs and CFOs of bigger firms choosing to engage less in LCM. It is possible that CFOs and CEOs prefer to keep their messages to external stakeholders separate and less dependent on each other.

power and disclosure coordination. Across all regression specifications, the effect of the two proxies for EPU (EPU Index and presidential elections) enhances the influence of CEO-CFO power on linguistic content matching<sup>54</sup>. This result suggests that, when economic policy uncertainty is high, CEOs and CFOs are more likely to jointly engage in disclosure coordination and deliver a unified message if one agent is more powerful than the other.

Taken together, these results suggest that disclosure coordination is higher when the CEO and CFO face higher policy uncertainty and one agent is more powerful than the other. In periods of uncertainty, there is higher demand for information, which could pose a risk to both CEOs and CFOs if they do not meet this demand. Thus, given the negative implications that economic policy uncertainty can have for the firm, the powerful agent pushes the other to deliver a common message that reassures the investors.

In order to understand which agent is driving our findings, we conduct our tests using the relative measures of power distance. Empirical evidence reported in Table 4, Panel B shows that our results are mainly driven by powerful CEOs. These results suggest that, as CFOs are more technically prepared to address the higher demand of information related to EPU, CEOs may rely on them more to relay a unified message.

As a last step we consider whether individual CEOs and CFOs choose to individually convey a less neutral message while they are still in the confines of the CEO-CFO dyad. Empirical evidence is reported in Table 5. We do not find evidence that CEO-CFO power influences the net positivity of individual CEOs and CFOs across the different specifications. The results, however, point to both CEOs and CFOs being more optimistic when presidential elections lead to increase in EPU. Furthermore, the moderating effect of CEO-CFO power is only detectable in the case of CFOs, although the coefficients are only significant for absolute power difference proxied by tenure. The results are in line with the findings for disclosure coordination.

*[Insert Table 5 around here]*

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<sup>54</sup> The linear combination of the main effect of absolute CEO-CFO power and its interaction with both proxies of EPU indicate that the combination is different than zero. Additionally, the effect of the two EPU proxies on LCM, albeit statistically insignificant, is interesting. Presidential elections appear to positively influence LCM, while the EPU Index has the opposite effect. Given the different implications of the two proxies (i.e., the effect of presidential elections is more concentrated in time while the effect of the EPU Index is based on time-series variation), the results are not surprising. The correlations in Table 2 also corroborate these results.



## 4.2. Robustness tests

We conduct five sets of robustness tests (results are un-tabulated). The first test is the inclusion of CEO-CFO fixed effects instead of firm fixed effects. Although the main unit of analysis is the firm, we are also considering the impact of the conjoined behavior of CEOs and CFOs. To this end, we test whether the effect of the variation in CFO-CEO power explains the variation in linguistic matching within the CEO-CFO dyad. The results for both hypotheses hold.

In the second test, we exploit cross-sectional variation in banks' capital ratios. Following Jin et al. (2020), we construct the variable *STRONG* equal to one when the bank's tier 1 capital ratio is higher than the median each year and zero otherwise. Roughly half of the observations are considered "strong". Splitting the sample into "strong" and "not strong" groups, we run the regressions in Eq. (1) through Eq. (6). The results are statistically significant only in the case of stronger banks and using the absolute tenure difference. The remaining specifications of CEO-CFO power do not yield a consistent pattern. Economic policy uncertainty does not seem to play a definitive role. Stronger banks may benefit more when their CEOs and CFOs engage in disclosure coordination as investors and analysts may need reassurance that the stronger equity position of the bank will persist.

The third and fourth tests explore two groups of CFOs that are expected to be more susceptible to CEO power – internally promoted<sup>55</sup> and co-opted CFOs<sup>56</sup>. Internally promoted CFOs, as outlined in Friedman (2014), are more entrenched compared to their externally hired counterparts as they have spent longer time at the focal firm. Co-opted CFOs, as described in Dikolli et al. (2020), are CFOs hired after the incumbent CEO. We partition the sample into internally hired and externally promoted CFOs, as well as into co-opted and not co-opted CFOs, and run the regressions in Eq. (1) through Eq. (6). The evidence suggests that the effects of CEO-CFO power relationship on disclosure coordination is stronger (positive and significant) for the groups of internally promoted and co-opted CFOs, which is in line with findings in the extant literature (Friedman, 2014; Dikolli et al., 2020). The moderating effect of increased economic policy uncertainty on

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<sup>55</sup> Roughly 63% of the observations in the sample are associated with internally promoted CFOs.

<sup>56</sup> Roughly 58% of the observations in the sample are associated with co-opted CFOs. Out of them, roughly 36% are for internally promoted CFOs.

the association between disclosure coordination and CEO-CFO power is evident and consistent with the results in Table 4.

To further understand whether powerful CEOs pressure CFOs or whether CEOs and CFOs explore their synergies to coordinate their joint disclosures, we consider the behavior of the co-opted groups of CFOs that have been in the company longer than the median tenure for CFOs. Following Dikolli et al. (2020), we construct a variable equal to one if the co-opted CFO has spent less than the median tenure as CFO and zero otherwise. The expectation is that CFOs early on in their tenure will be more beholden to the CEO, hence susceptible to CEO pressure. Conversely, CFOs later on in their tenure are expected to be more independent and may develop synergies through their continuous work with the CEO. The results from regressions of equations (1) through (6) offer some support to the existence of synergies between CEOs and CFOs as they deliver their joint disclosures (the coefficients of the main effect of CEO-CFO power as well as the moderated effect of EPU are positive and significant, in line with results presented in Tables 3 and 4).

## **5. Conclusion**

We investigate whether and under what circumstances CEOs and CFOs coordinate their disclosures during earnings conference calls through the lens of their power relationship. Using a sample of U.S. commercial banks during the period 2010 – 2017, we find that, on average, CEOs and CFOs jointly adjust the linguistic content of their disclosures when one of the managers in dyad, especially the CEO, is more powerful. Furthermore, during times when external stakeholders may demand more information to alleviate their uncertainty, CEOs and CFOs are even more likely to engage in disclosure coordination. A cross-sectional analysis of strong banks, i.e. banks with higher than median capital ratios, yields partially conclusive results that CEOs and CFOs of stronger banks jointly use their disclosures to assure external stakeholders, regardless of the impact of economic policy uncertainty.

Despite its contribution, the study has some limitations. Since we consider a single-industry setting characterized by strong economic and regulatory idiosyncrasies, our results may not be generalizable to CEOs and CFOs in other industries. However, the

CEO-CFO power dynamics exist in firms across industries. Thus, our evidence enriches our understanding of the CEO-CFO power relationship, how this relationship shapes CEO-CFO disclosures, especially during times of higher economic policy uncertainty.

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Table 1. Descriptive statistics (full sample)

<b>Variable</b>	<b>N</b>	<b>Mean</b>	<b>SD</b>	<b>Min</b>	<b>P1</b>	<b>P25</b>	<b>P50</b>	<b>P75</b>	<b>P99</b>	<b>Max</b>
<i>LCM</i>	1746	0.701	0.400	(8.0)	0	0.583	0.750	0.881	1	3
<i>CFOTone</i>	1746	0.175	1.013	(2.828)	(2.102)	(0.516)	0.156	0.801	2.792	3.188
<i>CEOTone</i>	1746	1.095	1.176	(3.435)	(1.364)	0.253	1.057	1.907	3.797	4.810
<i>EUI_Newspaper</i>	1746	4.897	0.230	4.346	4.346	4.763	4.903	5.049	5.464	5.464
<i>PresElec</i>	1746	0.196	0.397	0	0	0	0	0	1	1
<i>TenureDiffAbs</i>	1746	21.22	24.04	0	0	4	12	32	99	119
<i>AgeDiffAbs</i>	1746	7.686	5.763	0	0	3	6.5	11	25	27
<i>CEOPowerTenure</i>	1746	15.460	24.420	0	0	0	2	22	99	119
<i>CEOPowerAge</i>	1746	6.143	6.277	0	0	0	5	10	25	27
<i>CFOPowerTenure</i>	1746	5.757	12.620	0	0	0	0	5	56	83
<i>CFOPowerAge</i>	1746	1.543	3.574	0	0	0	0	1	16	16
<i>AnalystFollow</i>	1746	2.359	0.663	0.693	0.693	1.946	2.303	2.890	3.466	3.555
<i>Size</i>	1746	9.883	1.515	7.246	7.668	8.812	9.526	10.410	14.600	14.720
<i>BTM</i>	1746	0.921	0.415	0.239	0.354	0.668	0.836	1.061	2.513	4.264
<i>LLPChg</i>	1746	(0.013)	0.260	(4.408)	(0.648)	(0.030)	(0.001)	0.019	0.510	3.477
<i>ROA</i>	1746	0.218	0.209	(3.371)	(0.550)	0.186	0.235	0.289	0.495	1.959
<i>Leverage</i>	1746	0.886	0.069	0.702	0.756	0.854	0.881	0.908	1.147	1.935
<i>CO</i>	1746	0.147	0.328	(1.820)	(0.050)	0.023	0.062	0.142	1.375	7.053
<i>NPA</i>	1746	1.128	1.126	0.012	0.095	0.428	0.753	1.414	5.798	9.132
<i>FirmAge</i>	1746	4.294	0.859	1.609	2.398	3.526	4.673	5.004	5.215	5.375
<i>GDP</i>	1746	2.274	1.5	(1.1)	(1.1)	1.7	2.3	3.2	5.5	5.5
<i>VIX</i>	1746	16.690	4.931	10.300	10.300	13.240	15.640	18.530	30.410	30.410

This table shows the descriptive statistics for variables used in the main analyses for the period 2010 – 2017. All variables are defined in Appendix B.

Table 2. Correlation table

Panel A: Correlation variables LCM to CFOPowerAge

	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]
[1] LCM	1										
[2] CFOTone	0.1343*	1									
[3] CEOTone	0.0974*	0.2825*	1								
[4] EUI_Newspaper	-0.0122	-0.0121	-0.0548*	1							
[5] PresElec	0.0184	0.0596*	0.0725*	0.4253*	1						
[6] TenureDiffAbs	-0.0139	-0.0388	0.0193	-0.0376	0.0278	1					
[7] AgeDiffAbs	-0.0181	-0.0175	0.0980*	-0.0297	0.0011	0.3039*	1				
[8] CEOPowerTenure	0.0146	-0.0388	0.0644*	-0.0522*	0.0166	0.8645*	0.3796*	1			
[9] CEOPowerAge	0.0074	-0.0298	0.0955*	-0.0012	0.0125	0.3255*	0.8271*	0.4517*	1		
[10] CFOPowerTenure	-0.0548*	0.0012	-0.0878*	0.0293	0.0208	0.2315*	-0.1559*	-0.2889*	-0.2543*	1	
[11] CFOPowerAge	-0.0421*	0.0242	-0.0098	-0.0458*	-0.0201	-0.0816*	0.1599*	-0.1812*	-0.4226*	0.1952*	1
[12] AnalystFollow	0.0883*	0.0504*	0.1119*	0.028	0.0115	-0.0073	-0.0159	0.021	0.1164*	-0.0545*	-0.2301*
[13] Size	0.1229*	-0.0085	0.0936*	0.0112	0.018	-0.0594*	-0.0905*	0.0174	0.0632*	-0.1468*	-0.2570*
[14] BTM	-0.0334	-0.2267*	-0.1171*	0.1312*	-0.0248	-0.0698*	-0.1382*	-0.0617*	-0.0648*	-0.0134	-0.1090*
[15] LLPChg	-0.0431*	0.025	0.0154	-0.0143	0.0119	0.0044	0.0039	0.0072	0.0013	-0.0056	0.0041
[16] ROA	0.0422*	0.1671*	0.1257*	-0.0385	0.0542*	-0.021	0.0351	-0.0145	0.0229	-0.012	0.0164
[17] Leverage	0.0017	-0.0514*	0.0197	-0.0027	-0.0191	0.001	0.0193	0.0115	0.0165	-0.0205	0.0021
[18] CO	-0.0589*	-0.1970*	-0.1455*	0.1373*	-0.0617*	-0.0234	-0.0686*	-0.0497*	-0.0368	0.0515*	-0.0459*
[19] NPA	-0.1207*	-0.2251*	-0.1853*	0.1718*	-0.0847*	-0.0385	-0.0495*	-0.0505*	-0.0347	0.0245	-0.0188
[20] FirmAge	0.1156*	-0.0209	0.0903*	-0.0039	-0.0061	-0.1221*	-0.1499*	-0.0662*	-0.0714*	-0.1045*	-0.1163*
[21] GDP	-0.0157	0.0078	-0.0204	-0.2795*	-0.1269*	0.0094	0.0061	0.0101	0.0015	-0.0016	0.009
[22] VIX	-0.0860*	-0.1115*	-0.1823*	0.3969*	-0.2638*	-0.0736*	-0.0279	-0.0911*	-0.0257	0.0361	0.0012

Panel B: Correlation variables AnalystFollow to VIX

	[12]	[13]	[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]
[12] AnalystFollow	1										
[13] Size	0.8076*	1									
[14] BTM	0.0717*	0.2053*	1								
[15] LLPChg	-0.0081	-0.0184	-0.0129	1							
[16] ROA	0.0823*	0.0555*	-0.3793*	-0.2077*	1						
[17] Leverage	-0.0282	0.0116	0.3201*	0.0415*	-0.2313*	1					
[18] CO	0.0303	0.1062*	0.4864*	0.2780*	-0.5147*	0.1275*	1				
[19] NPA	-0.1065*	-0.0811*	0.5239*	-0.0831*	-0.3289*	0.1013*	0.5174*	1			
[20] FirmAge	0.2737*	0.4368*	0.1741*	-0.0018	-0.0235	0.0825*	-0.0022	-0.0838*	1		
[21] GDP	-0.007	0.0071	0.0103	0.0035	-0.0094	-0.0189	-0.0251	-0.0338	0.0051	1	
[22] VIX	0.0104	-0.0322	0.3205*	-0.0365	-0.1391*	0.1455*	0.2814*	0.3761*	0	-0.1344*	1

This table shows pairwise Pearson correlations between the main variables of interest. All cells with star represent statistically significant ( $p \leq 0.1$ ) correlations. All variables are defined in Appendix B.

Table 3. Relationship between disclosure coordination and CEO-CFO power difference (H1)

Variables	Absolute Power Difference		CEO Relative Power Difference		CFO Relative Power Difference	
	(1) <i>LCM</i> <sub>t+1</sub>	(2) <i>LCM</i> <sub>t+1</sub>	(3) <i>LCM</i> <sub>t+1</sub>	(4) <i>LCM</i> <sub>t+1</sub>	(5) <i>LCM</i> <sub>t+1</sub>	(6) <i>LCM</i> <sub>t+1</sub>
<i>TenureDiffAbs</i>	0.001* (0.001)					
<i>AgeDiffAbs</i>		0.003 (0.002)				
<i>CEOPowerTenure</i>			0.001*** (0.001)		0.001*** (0.001)	
<i>CEOPowerAge</i>				0.003 (0.002)		0.003 (0.002)
<i>CFOPowerTenure</i>					-0.001* (0.001)	
<i>CFOPowerAge</i>						0.001 (0.005)
<i>AnalystFollow</i>	0.018 (0.036)	0.019 (0.037)	0.016 (0.036)	0.020 (0.036)	0.016 (0.036)	0.019 (0.037)
<i>Size</i>	-0.110** (0.053)	-0.111** (0.052)	-0.115** (0.054)	-0.109** (0.051)	-0.115** (0.053)	-0.110** (0.052)
<i>BTM</i>	-0.027 (0.024)	-0.029 (0.025)	-0.026 (0.024)	-0.029 (0.026)	-0.024 (0.024)	-0.029 (0.026)
<i>LLPChg</i>	-0.021 (0.019)	-0.034 (0.021)	-0.021 (0.019)	-0.033 (0.021)	-0.021 (0.019)	-0.034 (0.021)
<i>ROA</i>	0.039 (0.031)	0.050 (0.033)	0.040 (0.031)	0.050 (0.033)	0.040 (0.031)	0.050 (0.033)
<i>Leverage</i>	0.102 (0.115)	0.104 (0.116)	0.095 (0.114)	0.108 (0.116)	0.088 (0.113)	0.105 (0.116)
<i>CO</i>	0.037 (0.026)	0.041 (0.027)	0.037 (0.025)	0.041 (0.026)	0.038 (0.025)	0.041 (0.027)
<i>NPA</i>	0.008 (0.010)	0.013 (0.011)	0.010 (0.011)	0.013 (0.011)	0.009 (0.011)	0.013 (0.011)
<i>FirmAge</i>	0.132 (0.179)	0.149 (0.169)	0.166 (0.183)	0.154 (0.170)	0.179 (0.183)	0.153 (0.171)
<i>GDP</i>	0.005 (0.003)	0.004 (0.003)	0.005 (0.003)	0.005 (0.003)	0.005 (0.003)	0.004 (0.003)
<i>VIX</i>	0.002 (0.002)	0.002 (0.002)	0.002 (0.002)	0.002 (0.002)	0.002 (0.002)	0.002 (0.002)

Time Trend	Y	Y	Y	Y	Y	Y
Firm FE	Y	Y	Y	Y	Y	Y
Observations	1,625	1,617	1,625	1,617	1,625	1,617
Adjusted R-squared	0.018	0.018	0.020	0.018	0.020	0.018

\*\*\*, \*\*, \* Denote  $p < 0.01$ ,  $p < 0.05$ , and  $p < 0.1$ , respectively.

This table shows the estimated coefficients from panel regressions of disclosure coordination (LCM or language content management) at time  $t+1$  on the CEO-CFO power relationship (absolute power difference, and CEO and CFO relative power difference), firm-level and macroeconomic controls. All continuous variables are de-measured. Time trend, firm fixed effects, and the constant are included in each regression but are not reported. A sample of CFOs and CEOs present during the 2010-2017 period is used for the estimation. Firm-level clustered robust standard errors are in parentheses. All variables are defined in Appendix B.



Table 4. Relationship between disclosure coordination and CEO-CFO power difference, moderated by economic policy uncertainty (H2)

Panel A: Absolute CEO-CFO power difference

Variables	Absolute CEO-CFO Power (Tenure)		Absolute CEO-CFO Power (Age)	
	(1) <i>LCM</i> <sub><i>t</i>+1</sub>	(2) <i>LCM</i> <sub><i>t</i>+1</sub>	(3) <i>LCM</i> <sub><i>t</i>+1</sub>	(4) <i>LCM</i> <sub><i>t</i>+1</sub>
<i>TenureDiffAbs</i>	0.001 (0.001)	0.001* (0.001)		
<i>PresElec</i>	0.006 (0.018)		0.011 (0.018)	
<i>EUI_Newspaper</i>		-0.009 (0.027)		-0.003 (0.026)
<i>PresElec</i> * <i>TenureDiffAbs</i>	0.001** (0.001)			
<i>EUI_Newspaper</i> * <i>TenureDiffAbs</i>		0.002** (0.001)		
<i>AgeDiffAbs</i>			0.002 (0.002)	0.002 (0.002)
<i>PresElec</i> * <i>AgeDiffAbs</i>			0.005** (0.002)	
<i>EUI_Newspaper</i> * <i>AgeDiffAbs</i>				0.012*** (0.003)
Firm-level & Macroeconomic Controls	Y	Y	Y	Y
Time Trend	Y	Y	Y	Y
Firm FE	Y	Y	Y	Y
Observations	1,625	1,625	1,617	1,617
Adjusted R-squared	0.018	0.019	0.019	0.021

Panel B: Relative CEO-CFO power difference

Variables	Relative CEO Power				Relative CFO Power			
	Tenure		Age		Tenure		Age	
	(1) <i>LCM</i> <sub><i>t</i>+1</sub>	(2) <i>LCM</i> <sub><i>t</i>+1</sub>	(3) <i>LCM</i> <sub><i>t</i>+1</sub>	(4) <i>LCM</i> <sub><i>t</i>+1</sub>	(5) <i>LCM</i> <sub><i>t</i>+1</sub>	(6) <i>LCM</i> <sub><i>t</i>+1</sub>	(7) <i>LCM</i> <sub><i>t</i>+1</sub>	(8) <i>LCM</i> <sub><i>t</i>+1</sub>
<i>CEOPowerTenure</i>	0.001** (0.001)	0.001*** (0.001)			0.001** (0.001)	0.001*** (0.001)		
<i>CFOPowerTenure</i>					-0.001 (0.001)	-0.001 (0.001)		
<i>PresElec</i>	0.007 (0.018)		0.008 (0.018)		0.008 (0.018)		0.011 (0.018)	

<i>PresElec * CEOPowerTenure</i>	0.001* (0.001)				0.001** (0.001)			
<i>PresElect * CFOPowerTenure</i>					0.001 (0.002)			
<i>EUI_Newspaper</i>	-0.008 (0.027)		-0.003 (0.026)		-0.008 (0.028)		-0.002 (0.026)	
<i>EUI_Newspaper * CEOPowerTenure</i>	0.003*** (0.001)				0.003*** (0.001)			
<i>EUI_Newspaper * CFOPowerTenure</i>					-0.002 (0.002)			
<i>CEOPowerAge</i>			0.002 (0.002)		0.002 (0.002)		0.002 (0.002)	
<i>CFOPowerAge</i>							-0.001 (0.005)	
<i>PresElect * CEOPowerAge</i>			0.003 (0.002)				0.005** (0.002)	
<i>PresElect * CFOPowerAge</i>							0.008 (0.009)	
<i>EUI_Newspaper * CEOPowerAge</i>					0.010*** (0.003)			
<i>EUI_Newspaper * CFOPowerAge</i>							0.012*** (0.003)	
<i>EUI_Newspaper * CFOPowerAge</i>							0.009 (0.007)	
Firm-level & Macroeconomic Controls	Y	Y	Y	Y	Y	Y	Y	Y
Time Trend	Y	Y	Y	Y	Y	Y	Y	Y
Firm FE	Y	Y	Y	Y	Y	Y	Y	Y
Observations	1,625	1,625	1,625	1,625	1,617	1,617	1,617	1,617
Adjusted R-squared	0.020	0.025	0.020	0.025	0.020	0.025	0.019	0.020

\*\*\*, \*\*, \* Denote  $p < 0.01$ ,  $p < 0.05$ , and  $p < 0.1$ , respectively.

Panels A and B of this table show the estimated coefficients from panel regressions of disclosure coordination (LCM or language content management) at time  $t+1$  on the CEO-CFO power relationship (absolute power difference in Panel A and relative power difference in Panel B), interacted with economic policy uncertainty (presidential elections and Economic Uncertainty Index), firm-level and macroeconomic controls. All continuous variables are de-measured. Time trend, firm fixed effects, and the constant are included in each regression but are not reported. A sample of CFOs and CEOs present during the 2010-2017 period is used for the estimation. Firm-level clustered robust standard errors are in parentheses. All variables are defined in Appendix B.

Table 5. Relationship between CEO/CFO individual tone and CEO-CFO power difference

Panel A: H1 – relationship between CEO/CFO individual tone and CEO-CFO power difference

Variables	(1) <i>CFOTone</i> <sub>tt-1</sub>	(2) <i>CFOTone</i> <sub>tt-1</sub>	(3) <i>CFOTone</i> <sub>tt-1</sub>	(4) <i>CFOTone</i> <sub>tt-1</sub>	(5) <i>CEOTone</i> <sub>tt-1</sub>	(6) <i>CEOTone</i> <sub>tt-1</sub>	(7) <i>CEOTone</i> <sub>tt-1</sub>	(8) <i>CEOTone</i> <sub>tt-1</sub>
<i>TenureDiffAbs</i>	0.001 (0.003)				-0.001 (0.002)			
<i>AgeDiffAbs</i>		0.012 (0.011)				0.006 (0.008)		
<i>CFOPowerTenure</i>			0.001 (0.004)				-0.004* (0.002)	
<i>CEOPowerTenure</i>			0.002 (0.004)				0.001 (0.002)	
<i>CFOPowerAge</i>				0.005 (0.016)				0.010 (0.016)
<i>CEOPowerAge</i>				0.013 (0.011)				0.005 (0.008)
Firm-level & Macroeconomic Controls	Y	Y	Y	Y	Y	Y	Y	Y
Time Trend	Y	Y	Y	Y	Y	Y	Y	Y
Firm FE	Y	Y	Y	Y	Y	Y	Y	Y
Observations	1,653	1,674	1,653	1,674	1,842	1,835	1,842	1,835
Adjusted R-squared	0.093	0.093	0.092	0.092	0.037	0.036	0.039	0.036

Panel B: H2 – relationship between CEO/CFO individual tone and CEO-CFO power difference (absolute), moderated by economic policy uncertainty

Variables	(1) <i>CFOTone</i> <sub>tt-1</sub>	(2) <i>CFOTone</i> <sub>tt-1</sub>	(3) <i>CFOTone</i> <sub>tt-1</sub>	(4) <i>CFOTone</i> <sub>tt-1</sub>	(5) <i>CEOTone</i> <sub>tt-1</sub>	(6) <i>CEOTone</i> <sub>tt-1</sub>	(7) <i>CEOTone</i> <sub>tt-1</sub>	(8) <i>CEOTone</i> <sub>tt-1</sub>
<i>PresElec</i>	0.158*** (0.057)		0.170*** (0.056)		0.144** (0.058)		0.145** (0.058)	
<i>EUI_Newspaper</i>		0.121 (0.107)		0.118 (0.109)		0.198* (0.108)		0.187* (0.108)
<i>TenureDiffAbs</i>	0.001 (0.003)	0.001 (0.003)			-0.001 (0.002)	-0.001 (0.002)		
<i>PresElec * TenureDiffAbs</i>	0.004* (0.002)				0.003 (0.002)			
<i>EUI_Newspaper * TenureDiffAbs</i>		0.007** (0.003)				-0.001 (0.003)		
<i>AgeDiffAbs</i>			0.010 (0.011)	0.012 (0.011)			0.006 (0.009)	0.006 (0.008)
<i>PresElec * AgeDiffAbs</i>			0.014* (0.008)				0.001 (0.009)	

<i>EUI_Newspaper * AgeDiffAbs</i>				0.015 (0.014)				-0.017 (0.017)
Firm-level & Macroeconomic Controls	Y	Y	Y	Y	Y	Y	Y	Y
Time Trend	Y	Y	Y	Y	Y	Y	Y	Y
Firm FE	Y	Y	Y	Y	Y	Y	Y	Y
Observations	1,653	1,653	1,674	1,674	1,842	1,842	1,835	1,835
Adjusted R-squared	0.099	0.095	0.100	0.093	0.041	0.038	0.039	0.038

Panel C: H2 – relationship between CEO/CFO individual tone and CEO-CFO power difference (relative), moderated by economic policy uncertainty

Variables	(1) <i>CFOTone</i> <sub>tt+1</sub>	(2) <i>CFOTone</i> <sub>tt+1</sub>	(3) <i>CFOTone</i> <sub>tt+1</sub>	(4) <i>CFOTone</i> <sub>tt+1</sub>	(5) <i>CEOTone</i> <sub>tt+1</sub>	(6) <i>CEOTone</i> <sub>tt+1</sub>	(7) <i>CEOTone</i> <sub>tt+1</sub>	(8) <i>CEOTone</i> <sub>tt+1</sub>
<i>PresElec</i>	0.159*** (0.057)		0.170*** (0.056)		0.145** (0.058)		0.144** (0.058)	
<i>EUI_Newspaper</i>		0.124 (0.108)		0.119 (0.111)		0.202* (0.108)		0.194* (0.106)
<i>CFOPowerTenure</i>	-0.001 (0.004)	0.001 (0.004)			-0.004 (0.003)	-0.004* (0.002)		
<i>CEOPowerTenure</i>	0.001 (0.004)	0.002 (0.004)			-0.001 (0.002)	0.001 (0.002)		
<i>PresElec * CFOPowerTenure</i>	0.003 (0.004)				-0.003 (0.004)			
<i>PresElec * CEOPowerTenure</i>	0.004* (0.002)				0.004* (0.002)			
<i>EUI_Newspaper * CFOPowerTenure</i>		0.006 (0.006)				-0.001 (0.008)		
<i>EUI_Newspaper * CEOPowerTenure</i>		0.007** (0.003)				0.001 (0.003)		
<i>CFOPowerAge</i>			0.003 (0.016)	0.005 (0.016)			0.013 (0.016)	0.011 (0.015)
<i>CEOPowerAge</i>			0.011 (0.012)	0.013 (0.011)			0.005 (0.009)	-0.006 (0.008)
<i>PresElec * CFOPowerAge</i>			0.020 (0.013)				-0.010 (0.018)	
<i>PresElec * CEOPowerAge</i>			0.014* (0.008)				0.001 (0.009)	
<i>EUI_Newspaper * CFOPowerAge</i>				-0.006 (0.025)				-0.049 (0.034)
<i>EUI_Newspaper * CEOPowerAge</i>				0.016 (0.015)				-0.015 (0.017)
Firm-level & Macroeconomic Controls	Y	Y	Y	Y	Y	Y	Y	Y
Time Trend	Y	Y	Y	Y	Y	Y	Y	Y
Firm FE	Y	Y	Y	Y	Y	Y	Y	Y

Observations	1,653	1,653	1,674	1,674	1,842	1,842	1,835	1,835
Adjusted R-squared	0.099	0.095	0.100	0.093	0.041	0.038	0.039	0.038

\*\*\*, \*\*, \* Denote  $p < 0.01$ ,  $p < 0.05$ , and  $p < 0.1$ , respectively.

Panels A, B and C of this table show the estimated coefficients from panel regressions of CFO/CEO individual tone (CFO tone in col. 1-4 and or CEO tone in col. 5-8) at time  $t+1$ , on CFO/CEO power difference (absolute and relative). Panels B and C also show power difference (absolute and relative) interacted with  $y$  economic policy uncertainty (presidential elections and Economic Uncertainty Index). Firm-level and macroeconomic controls, time trend, firm fixed effects, and the constant are included in each regression but are not reported. A sample of CFOs and CEOs present during the 2010-2017 period is used for the estimation. Firm-level clustered robust standard errors are in parentheses. All variables are defined in Appendix B.

## Appendix A. Sample selection

	Observations (Companies)
Quarterly observations from Compustat & CRSP bank quarterly	16,503 (682)
Quarterly observations with required Execucomp data (SIC 6020, 6035 and 6036)	3,512 (128)
Quarterly observations with required I/B/E/S and conference call transcripts (at least one available transcript per bank during 2010 – 2017) data	2,209 (85)
Final sample for main analyses (non-missing data)	1,746 (79)
Final sample (individual CFOs)	149
Final sample (individual CEOs)	111

This panel summarizes the sample selection. The sample covers the period of 2010 – 2017.

## Appendix B. Variable definitions

Variable	Definition	Source
<i>LCM</i>	total CEO and CFO tone equal to 1 minus the ratio between the absolute difference between CEO tone (positive minus negative words) and CFO tone (positive minus negative words) over the sum of CEO tone and CFO tone (using Loughran & McDonald's 2018 dictionary); winsorized at 1 and 99% level	Thomson Reuters Street Events
<i>CFOTone</i>	difference between positive and negative words as a percentage of total words of the CFO during the presentation part of each conference call (using Loughran & McDonald's 2018 dictionary); winsorized at 1 and 99% level	Thomson Reuters Street Events
<i>CEOTone</i>	difference between positive and negative words as a percentage of total words of the CEO during the presentation part of each conference call (using Loughran & McDonald's 2018 dictionary); winsorized at 1 and 99% level	Thomson Reuters Street Events
<i>EUI_Newspaper</i>	natural log of the quarterly average of the monthly news-based portion of the Baker et al. (2016) U.S. Economic Policy Uncertainty Index	<a href="https://www.policyuncertainty.com/">https://www.policyuncertainty.com/</a>
<i>PresElec</i>	indicator variable equal to 1 for the quarter before, of and after the 2012 and 2016 presidential elections; 0 otherwise	
<i>TenureDiffAbs</i>	absolute of the difference between CEO and CFO tenure quarters	Thomson Reuters Street Events
<i>AgeDiffAbs</i>	absolute of the difference between CEO and CFO age	Execucomp
<i>CEOPowerTenure</i>	variable equal to the difference between CEO and CFO tenure if it is positive; 0 otherwise	Thomson Reuters Street Events

<i>CEOPowerAge</i>	variable equal to the difference between CEO and CFO age if it is positive; 0 otherwise	Execucomp
<i>CFOPowerTenure</i>	variable equal to the difference between CEO and CFO tenure if it is negative or zero; 0 otherwise	Thomson Reuters Street Events
<i>CFOPowerAge</i>	variable equal to the difference between CEO and CFO age if it is negative or zero; 0 otherwise	Execucomp
<i>AnalystFollow</i>	natural log of the number of analysts following the firm	I/B/E/S
<i>Size</i>	natural log of lag of total quarterly assets	Compustat Bank Quarterly
<i>BTM</i>	ratio between quarterly lag of book value of equity (total quarterly net assets) and quarterly lag of market value of equity (total number of shares multiplied by the absolute value of end-of-quarter stock price)	Compustat Bank Quarterly; CRSP
<i>LLPChg</i>	percentage change in the ratio between quarterly loan loss provision scaled by lag of quarterly loans net of total allowance of assets from time t to time t-1	Compustat Bank Quarterly
<i>ROA</i>	ratio between quarterly EBIT and total quarterly assets, scaled by 100	Compustat Bank Quarterly
<i>Leverage</i>	ratio between total quarterly loans and the sum of lagged total quarterly loans and lagged market value of equity	Compustat Bank Quarterly
<i>CO</i>	ratio between quarterly net charge-offs and total quarterly loans net of total allowance, scaled by minus 100	Compustat Bank Quarterly
<i>NPA</i>	ratio between quarterly non-performing assets and total quarterly assets, scaled by 100	Compustat Bank Quarterly
<i>FirmAge</i>	natural log of the difference between current fiscal year and year bank founded	Compustat; Yahoo Finance
<i>GDP</i>	percentage change of quarterly real growth rates of U.S. quarterly gross domestic product (GDP) from previous period (most recent estimate quarter used)	U.S. Bureau of Economic Analysis (BEA)
<i>VIX</i>	quarterly average of daily Volatility Index (VIX) values	Chicago Board Options Exchange (CBOE)
<i>STRONG</i>	indicator variable equal to 1 when the bank's tier 1 capital ratio is higher than the median each year; 0 otherwise	Compustat Bank Quarterly
<i>INSIDE_CFO</i>	indicator variable equal to 1 if the CFO is internally promoted; 0 otherwise	BoardEx
<i>CFO_COOPT</i>	indicator variable equal to 1 if the CFO is hired after the incumbent CEO; 0 otherwise	BoardEx
<i>CFO_COOPT_06</i>	Indicator variable equal to 1 if the CFO hired after the incumbent CEO has tenure less than the median for the sample (6 years); 0 otherwise	BoardEx