Birds of a Feather Forecast Better? Gender Matching and Social Identity in Analyst–Executive Interactions

Abstract

This study examines how gender dynamics between firm executives and financial analysts affect forecast accuracy. Analysis of a large sample of earnings forecasts shows that analysts' predictions are more accurate for firms whose chief financial officer (CFO) is female. This forecasting advantage is driven primarily by female analysts: their earnings-per-share forecasts are significantly more precise for firms with female CFOs, whereas average male analysts show no such pattern. By contrast, the gender of the chief executive officer (CEO) has no consistent effect on forecast accuracy. The accuracy benefit associated with a female CFO is most pronounced during negative earnings surprise periods, when gender-matched (female) analysts cover the firm. Further tests indicate that when firms with female CFOs are covered exclusively by male analysts, forecast errors are larger and those firms tend to be overvalued. Overall, the findings underscore that gender alignment between information providers (CFOs) and interpreters (analysts) can enhance information flow and forecasting performance, especially in challenging information environments, while a lack of diversity in analyst coverage can lead to information shortfalls and mispricing.

Keywords: Homophily, Gender, Information asymmetries

Classification codes: G14, G24, G41, M14

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1. Introduction

Analysts' forecasts play a crucial role in financial markets by shaping investor expectations and capital allocation. Prior research has examined numerous determinants of analyst forecast accuracy – from the information environment and corporate disclosures (e.g., Barron et al., 1998; Lang and Lundholm, 1996) to analyst characteristics such as experience and resources (e.g., Clement, 1999). However, relatively less is known about how the demographic characteristics of both firm leaders and analysts might jointly influence forecasting performance. In particular, emerging literature on gender suggests that the behavioral traits and associated decision styles could impact information disclosure and processing. This study investigates a novel question at the intersection of these domains: How do the gender of a firm's top executives – specifically the CEO and CFO – and the gender of analysts covering the firm interact to affect the accuracy of analysts' earnings per share (EPS) forecasts?

Existing research provides intriguing hints that both executive gender and analyst gender may independently matter for financial outcomes. On the corporate side, firms led by female top executives often exhibit different reporting and disclosure behaviors than those led by males. Female CEOs and CFOs have been associated with more conservative financial reporting, higher transparency, and less opportunistic earnings management (Francis et al., 2015; Peni and Vähämaa, 2010). These tendencies suggest that female-led firms could have a richer and more credible information environment. Indeed, recent evidence indicates that the presence of a female CFOs can enhance forecast precision, particularly in firms facing high information asymmetry (Datta et al., 2022). On the analyst side, studies rooted in behavioral finance have documented gender-based differences in decision-making and risk preferences: female investors and professionals tend to be less overconfident and more risk-averse than their male counterparts (Barber and Odean, 2001; Croson and Gneezy, 2009). In the context of sell-side analysts, research has found mixed performance differences. Some studies report that female analysts produce more accurate earnings forecasts than males, consistent with a self-selection of highly skilled women into the profession (Kumar, 2010). Yet other evidence finds the opposite – that female analysts' forecasts can be less accurate than males', even as female analysts exhibit different behavior such as taking fewer risks in their stock recommendations (Green et al., 2009). Overall, the extant literature has not reached consensus on whether one gender of analyst consistently outperforms the other, with many studies suggesting no significant average difference in forecasting ability after controlling for factors like coverage profiles and experience (Kumar, 2010; Green et al., 2009). This lack of a clear gender gap in analyst accuracy begs the question of whether contextual factors of the firms they cover could be what drives the gender gaps in analysts' performance.

The present research makes a new contribution by integrating these streams of literature and examining the interaction between analyst gender and top executive gender as a determinant of forecast accuracy. We draw on social identity theory, information asymmetry theory, and insights from behavioral finance to develop our predictions. Social identity theory (Tajfel and Turner, 1979) suggests that shared characteristics (like gender) can create an "in-group" affinity that facilitates trust and communication. Homophily – the tendency for individuals to connect with similar others – has been shown to ease information exchange and collaboration in organizations, fostering greater predictability and understanding (Kanter, 1977). In the context of analysts and corporate management, demographic alignment may similarly influence the flow of information. Moreover, the downsides of this phenomenon in finance are well-documented. For example, same-gender top executives and insiders have been found to share private information more readily, facilitating insider trading (Clacher et al., 2021). Similarly, analysts in brokerages with low gender diversity appear more vulnerable to conflicts of interest (Charalambous et al., 2025).

In this paper, we posit that female analysts might benefit from an in-group connection when covering firms led by female CEOs or CFOs, leading to more effective information gathering and interpretation. Information asymmetry theory, on the other hand, emphasizes the importance of the quality and transparency of information available to analysts. If female executives provide more informative, credible disclosures (Datta et al., 2022), analysts – regardless of gender – should make smaller forecast errors for female-led firms due to the superior information environment. Finally, behavioral finance offers mechanisms at the individual level: gender differences in overconfidence and risk perception could cause male and female analysts to react differently to corporate news. Male analysts, who on average exhibit greater overconfidence (Barber and Odean, 2001), may be slower to adjust their forecasts in the face of adverse news, whereas female analysts' comparatively cautious outlook might lead them to incorporate negative information more readily. These theoretical considerations all point to interactive effects between the gender of analysts and that of executives on forecasting outcomes, especially under conditions of high uncertainty or "bad news."

We leverage a large sample of analyst EPS forecasts and an array of firm-level and individual-level data to systematically examine these interactions. We focus on the gender of the CEO and of the CFO as key attributes that impact the firm's information environment, and the genders of the sell-side analysts as an attribute of the information intermediaries. Our analyses yield four main findings. First, analysts' forecasts are *more accurate on average for firms led by women* – whether as CEO or CFO – compared to firms led by men. Notably, this overall female-leadership effect is driven by the forecasts issued by female analysts. Female analysts are significantly more precise when forecasting earnings for female-led companies, whereas male analysts' accuracy is essentially unchanged by the CEO or CFO's gender. Consistent with prior literature, we do not find a significant difference in accuracy between female and male analysts *in general*; rather, female analysts *outperform males only in the context of female-led firms*.

Second, the enhanced accuracy of female analysts covering female-led firms is primarily manifested during bad news periods. We define "bad news" using text-based negative sentiment measures from news

and disclosures (see Loughran and McDonald, 2011) and find that female analysts' forecasts for female-led firms are especially accurate when the firm is facing negative news or pessimistic outlooks. In contrast, during "good news" periods (positive sentiment), we observe no material performance difference between female and male analysts related to executive gender. Third, when we disaggregate the effects by executive role, we find that it is female CFOs – rather than female CEOs – that drive female analysts' superior accuracy under bad news conditions. In other words, the analyst gender interaction is strongest when the firm's chief financial officer is female, suggesting that the mechanism operates through aspects of financial information processing and disclosure overseen by the CFO. This aligns with evidence that CFOs have direct influence on financial reporting quality (Ge et al., 2011) and that female CFOs are associated with more conservative accounting choices (e.g., lower accrual manipulation) than male CFOs (Barua et al., 2010; Peni and Vähämaa, 2010).

Finally, we document an important capital market implication: firms led by women that are covered exclusively by all-male analyst teams are more likely to be overvalued relative to fundamentals, compared to female-led firms whose coverage includes at least one female analyst. This finding suggests that a lack of gender diversity in the analyst pool can impair the external information environment – potentially due to missed communication cues or biases – resulting in mispricing. Conversely, diverse analyst teams may provide a more balanced interpretation of information from female-led firms, mitigating overvaluation. Taken together, these results underscore the value of considering both manager and analyst demographics in understanding financial information flows and market efficiency.

The contributions of this study are threefold. First, we add to the analyst forecast accuracy literature by identifying executive–analyst gender alignment as a previously underexplored factor that can enhance or diminish forecast precision. While prior research has linked corporate disclosure quality to forecast accuracy (e.g., Barron et al., 1998; Healy and Palepu, 2001), we show that *who* is delivering and interpreting the information (in terms of gender) also matters. Second, our work extends the growing literature on gender in executive leadership and capital markets (e.g., Srinidhi et al., 2011; Huang and Kisgen, 2013). We provide new evidence that female CEOs/CFOs contribute to a better information environment for analysts, and we qualify this by demonstrating the crucial role of analyst diversity in unlocking that benefit. By examining the dual-gender interaction, we bridge insights from finance, accounting, and management, integrating social identity and behavioral perspectives to explain *when* and *why* gender may influence information outcomes. Third, our findings have practical implications for the composition of analyst teams and the coverage of firms. They suggest that diversity among analysts is not just an issue of equal representation but can tangibly affect the accuracy of market forecasts and valuations. In an era where both corporate boards and Wall Street institutions are striving for greater diversity and inclusion, our evidence implies that such efforts could improve the functioning of markets by enhancing information interpretation, especially for firms with diverse leadership. In sum, this research shines light on an important theoretical and empirical gap – the interplay between the gender of information senders (executives) and

information processors (analysts) – and provides novel insights into how gender-based behavioral mechanisms and biases can impact financial analysis and investor outcomes.

2. Literature & Hypotheses

2.1. Executive Gender, Disclosure Quality, and Analyst Forecasts

A large body of literature in finance and accounting has examined how the information environment of a firm influences analysts' forecast accuracy. Firms that provide more transparent, detailed, and credible disclosures tend to reduce information asymmetry, enabling analysts to make more accurate predictions (Healy and Palepu, 2001). Empirically, measures of greater voluntary disclosure and higher financial reporting quality are associated with smaller forecast errors and less dispersion among analysts (Lang and Lundholm, 1996; Barron et al., 1998). Within this context, the personal attributes of top executives – who ultimately oversee corporate disclosure policy – can be critical. Gender is one such attribute that has attracted growing interest. Research on gender differences in corporate leadership suggests that female executives often adopt a more conservative and transparent approach to financial reporting compared to male executives (Datta et al., 2022). For example, female CFOs have been found to engage in less earnings management and more income-conservative accounting (Peni and Vähämaa, 2010), and companies with more women on the board exhibit higher financial reporting quality and fewer instances of fraud or irregularities (Srinidhi et al., 2011; Cumming et al., 2015). These differences are often attributed to behavioral traits: women on average have lower risk tolerance and higher aversion to unethical behavior (Ittonen et al., 2013; Kennedy et al., 2017). As a result, female CEOs and CFOs may foster an environment of enhanced disclosure – providing more informative earnings guidance, more candid discussions of company performance, and generally reducing the uncertainty that analysts face in forecasting earnings. Consistent with this idea, Datta et al. (2022) find that analysts' EPS forecast errors are significantly lower for firms with female CEOs, and that female CFOs likewise improve forecast accuracy in settings of high information asymmetry. These authors conclude that analysts are "able to draw more accurate assessments of the firm's prospects for corporations led by female executives", suggesting a broad information advantage. Notably, Datta et al. (2022) attribute the effect to female executives' more informative and credible disclosures, which aligns with prior evidence of gender-driven disclosure differences.

However, an open question is whether all analysts benefit equally from the potentially better information environment under female leadership. The firm's information environment and risk profile materially affect analysts' forecast precision (Parkash et al., 1995) but the literature to date has generally not considered the characteristics of the *analysts* in conjunction with management gender. If female executives indeed communicate differently, analysts may be better at receiving or interpreting those signals. This gap leads to our first hypothesis. Based on the premise that female-led firms provide superior information to the market (via higher quality financial reporting and disclosure) and that, in general, this should facilitate more accurate forecasting, we posit the following baseline expectation:

Hypothesis 1 (Executive Gender and Forecast Accuracy): *Analysts' earnings forecasts are more accurate for firms led by female CEOs or CFOs than for firms led by male CEOs or CFOs.*

2.2. Analyst Gender and Performance Differences

The first hypothesis essentially anticipates an overall female-executive advantage in forecast accuracy. Next, we probe *how* and *for whom* this advantage manifests, particularly concerning the gender of the analysts making the forecasts.

The sell-side analyst profession has traditionally been male-dominated (Green et al., 2009). This gender imbalance has spurred research into whether female analysts face discrimination or perform differently from their male peers. From a skill and accuracy standpoint, early evidence was mixed. In a seminal study controlling for self-selection, Kumar (2010) finds that female equity analysts actually achieved higher forecast accuracy than male analysts on average, despite covering slightly fewer companies; he suggests that women who succeed in the field may be exceptionally qualified, overcoming barriers to entry. In contrast, a contemporaneous study by Green et al. (2009) reported that, after controlling for various factors, female analysts' earnings forecasts were less accurate than those of male analysts. The same study noted that women were more likely to be recognized as prestigious "All-Star" analysts by Institutional Investor magazine, a seeming paradox given their slightly lower forecast accuracy. One interpretation was that female analysts might excel on dimensions not captured by simple accuracy metrics (such as client service or breadth of analysis), or that they must exceed performance expectations to attain star status due to higher scrutiny (a potential double standard in evaluations).

Beyond accuracy, gender-based behavioral differences among analysts have been documented. Green et al. (2009) and a related analysis by Barber, Lehavy, and Trueman (2013) found that female analysts tend to issue fewer "sell" recommendations and take fewer extreme positions than male analysts. This was interpreted as females being more cautious or risk-averse in their professional judgment, possibly reflecting a lower risk appetite or a desire to avoid the career risk of bold negative calls. Similarly, consistent with general behavioral finance findings, male analysts may exhibit more overconfidence – for example, trading too frequently on their own forecasts or being slower to revise their views in the face of new evidence (Barber and Odean, 2001). In sum, while the average accuracy of male vs. female analysts is not conclusively different, the genders may differ in how they process information and respond to uncertainty. Female analysts might be more diligent and careful in incorporating information (perhaps leading to an edge in complex or risky situations), whereas male analysts might be bolder but prone to over-optimism. It's important to stress that any differences are subtle and often context-dependent; many studies conclude that after accounting for analysts' firm assignments and experience, men and women analysts perform similarly in forecasting tasks (e.g., Kumar, 2010; Green et al., 2009). This implies that gender alone is not a dominant driver of forecast accuracy in the average case.

We propose that jointly considering the gender of the executives and the gender of analysts could explain some of thee mixed findings. Social identity theory (Tajfel and Turner, 1979) posits that individuals

categorize themselves and others into social groups (e.g., by gender, ethnicity, alma mater) and tend to favor those with whom they share an identity. One consequence of this in-group favoritism is that communication and trust can be stronger among individuals who perceive each other as similar. The management literature has long noted that demographic similarity between colleagues can facilitate better interaction. Kanter (1977) famously argued that homogeneity in groups improves communication and predictability, as people more readily trust and understand others who are similar to themselves.

In financial contexts, while the idea of gender homophily specifically affecting analyst–executive interactions has not been directly studied before, analogous research on social ties provides suggestive evidence. For example, analysts who share an educational connection with a firm's top management (such as having attended the same university) enjoy a comparative information advantage: Cohen et al. (2010) document that stock recommendations are significantly more profitable when an analyst has a school tie with the company's senior officers. The likely reason is superior information flow or access – those analysts perhaps get better insight or candor from management due to the personal affinity. Similarly, Malloy (2005) finds that analysts who are geographically closer to the companies they cover (in the same city or region) issue more accurate forecasts, presumably because informal local connections or easier face-to-face communications improve their information. Also, Clacher et al. (2021) Clacher et al. (2022) find that female insiders make more profitable trades when the top management of the firm are also female. Interestingly, the results in Clacher et al. (2021) are driven by sale transactions, consistent with information sharing between women in the upper echelons leading to a significant advantage in the context of avoiding losses as opposed to making gains.

These studies illustrate how shared social identity or bonds can enhance an analyst's ability to interpret or obtain information. Translating this to gender, one might expect that shared gender between an analyst and a firm's key executives could create a subtle rapport or mutual understanding that benefits the forecasting process. A female CEO or CFO might (consciously or unconsciously) communicate more openly or effectively with a female analyst, perhaps due to greater comfort or an assumption of shared perspectives. Likewise, a female analyst might be more attuned to the communication style or signals sent by female leadership. There could also be elements of mentoring or network inclusion – for instance, female executives, being relatively rarer, might be more likely to acknowledge or support female analysts, leading to better information exchange in interviews and conference calls. Conversely, male analysts might not experience this in-group channel with female executives and could even be prone to certain biases or misperceptions due to gender differences in communication. Social identity theory would predict an in-group advantage in information processing: the alignment of analyst and executive gender could reduce information frictions and improve forecast accuracy.

Therefore, building on Hypothesis 1, we refine our expectation by introducing analyst gender: if female-led firms provide a better disclosure environment, female analysts may be uniquely positioned to capitalize on it. Meanwhile, male analysts, who do not share the same social identity with female executives,

might not realize the full benefit or might approach the information differently. This leads to our second hypothesis:

Hypothesis 2 (Analyst–Executive Gender Alignment): *Female analysts will exhibit higher forecast accuracy for companies with female CEOs or CFOs compared to companies with male CEOs/CFOs, relative to male analysts.*

We emphasize that our theorizing does not require that female analysts are *intrinsically* better forecasters; rather, it could be the *combination* of a female analyst with a female-led firm that yields a superior outcome. This nuanced view contributes a new dimension to the literature on forecast accuracy determinants.

2.3. Behavioral Finance, Overconfidence, and the Role of Bad News

While homophily and social identity give one explanation for why female analysts might particularly benefit from female executives' information, behavioral finance provides another piece of the puzzle, especially regarding how different genders process bad news vs. good news. Individuals vary in their reaction to information based on traits like overconfidence and risk tolerance. Men, on average, have been shown to be more overconfident in financial settings – for example, male investors trade more aggressively than women to their detriment (Barber and Odean, 2001). Overconfidence can lead to optimism bias and slower incorporation of negative information (Daniel et al., 1998). Women, being somewhat more risk-averse and less overconfident on average, may approach negative news with greater caution and realism. In the context of analysts, this suggests that male analysts might underreact to or downplay negative signals about a company's prospects (perhaps believing their prior positive outlook to still be correct, or being reluctant to issue pessimistic forecasts), whereas female analysts might take negative signals more seriously and adjust their forecasts more promptly. If the firm's top executives are female, and as prior literature indicates, potentially *more willing to communicate bad news or issue conservative guidance*, then a female analyst could doubly benefit: she receives clearer warning signs and, due to her own lesser optimism bias, acts on them effectively.

By contrast, a male analyst covering the same female-led firm during a downturn might not interpret or trust the cautious signals as much – or could be overconfident in his own models – leading him to miss the extent of the bad news. Additionally, gender norms might play a role: some studies in management suggest female leaders use different communication tactics. For example, female executives may employ a more relational and transparent communication style but could also face skepticism (Lee & James, 2007). A female analyst might be more receptive to a female executive's style of conveying caution, whereas a male analyst might be more attuned to traditionally "hard" information cues and thus might not fully appreciate subtle warnings embedded in tone or body language.

Crucially, we expect these dynamics to matter mostly in periods of bad news or high uncertainty. In benign or "good news" periods – when a company is meeting expectations and the outlook is positive – forecasting may be comparatively straightforward and not as sensitive to nuanced information or

behavioral factors. Under such conditions, any analyst (male or female) can rely on readily available positive signals (e.g. strong financials, optimistic guidance) to make accurate forecasts. Thus, we anticipate that gender-based differences in forecast accuracy will be muted when news sentiment is good. It is when news is predominantly negative, and the task of forecasting becomes more challenging (with greater information asymmetry and possibly greater impression management by firms), that the advantages of female leadership and female analyst behavior manifest strongly. This reasoning yields our third hypothesis:

Hypothesis 3 (Gender Effects under Bad News vs. Good News): *The forecast accuracy advantage for female analysts covering female-led firms will be concentrated in bad news periods, whereas little to no accuracy difference between female and male analysts will be observed in good news periods.*

An additional layer to explore is which executive – the CEO or the CFO – is the primary source of this effect. The CEO is the public face of the company and ultimately responsible for strategy and often for communicating broad outlooks, while the CFO is typically the executive directly in charge of earnings releases, financial reporting, and guidance. If the mechanism driving our results is related to the interpretation of financial information and disclosure nuances, one might expect the CFO's gender to play a more pivotal role. Prior studies suggest exactly that in terms of financial reporting: for instance, Peni and Vähämaa (2010) found that the reduction in earnings management associated with female executives was largely driven by female CFOs, not CEOs (Harris et al., 2019) (Harris, Karl, Lawrence 2019?). This is intuitive, since CFOs have primary responsibility for the financial statements. Similarly, Datta et al. (2022) report that female CFOs improve analyst forecast accuracy mainly in settings where information uncertainty is high, whereas female CEOs have a more uniformly positive effect. In light of this, our earlier hypotheses (H1–H3) might not apply equally to CEOs and CFOs. We therefore explicitly hypothesize the following:

Hypothesis 4 (CFO Gender vs. CEO Gender Effect): *The positive effect of female leadership on analyst forecast accuracy – particularly the enhanced performance of female analysts during bad news – will be more strongly associated with female CFOs than with female CEOs.*

This hypothesis focuses on the locus of the information advantage. If supported, it would suggest that it is the *financial information channel* (managed by the CFO) through which gender-based differences manifest most strongly, reinforcing the idea that female CFOs produce financial disclosures that female analysts interpret especially well. A lack of a strong CEO gender effect in the same tests would imply that simply having a woman at the top in a general leadership sense (CEO role) is less important than having a woman in the top financial role when it comes to aiding analysts during tough times.

3. Research design

3.1. Data and sample

Our sample spans 1992-2016. We gather analyst information from I/B/E/S. We begin with all the one-year ahead forecasts from I/B/E/S Detail History file and retain the most recent forecast made by each

analyst for a given firm-year. We then match the data based on analyst unique identification codes with the I/B/E/S Detail Recommendation, which contains the last names and initial of first names of analysts. To obtain analysts' gender, we use Capital IQ's person screening data and download data—including full name—for all equity and fixed income analysts located in the U.S. We identify the gender of analysts by matching the first names from Capital IQ to names from Social Security Administration's records[1] which are separated by gender. In cases where the first name can belong to both genders, we use the middle name of the analyst, and when the middle name is not available we extract from the biography description in Capital IQ the analyst's title ("Mr."/"Mrs.") to identify gender.

We next merge the resulting database with Compustat and CEO and CFO information. We identify the gender of CEOs and CFOs from ExecuComp, and whenever it is missing there, we use RiskMetrics. The final sample for our analysis consists of 210,552 forecasts made for 2,881 firms by 4,881 analysts, 608 of which are female and 4,273, male. Descriptive statistics are presented in Table 1.

[Table 1 here]

3.2. Variables and model

To test our hypotheses, we use consensus firm-level EPS forecast from the I/B/E/S Summary History file. To measure forecast accuracy, we use an analyst-level measure similar to the one used in Armstrong et al. (2012). The variable *Analyst_Error* measures in fact the error of the forecast made by each analyst as the difference between the earnings per share (EPS) estimate and the actual EPS, scaled by firm size (measured as log(total sales)); higher values of this variable reflect lower forecast accuracy. The key explanatory variable is an indicator for female top executive leadership is *Gender_CEOCFO*, that equals 1 if at least one of the firm's two key executives (CEO or CFO) is female in a given year, and 0 if both the CEO and CFO are male. To test our first hypothesis (that firms led by women yield more accurate forecasts), we estimate the following OLS model at analyst-firm-year level:

$$Analyst\ Error_{i,f,t} = \beta_0 + \beta_1 Female\_Exec_{f,t} + \beta X_{f,t} + a_f + \gamma_i + \lambda_t + \varepsilon_{i,f,t} \qquad (1),$$

where i indexes analysts, f firms, and t year. $X_{f,t}$ represents the control variables, a_f are firm fixed effects, γ_i analyst fixed effects, and λ_t year fixed effects. A significantly negative coefficient for *Gender_CEOCFO* would indicate more accurate analyst forecasts when a woman holds a top executive position, compared to when top leadership is exclusively male.

Prior literature finds that larger or more profitable firms generally have more predictable earnings, while firms in distress or with extreme growth may be harder to forecast. As such, we include a set of control variables known to affect forecast difficulty and accuracy: firm *Size* (log of total assets), Book-to-Market ratio (*BTM*) as a proxy for growth opportunities, Return on Assets (*ROA*) to capture

[1] The Social Security Administration records names that occurred at least 5 times on annual Social Security card applications for births in the United States after 1879, organized by gender. See, for reference: https://www.ssa.gov/oact/babynames/limits.html

profitability, and the Altman *Z-Score* to proxy for financial risk and opacity. The rich set of fixed effects at firm, analyst, and year levels effectively controls for any time-invariant characteristics of a given firm and of a given analyst (e.g. skill, style, or experience constant over time), as well as common year shocks. The inclusion of firm and analyst fixed effects means that the effect of the variable of interest is identified from within-firm changes in executive gender and within-analyst differences in performance. This allows us to compare forecast accuracy for the same firm in periods when its top leadership includes a woman versus when it does not, and likewise comparing the same analyst's performance across different coverage situations. This fixed-effects approach strengthens causal interpretation by differencing out static firm and analyst traits.

We estimate equation (1) for the full sample of forecasts, as well as separately for female analysts vs. male analysts. In addition, we estimate a combined model including an interaction term *Gender_CEOCFO* × *Gender_Analyst* to test Hypothesis 2. The variable *Gender_Analyst* is an indicator equal to 1 if the analyst is female.

To investigate Hypothesis 3 we partition the data based on the firm's information environment each year, identifying bad-news periods via a text-based negative sentiment measure (Loughran & McDonald 2011). We re-run our forecast error regressions separately for bad-news and good-news periods, with the interaction term *Gender_CEOCFO* × *Gender_Analyst*.

To test Hypothesis 4, we include separate indicators for female CEO and female CFO (and their interactions with analyst gender). We estimate these models in bad-news and good-news subsamples with the same controls and fixed effects.

Finally, we examine market consequences using a firm overvaluation metric (P/V). We regress P/V on *Gender_CEOCFO*, splitting the sample by the gender composition of the analysts following the firm. In particular, we are interested in studying the presence vs. absence of female analysts on the overvaluation metric.

4. Results

Table 2 presents the regression results linking female top executive leadership to analyst forecast errors, estimated separately for female analysts, male analysts, and all analysts. The coefficient on *Gender_CEOCFO* is negative in all specifications, consistent with higher forecast accuracy for firms led by women. In the full sample model (all analysts), the coefficient on *Gender_CEOCFO* is negative and marginally significant. This suggests that, on average, analyst EPS forecast errors are lower when a woman holds a top executive position, supporting Hypothesis 1. In practical terms, firms with female leadership tend to provide a slightly better information environment, resulting in more precise analyst predictions (as evidenced by the lower error term). This overall female-leadership effect, however, masks important differences across analyst gender.

When the sample is split by analyst gender, the effect is driven entirely by female analysts' forecasts. In the female-analyst subsample, the coefficient on *Gender_CEOCFO* is negative and statistically significant.

This indicates that female analysts are more accurate when covering companies with women in top executive roles. By contrast, the results on the male-analyst subsample are not statistically significant. This implies that male analysts' forecasting accuracy is essentially unchanged by the CEO/CFO's gender. They do not exhibit the same improvement in accuracy for female-led firms. This supports Hypothesis 2.

[Table 2 here]

Table 3 breaks down the forecast error analysis by the tone of the news environment – specifically comparing periods of negative ("bad news") versus positive ("good news") sentiment. The results reveal that in bad-news periods, the interaction term *Gender_CEOCFO* × *Gender_Analyst* is negative and highly significant. This indicates that when a firm's top leadership includes a woman (female CEO or CFO) and the covering analyst is also female, the analyst's earnings forecasts are markedly more accurate compared to other gender pairings. Thus, shared gender between executives and analysts can substantially improve information processing under adverse conditions. Moreover, the main effect of female leadership (*Gender_CEOCFO* without the interaction) is small and not statistically significant in the bad-news sample, implying that female-led firms by themselves do not see significantly better forecast accuracy when most analysts are male. It is only when the analyst is female that the female-led firm enjoys a pronounced accuracy benefit during bad news periods. This finding supports Hypothesis 3, affirming that the analyst–executive gender alignment advantage manifests primarily in difficult, negative news environments. Consistent with this, we observe that in good-news periods the same interaction term is near zero and statistically insignificant. During positive or benign news environments, female and male analysts perform similarly for female-led companies, and executive gender makes little difference to forecast accuracy. These patterns align with the notion that when news sentiment is good and forecasting is relatively easier, any potential gender-based communication advantages are muted. In contrast, when news is predominantly negative – making the information environment more challenging and information asymmetry higher – the combination of female leadership and female analysts yields superior forecasting performance. This result confirms that the benefit of gender matching is context-dependent, emerging especially under stressful conditions, which supports Hypothesis 3.

[Table 3 here]

Table 4 extends the analysis by examining the roles of CEO and CFO separately to determine which executive's gender drives the alignment effect. The regression includes separate indicators for a female CEO and a female CFO (each interacted with analyst gender) in the bad-news and good-news subsamples. The evidence points decisively to the CFO's gender as the critical factor. In bad-news environments, the interaction of *GenderCFO* × *Gender_Analyst* is significantly negative. This implies that when the CFO is female and the analyst covering the firm is female, forecast errors are substantially lower

than in other cases – an even larger improvement in accuracy than the aggregate CEO/CFO effect in Table 3. By contrast, the interaction term for a female CEO and female analyst is close to zero and not statistically significant in bad-news periods. In fact, having a female CEO alone does not appear to confer any measurable forecast accuracy advantage to analysts once the CFO's influence is accounted for. These results suggest that the earlier observed "female leadership × female analyst" benefit is driven primarily by female CFOs, rather than CEOs, during periods of negative news. This finding is consistent with the idea that CFOs, who oversee financial reporting and disclosures, play a more direct role in shaping the firm's information environment that analysts rely on. It appears that female CFOs provide information or signals that female analysts are particularly adept at understanding or trust more readily, thereby sharpening forecast precision. The absence of a significant CEO gender interaction effect, even when paired with female analysts, underscores that simply having a woman as CEO is not enough to improve forecast accuracy under stress; it is the presence of a woman in the top financial role that matters most. During good-news periods, neither the female CEO nor female CFO interaction term is significant (both coefficients are around –0.002 and statistically indistinguishable from zero). This reinforces the earlier conclusion that gender-based differences in forecasting emerge mainly in challenging information environments and that the female CFO-driven alignment effect is a phenomenon specific to bad news contexts. These results substantiate the spirit of Hypothesis 4 by showing that the superior performance of female analysts under bad news is primarily associated with female CFOs rather than CEOs. In sum, under negative news conditions female analysts significantly outperform their male counterparts in forecasting only when the firm's CFO is a woman, highlighting a specific executive–analyst gender synergy centered on the finance function. Conversely, no significant gender-based forecasting differences arise in positive news scenarios or from female CEOs in isolation, underscoring that the informational advantages of gender diversity emerge in the most demanding contexts and through the CFO's role.

[Table 4 here]

In summary, analysts' forecast accuracy is influenced by the interaction between their gender and the gender of top corporate leadership. Female analysts outperform in forecasting earnings for female-led firms, particularly under bad-news conditions, and this advantage is tied to female CFO leadership. When female analysts are absent, female-led firms experience overvaluation, underscoring the informational value of gender diversity in analyst teams.

The final aspect of our study examines an implication of the above dynamics for market efficiency and valuation. In our sample, we observe that some companies – including those with female executives – are covered exclusively by male analysts. Our findings indicate that in such cases, important information or perspectives may be missed, as evidenced by larger forecast errors. A natural consequence of systematically less accurate forecasts is that stock prices could drift away from fundamental values. To test this possibility, we compute a firm overvaluation metric, price-to-value or P/V (Frankel & Lee, 1998; Lee et al. 1999). P/V

is calculated using a residual income valuation approach, where fundamental value (V) is estimated as the book value of equity plus the present value of expected future residual earnings. Residual earnings for each future period are defined as the book value of equity multiplied by the spread between the forecasted return on equity and the required return. Forecasted ROE inputs come from analysts' consensus estimates, and the cost of equity (used as the discount rate) is derived from the CAPM. Finally, the P/V metric is the ratio of the market price to this model-estimated fundamental value.

[Table 5 here]

In Table 5, we find that among firm-years with at least one female analyst, *Female_Exec* does not affect *P/V*. Among firm-years with all-male coverage, *Gender_CEOCFO* is positive and significant, indicating that female-led firms are overvalued only when no female analysts cover them. Specifically, our results suggest that female-led firms tend to become overvalued (with valuation metrics, such as price-to-earnings ratios, exceeding what subsequent performance justifies) when their analyst coverage lacks any female analysts. This overvaluation likely stems from male analyst teams being less able to incorporating negative information or subtle signals from female management, leading to overly optimistic earnings expectations and, in turn, inflated stock prices. When female analysts are part of the coverage, this bias is reduced, and valuations more closely reflect reality.

This result connects to broader discussions about the importance of diversity in decision-making teams. Diverse teams—whether in corporate boards, investment committees, or analyst research departments—are often argued to produce better outcomes by combining different viewpoints and avoiding groupthink. In our context, a gender-diverse analyst team covering a female-led firm may be better equipped to fully process all available information: the female analysts bring the in-group perspective and perhaps greater sensitivity to certain information, while the male analysts contribute their own strengths, and together they reach a more accurate consensus. Homogeneous teams, on the other hand, may have blind spots. Our evidence of overvaluation is consistent with the notion that the market can only be as good as the information it is fed and understands. If that information is incomplete or misinterpreted due to lack of diversity among information intermediaries, mispricing occurs. This aligns with classic finance theories that incomplete information leads to misvaluation (Healy and Palepu, 2001) and with recent arguments in corporate governance that diversity improves information processing and monitoring (Gul et al., 2011). While prior studies have not directly examined analyst team gender diversity, our findings break new ground in showing its relevance.

It is important to note that this hypothesis does not necessarily imply causality, but it provides a testable prediction linking our analyst accuracy findings to real market outcomes. Observing a significant overshooting of valuations in the female-led vs. all-male-coverage scenarios will support the idea that analyst diversity materially improves how information is reflected in stock prices.

5. Conclusions

This study provides new evidence that gender dynamics at the top of firms and within the analyst community significantly shape the quality of earnings forecasts. In particular, we find that firms with female financial leadership – especially female CFOs – are associated with more accurate analyst forecasts. Analysts' earnings forecast errors are significantly lower when the CFO is female, suggesting that women in this key financial role may foster a more transparent or informative disclosure environment. Notably, this accuracy advantage emerges primarily when the analyst is also female. Female analysts are especially adept at forecasting earnings for female-led firms, whereas male analysts' accuracy remains largely unchanged by the CEO or CFO's gender. In contrast, the gender of the CEO alone does not show a consistent effect on forecast accuracy, nor do we observe a significant benefit when a female CEO is paired with a female analyst. In other words, it is the presence of a female CFO, combined with gender alignment in the analyst covering the firm, that drives the improvement in forecasting performance. These findings underscore that shared gender between information providers (executives) and information interpreters (analysts) can enhance the flow and understanding of corporate information, while a female CEO's gender by itself appears insufficient to yield the same effect.

From a theoretical standpoint, our results contribute to the literature on information asymmetry and social identity. We extend prior research on executive gender and disclosure by showing that such benefits translate into tangible forecasting gains. Importantly, we bridge this with research on analyst performance and gender, illuminating a critical contingency: female analysts outperform their male counterparts only when they are covering companies led by women in financial leadership. This helps resolve mixed findings in earlier studies that found no unconditional gender difference in analyst accuracy. Our evidence suggests that context matters – specifically, the context of a gender-aligned information environment. The strong performance of female analysts with female CFOs aligns with social identity and homophily theories, which posit that shared characteristics can build trust and facilitate communication. It appears that female CFOs, through a combination of more open financial communication and perhaps a greater willingness to share timely "bad news," provide information that female analysts are particularly well positioned to interpret and incorporate. Meanwhile, the lack of a CEO gender effect on analysts' accuracy highlights the unique role of CFOs in shaping the firm's financial information environment. This nuance contributes to a more refined understanding of how top executive roles differ: whereas CEOs set the tone at the top, CFOs directly oversee financial reporting and investor guidance, and our findings identify an analyst-executive channel that can meaningfully improve forecast precision.

The findings also carry practical implications for managers, investors, and the financial services industry. For corporate leadership, the results highlight an often underappreciated benefit of gender diversity in the C-suite: firms with female CFOs tend to enjoy a more informed and accurate assessment from analysts. More accurate forecasts can translate into smoother investor relations, fewer surprises, and potentially a lower cost of capital, since market prices more reliably reflect fundamentals when information is well understood. Additionally, the pronounced accuracy gain when both the CFO and the covering analyst are female suggests that diversity on both sides of the information exchange is valuable. Managers

and boards might therefore consider that appointing women to financial leadership positions can enhance the firm's transparency and credibility with the market. Likewise, from the perspective of brokerage houses and research departments, our study underscores the importance of gender diversity among analyst teams. A diversity of perspectives — in this case, female analysts bringing insights that might otherwise be missed in all-male coverage — can reduce blind spots in evaluating female-led companies. Ensuring that analyst teams include women could improve the overall quality of market forecasts, particularly for firms with women in key leadership roles. In sum, embracing diversity is not just about equity or optics; our findings suggest it has concrete information benefits that savvy managers and investors can leverage.

This research opens several avenues for future inquiry. First, future studies could delve deeper into how female CFOs influence the information environment – for example, by examining the tone and frequency of earnings guidance or the nature of interactions with analysts. Qualitative research or surveys could complement our findings by revealing whether female CFOs adopt distinct communication styles or governance practices that encourage analysts to adjust forecasts more accurately. Second, the role of the CEO's gender remains somewhat puzzling in our results. It would be worthwhile for future research to investigate conditions under which a female CEO might impact analyst perceptions and forecasting (perhaps in industries or contexts where CEOs have more direct communication with analysts), or whether the CEO's influence is simply more indirect compared to the CFO. Finally, our focus is on gender as an aligning characteristic; future research might examine other forms of executive-analyst alignment or diversity (such as educational, professional, or cultural backgrounds) to see if similar improvements in information processing occur.

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Table 1. Summary statistics
Full sample

	N	Mean	Median	SD	Min	Max
Forecast error	210552	.002	-.001	.049	-.241	1.286

Forecast error by analyst gender

	N	Mean	p50	SD	Min	Max
female	20498	.002	-.001	.048	-.241	1.286
male	190054	.002	-.001	.049	-.241	1.286

Forecast error by analyst gender under male CEO and male CFO

	N	Mean	p50	SD	Min	Max
female	18598	.002	-.001	.048	-.241	1.286
male	175991	.002	-.001	.049	-.241	1.286

Forecast error by analyst gender when either female CEO or CFO

	N	Mean	p50	SD	Min	Max
female	1900	.001	-.001	.047	-.237	1.286
male	14063	0	-.002	.044	-.241	1.286

Table 2. Analyst error

	(1) Female analysts	(2) Male analysts	(3) All analysts
Gender_CEOCFO	**-0.005****	**-0.001**	**-0.002***
	(-2.468)	**(-1.572)**	**(-1.847)**
Size	-0.009**	-0.005**	-0.005**
	(-2.724)	(-2.220)	(-2.300)
BTM	0.006	0.009**	0.008**
	(1.269)	(2.553)	(2.549)
ROA	-0.050	-0.057**	-0.057**
	(-1.658)	(-2.307)	(-2.247)
ZScore	0.003*	0.000	0.000
	(1.824)	(0.030)	(0.169)
Constant	0.073**	0.042**	0.045**
	(2.595)	(2.221)	(2.292)
Observations	20,220	190,095	210,315
R-squared	0.267	0.180	0.178
Yr&firm&analyst FE	Yes	Yes	Yes

Robust t-statistics in parentheses
*** p<0.01, ** p<0.05, * p<0.1
The dependent variable is the analyst error. Errors are clustered at firm level.

Table 3. Analyst error for Bad vs. Good News by top executives' and analysts' gender

	(1) Bad News LMD	(2) Good News LMD
Gender_CEOCFO	-0.002	-0.003
	(-1.283)	(-1.451)
Gender_CEOCFO × Gender_Analyst	**-0.005*** **	**-0.002**
	(-3.268)	**(-0.831)**
Size	-0.001	-0.001
	(-1.040)	(-0.481)
BTM	0.013***	0.012***
	(5.221)	(3.574)
ROA	-0.049***	-0.070*
	(-4.012)	(-1.884)
ZScore	0.001	0.001
	(0.359)	(0.489)
Constant	0.009	0.002
	(0.668)	(0.166)
Observations	76,040	62,262
R-squared	0.277	0.298
Yr&firm&analyst FE	Yes	Yes

Table 4. Analyst error for Bad/Good News; separate CEO vs. CFO gender and analyst gender

	Bad news environments	Good news environments
GenderCEO	0.002	-0.004
	(0.516)	(-1.213)
GenderCEO × Gender_Analyst	**-0.003**	**-0.002**
	(-1.094)	**(-0.524)**
GenderCFO	-0.001	0.000
	(-0.938)	**(0.119)**
GenderCFO × Gender_Analyst	**-0.006*** **	**-0.002**
	(-4.263)	(-1.107)
Size	-0.002	-0.001
	(-1.010)	(-0.813)
BTM	0.012***	0.009***
	(3.174)	(2.808)
ROA	-0.054***	-0.053*
	(-3.823)	(-2.019)
ZScore	0.001	-0.000
	(0.572)	(-0.310)
Constant	0.008	0.005
	(0.563)	(0.545)
Observations	61,078	50,911
R-squared	0.317	0.323
Yr&firm&analyst FE	Yes	Yes

Robust t-statistics in parentheses

*** p<0.01, ** p<0.05, * p<0.1

The dependent variable is the analyst error. Errors are clustered at firm and year level.

Table 5. Overvaluation by gender of analysts and CEO/CFO

	All analysts	Min. one F analyst	(3) All M analysts
Gender_CEOCFO	**0.078**	**-0.003**	**0.210***
	(1.064)	**(-0.028)**	**(1.936)**
Size	0.004	0.006	0.187**
	(0.078)	(0.076)	(2.552)
BTM	-1.679***	-1.771***	-1.349***
	(-16.829)	(-12.847)	(-9.481)
ROA	0.118	-0.245	0.109
	(0.292)	(-0.401)	(0.231)
ZScore	-0.046	0.031	-0.137*
	(-0.803)	(0.374)	(-1.888)
Constant	2.806***	2.741***	1.444**
	(6.501)	(3.937)	(2.518)
Observations	16,769	9,415	7,132
R-squared	0.580	0.596	0.658
Yr and firm FE	Yes	Yes	Yes

Robust t-statistics in parentheses

*** p<0.01, ** p<0.05, * p<0.1

The DV is overvaluation measured as P/V. The IV is Gender_CEOCFO, which takes value 1 in years when the CEO or CFO is female. Errors are clustered at firm level.