Government Subsidies and Analyst Directional Inconsistency

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Abstract

Our study examines whether government subsidies influence analysts' directional inconsistency between revisions to earnings and target price forecasts. We show that higher subsidy amounts are associated with higher directional inconsistency. This increased analyst inconsistency intensifies when firms announce earnings immediately before analyst revisions. Higher subsidy amounts are also associated with lower earnings informativeness. The sensitivity between subsidies and inconsistency is pronounced mainly for firms operating in asymmetric information environments, weak governance, or facing intense product market competition. Subsidy-driven analyst inconsistency is associated with lower target price accuracy and higher implied volatility, indicating that investors perceive these analyst updates as less reliable. Moreover, subsidies amplify the analyst directional inconsistency between target prices and stock recommendation revisions. Overall, our findings highlight the consequences of government subsidies for capital market participants, demonstrating how shifts in earnings informativeness can affect analyst assessments of firm-level short- and long-term prospects.

Keywords: Analyst; Earnings Forecast; Inconsistency; Subsidy; Target Prices

JEL Codes: G24; G30; H20; H25

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"The criticism around Tesla selling emission credits proves that analysts don't understand the company's business"

Business Insider (2019)[1]

1. Introduction

Sell-side analysts provide information regarding a firm's prospects through three different outputs: earnings forecasts, target price forecasts, and stock recommendations. Investors find these outputs informative, especially the revisions to these research outputs (Womack, 1996; Barber et al., 2001; Brav & Lehavy, 2003; Asquith et al., 2005; Barber et al., 2010; Huang et al., 2014; Huang et al., 2018; Palley et al., 2025). Analyst research outputs are expected to be positively related to one another underlying a sequential process, i.e., analyst process information gathered through different sources into earnings forecasts, followed by target price forecasts and stock recommendations (Bandyopadhyay et al., 1995; Bradshaw, 2009; Da et al., 2016; Iselin et al., 2021). Thus, we expect at least an internal consistency, wherein the estimates issued by the same analyst concurrently are linked. However, at times, we see inconsistency in these analyst revisions. For instance, a conflict could arise between the direction of revisions to earnings and target price forecasts issued by the same analyst simultaneously for a firm.

Studies have argued the role of analyst-level factors, such as strategic distortions (Malmendier & Shanthikumar, 2014), or different accounting and economic factors in driving this inconsistency (Iselin et al., 2021). Inconsistent analyst revisions are often related to lower quality, and credibility (Barniv et al., 2009; Brown & Huang, 2013; Kecskés et al., 2017). Internal

[1] https://www.businessinsider.com/criticism-of-tesla-selling-emission-credits-proves-analysts-dont-understand-its-business-2019-5?utm_source=chatgpt.com

inconsistency goes beyond questions of credibility, expertise, or strategic incentives; it highlights a deeper issue in how analysts synthesize firm-level information across short-term earnings forecasts and long-term target-price projections. Although prior studies have attributed such inconsistencies to analyst-level characteristics or accounting and economic factors, the influence of other idiosyncratic drivers—such as government subsidies to firms—remains largely unexplored. Because subsidies are a public policy tool subject to heightened scrutiny and can alter the transparency and informativeness of reported earnings, they provide a unique setting for gauging how government subsidies can potentially affect analyst understanding of firm prospects and, consequently, the internal directional inconsistency of their forecasts.

Through this study, we investigate the relationship between government subsidy amounts and analyst directional inconsistency. Previous studies have documented various corporate and local economic implications of government subsidies. For instance, by attributing to lenient state-level enforcement, Raghunandan (2024) argues that firms that receive US state-level subsidies are more likely to engage in corporate misconduct, specifically non-financial misconduct. Huang (2022) provides evidence on voluntary disclosures by subsidy-receiving firms. The author argues that firms provide more subsidy-related information to avoid public scrutiny. Similarly, building on the latter foundation, Pappas et al. (2024) document that subsidy-receiving firms smooth their income while trying to evade political costs associated with increased public scrutiny. This act of income smoothing decreases the informativeness of earnings.

Motivated by Pappas et al. (2024), we explore whether government subsidy amounts are related to analyst directional inconsistency, specifically between revisions to earnings and target price forecasts. Since earnings informativeness decreases amidst increased public scrutiny, government subsidies may influence an analyst's understanding of firm-level prospects. Variations

to earnings informativeness—unrelated to systematic factors—offer a unique opportunity to provide a comprehensive and crucial assessment of how government subsidies affect capital market participants. Amidst the growing prevalence of government subsidies as a public policy tool and the political costs associated with increased voter scrutiny, it becomes imperative to quantify the effectiveness of government subsidies by examining their impact on analyst inconsistency (Slattery & Zidar, 2020; Jensen & Malesky, 2018; Slattery, 2021).

Unlike analyst earnings forecasts and stock recommendations, target prices reflect analyst opinions about future stock price levels derived from valuation models that rely on long-term fundamentals, such as multi-period models (Demirakos et al., 2010). Target prices are relatively more verifiable than other analyst outputs, as they contain continuous information about a firm's intrinsic value. This rich information set facilitates capital market participants to assess the price multiples and long-term firm value (Brav & Lehavy, 2003; Asquith et al., 2005; Bradshaw et al., 2013; Han et al., 2022). Thus, by framing our analysis through the lens of subsidies-induced reduction in firm-level earnings informativeness (Pappas et al., 2024), we hypothesize that higher government subsidy amounts increase the likelihood of inconsistency between analysts' short-term earnings and long-term target price forecasts.

Our study draws from a sample of US firms and government subsidies from the Subsidy Tracker of the Good Jobs First (GJF) database from 2005 to 2016. The latter database provides information about a subsidy-receiving firm, the amount of subsidy, the type of subsidy (cash-based or tax-based subsidies or a concessional loan), and the level of the granting authority (federal,

state, or the local government).[2] We refer to Iselin et al.'s (2021) analyst inconsistency measure, focusing on the directional inconsistency between revisions to earnings and target price forecasts.

Recent research emphasizes the significance of evaluating consistency based on an analyst's prior estimates rather than comparing them with other analysts as a benchmark because of the lack of comparability of information. In other words, if an analyst revises one earnings forecast in one direction while concurrently revising a target price forecast in the opposite direction for a firm, it would be considered an inconsistent analyst output. Analysts generate estimates of firm-level target prices based on their generated estimates of earnings forecasts. We expect these estimates issued by the same analyst concurrently to be linked or at least in the same direction. However, if government subsidies affect analysts' understanding of firm-level earnings, we may expect an association between government subsidy amounts and analyst directional inconsistency.

To capture the economic effect of government subsidies on the likelihood of analyst directional inconsistency, we use the dollar values of government subsidies scaled by firms' market capitalization. Our baseline results indicate that the likelihood of analyst directional inconsistency increases in response to higher government subsidies. The positive association between government subsidies and analyst inconsistency is also economically significant. A one standard deviation increase in government subsidies is associated with a 12 percent increase in the probability of an inconsistent analyst revision.

Analyst directional inconsistency is unlikely to drive the government's decision to determine the subsidy amount to a firm, i.e., reverse causality is likely a concern. However, we address other endogeneity-related concerns, such as selection bias and potential omitted variables,

[2] Several studies, such as Drake et al. (2018), Huang (2022), and Raghunandan (2024), among others, have used this dataset.

through entropy balancing and impact threshold for a confounding variable analysis (ITCV). Our results remain consistent after accounting for endogeneity issues.

We relate subsidies-induced increased analyst directional inconsistency to firm-level earnings releases and informativeness. Prior studies such as Huang (2022) and Pappas et al. (2024) provide evidence of variations in the informativeness of earnings and the disclosure practices of subsidized firms. Such firms smooth their income while attempting to evade political costs associated with increased voter scrutiny, resulting in reduced earnings informativeness. Therefore, to document the latter phenomenon, we adopt two different approaches. First, we investigate whether earnings announcements before the forecast revision day moderate the relationship between government subsidies and analyst directional inconsistency. We expect the sensitivity of analyst directional inconsistency to increase if there is an earnings release by firms before forecast revisions. Second, we assess the informativeness of earnings announcements by linking them to stock returns and examine the differential effects of subsidies on analyst directional inconsistency based on high versus low-subsidized firms. Consistent with our expectation, we find that earnings announcements immediately before the forecast revision day appear to amplify the impact of government subsidies on analyst inconsistency. Further, high government subsidies are associated with reduced earnings informativeness and a higher likelihood of inconsistency between revisions to earnings and target price forecasts.

In the next set of results, we explore whether firm-level characteristics, such as information opacity, governance quality, and product market competition, affect the association between government subsidies and analyst directional inconsistency. To the extent that government subsidies affect analysts' understanding of short-term and long-term firm-level fundamentals, we

may expect this increased analyst inconsistency to be pronounced mainly for firms with opaqued information environments, weak governance quality, and high product market competition.

For information opacity, we refer to two different measures, i.e., firm-level analyst coverage and the Bog index (Chang et al., 2006; Bonsall et al., 2017; Balachandran et al., 2019; Blankespoor et al., 2020; Lee et al., 2020; Hasan, 2020; Nadeem, 2022). Both these measures reflect the extent to which a firm operates under an asymmetric information environment. We employ four different measures of governance quality such as investor distraction (Kempf et al., 2017), board co-option (Coles et al., 2014), internal governance (Cheng et al., 2016), and the hostile takeover susceptibility of a firm (Cain et al., 2017). All the measures capture the extent to which managerial actions are monitored by investors, boards of directors, internal key subordinates, and the external hostile environment, respectively. We employ the product fluidity measure of Hoberg et al. (2014) to measure product market competition. Based on sub-sample analyses, our findings suggest that analyst directional inconsistency increases in response to higher government subsidies when firms operate under an informationally opaque environment, have weak governance quality, and operate in a highly competitive environment.

Extending our analysis, we argue that if higher government subsidies increase the likelihood of analyst directional inconsistency, it could also affect the accuracy of target prices and short-term option-based implied volatility. Our findings support that increased analyst inconsistency in response to higher government subsidies reduces target price forecast accuracy and heightens implied volatility in the short term. Increased implied volatility reflects investors' perception of the quality of analyst revisions, wherein a subsidies-induced increase in analyst directional inconsistency likely decreases the quality of analyst revisions. Moreover, we find that this increase in the likelihood of analyst inconsistency isn’t confined to only earnings and target

price forecasts—higher government subsidies also notably increase the divergence between analyst target price forecasts and their stock recommendations.

Our study adds to the growing literature on the potential determinants of analyst directional inconsistency. It integrates an understanding of accounting and economics domains. Prior studies have argued the role of analyst-level factors such as conflict of interest (Malmendier & Shanthikumar, 2014) and other accounting and economic factors like stock issuance, debt issuance, earnings announcement, earnings guidance, return volatility, research and development expenditure, and so on (Iselin et al., 2021) in determining the inconsistency of analyst outputs. We contribute to this line of research by exploring the association between government subsidy amounts and analyst directional inconsistency. Government subsidies are another important determinant of analyst directional inconsistency. Internal inconsistency between revisions to earnings and target price forecasts increases in response to higher government subsidy amounts. We relate this increase in analyst directional inconsistency to firm-level earnings releases to capture the role of reduced earnings informativeness associated with subsidies-induced increased public scrutiny.

We also contribute to the literature investigating the economic ramifications of government subsidies. Prior studies have explored several firm-specific and local economic implications of government subsidies, such as the effect of subsidies on corporate misconduct (Raghunandan, 2024), income smoothing (Pappas et al., 2024), corporate disclosures (Huang, 2022; Li et al., 2025), and local employment creation (De Simone et al., 2025). By combining government subsidies and analyst directional inconsistency, we investigate the capital market participant implications of government subsidies. Our findings suggest that the likelihood of analyst directional inconsistency between revisions to earnings and target price forecasts increases in

response to higher government subsidies. Government subsidies and increased analyst directional inconsistency are also associated with attenuated target price accuracy and heightened implied volatility, highlighting investors' perception of the quality of analyst revisions.

Lastly, our study contributes to the literature examining analyst reliance on firm-level information and corporate governance environments for their outputs. Since analyst research outputs follow a sequential process, starting with the information acquisition, firm-level information and governance environments play a pivotal role in influencing the credibility and the quality of their outputs (Lang et al., 1996; Hope, 2003; Lang et al., 2003; Bradshaw, 2009; Hutton et al., 2012; Dhaliwal et al., 2012; Bozanic & Thevenot, 2015; Lee et al., 2016; Chen et al., 2017; Bernardi & Stark, 2018; Griffin et al., 2020; Cowan & Salotti, 2020; Hou et al., 2022; Ben-Amar et al., 2024). We add to this stream of literature by documenting that government subsidy amounts increase the likelihood of analyst directional inconsistency, especially for informationally opaqued firms and firms with weak governance quality. Since government subsidies prompt variations in earnings informativeness, they affect analysts' understanding of firm-level prospects, supporting an increased analyst directional inconsistency between revisions to earnings and target price forecasts.

2. Data and Sample Overview

2.1 Analyst Inconsistency

We collect analyst target prices, earnings forecasts, and stock recommendations from the I/B/E/S database for US firms. We collect data post-2003 to capture the post-global settlement era. We focus on the earnings and target price forecast pairs, where both outputs have the same original issue date and the revision date. We start with the less frequently revised target prices and compare

them with the earnings forecasts issued (revised) on the same date. We classify revisions as directionally consistent (inconsistent) if the earnings and target price forecasts move in the same (opposite) direction. We also explore revisions to target price forecasts and stock recommendations, where we start with the less frequently revised stock recommendations and match these outputs with target prices. Our definition of analyst directional inconsistency is similar to Huang et al. (2014), Kecskés et al. (2017), and Iselin et al. (2021). We follow the same data filtering procedure utilized by Iselin et al. (2021).

Earnings forecasts are provided for multiple fiscal periods at the same time. In such instances, a single earnings estimate may not reflect the full *stream* of earnings, representing the analyst's opinion about a firm. In other words, there could be instances where a single earnings estimate is inconsistent with the target price, although the full stream of earnings is consistent. We aggregate earnings forecasts issued for multiple fiscal periods using the aggregation method proposed by Iselin et al. (2021). When aggregating the earnings forecasts, we only include quarterly estimates not subsumed by the annual estimates. For example, an analyst issues two earnings estimates for the same firm for fiscal quarter 3 of 2019 and the fiscal year 2019. We exclude the quarterly estimate from our sample, given that the fiscal year 2019 estimate subsumes the quarterly estimate. We also exclude estimates that are not comparable to the original issue date and the revision date. For instance, an analyst's earnings estimate for the fiscal year 2020 was issued on 21/10/2019 and subsequently revised on 20/03/2020. However, on 20/03/2020, the analyst also issues an estimate for the fiscal year 2021. In such a case, we exclude the observations altogether, as the earnings estimates for the two dates are not comparable (issued for different fiscal periods).

2.2 Government Subsidies

We gather data on government subsidies from the Subsidy Tracker of the Good Jobs First (GJF) database. The database provides firm-level information, including the subsidy recipient firm's name, the CUSIP number, and the subsidy amount. It also outlines detailed information on the type of subsidy (e.g., tax credits, cash grants, and concessionary loans) and the awarding level of the government (e.g., federal, state, and local government).

We created the *Subsidy* variable, indicating the aggregate subsidy received by a firm in a given year. For this, we aggregated the tax credits and cash grants received during a year and excluded loans from our measure, as the face value of loans is not directly comparable to other types of subsidies (Huang, 2022). However, we also created a separate control variable named *Loan* to capture the impact of providing loans at concessionary terms in all our regression specifications. We scaled the aggregate amounts by the lagged market capitalization of the firm (gathered from the COMPUSTAT database). With our continuous variable approach, we aim to capture the economic effect of government subsidies on analyst directional inconsistency.[3]

We also construct separate variables for subsidy type (tax and cash-based subsidies) and subsidy source (federal and non-federal for the state/local governments) to isolate how each dimension influences analyst directional inconsistency. As Huang (2022) notes, state and local authorities award an average of $13.7 billion in subsidies—versus $5.3 billion at the federal level annually, accounting for 72 percent of subsidy transactions by value.

[3] Note that it could be possible that the government subsidy amount is recorded as zero for some observations because the firm received only a government loan. Our results remain robust even when we exclude these cases.

2.3 Firm and Analyst Characteristics

We obtain all firm-level fundamentals from the COMPUSTAT and the return data from the CRSP. The earnings announcements, earnings guidance, and the consensus analyst data are obtained from the I/B/E/S.

2.4 Sample Selection

Our sample is restricted to firm-years that have at least one observation in the Subsidy Tracker dataset and the I/B/E/S earnings forecasts database. Following Raghunandan (2021), we restrict our sample to firms that have received any subsidy (cash grants, tax credits, and loans) from different levels of government. Good Jobs First provides matching at the parent-subsidiary level with private firms and subsidiaries of foreign parent companies as part of the sample. Thus, there remains a possibility that a firm that has received a subsidy could erroneously be captured as a non-subsidy-receiving firm, introducing biasness while comparing a subsidy-receiving with a non-subsidy-receiving firm. To avoid such instances, we include firms with at least one observation in the Subsidy Tracker and the I/B/E/S databases. Because firms receiving high subsidies could fundamentally differ from low-subsidy-receiving firms, we also adopt an entropy balancing approach to mitigate this selection bias.

We expect subsidies to have a significant effect on a firm's fundamentals. Prior evidence suggests that 75% of the subsidies are awarded to the top 1000 firms (Pappas et al., 2024). Therefore, an analyst's interpretation of the economic magnitude of the subsidy may depend on the size of the subsidy relative to the firm size. Given these concerns, we use firm-years that have subsidy data available in the Subsidy Tracker database and compute the proportionate impact of the subsidy on a firm (i.e., the aggregate subsidy amount for a fiscal year divided by the size of the

firm). Following De Simone et al. (2025) and Raghunandan (2024), we end our sample period in 2016, as the subsidy data is less complete for years after 2016. We exclude firms in the financial sector (two-digit SIC codes 60-69) and utilities (SIC code 49). Our final sample consists of 66,235 (aggregated) observations. Our final sample covers the period from 2005 to 2016 after merging with the Subsidy Tracker data.

2.5 Summary Statistics

Table 1 reports the summary statistics for our final sample, indicating the mean, standard deviation, the median, and quartiles for all the variables. We follow the same methodology employed in Iselin et al. (2021) to construct the *Inconsistent* variable for analyst directional inconsistency. A comparison of the descriptive statistics indicates that the mean and standard deviation are comparable to the sample utilized in Iselin et al. (2021). The average (SD) in our sample is 0.180 (0.384) compared to the average (SD), i.e., 0.187 (0.390), in the sample used by Iselin et al. (2021).

In Table A2 (in the Appendix), we replicated the results of Panel B of Table 1 of Iselin et al. (2021), using the raw sample of *TP_EPS,* [4] showing inconsistent proportions across fiscal periods and calendar years. In this case, we define an inconsistent output at the individual earnings level (i.e., non-aggregated across fiscal periods). Our sample is comparable to Iselin et al. (2021) when it comes to the proportion of inconsistent forecasts. The total proportion of inconsistent earnings forecasts is 24.7 percent for Iselin et al. (2021), whereas it is 24.80 percent for our sample.

[4] The *TP_EPS* sample is the inconsistency between revisions to target price and earnings forecasts. In other words, when revisions to the target price and earnings forecasts, issued by the same analyst for the same firm, are in the opposite direction.

In Table A3 (in the appendix), we replicated the results of Panel B of Table 2 of Iselin et al. (2021), where we measure inconsistency of earnings forecasts at an aggregated level across fiscal periods. The number of observations come down to 471,464 due to the aggregation of earnings forecasts at the report level. Our sample across *Up*, *No Change* and *Down* groups for the target price and earnings forecasts remains qualitatively similar.[5] The original sample includes 3,844,907 observations (see Table A2 in the appendix) for the directional inconsistency between target price and unaggregated earnings forecasts. Table A3 shows that the number of observations declines to 471,464 for the directional inconsistency between the target price and aggregated earnings forecasts. Our filtering procedure leads to a final sample of 66,235. The summary statistics for our main independent variable (*Subsidy*) indicate that on average government subsidies constitute 5 percent of a firm's market capitalization. On the other hand, the median is significantly lower at 0.7 percent, which is consistent with a few firms receiving large subsidies. Consistent with Huang (2022), the average tax subsidy is larger than the average cash subsidy. Furthermore, the average non-federal (state and local) subsidy is larger than the average federal subsidy.

3. Findings

3.1 Model

To examine the relationship between government subsidy amounts and analyst directional inconsistency between revisions to earnings and target price forecasts, we adopt the following logistic regression models:

[5] The *Up* group includes all the target price revisions that have a revision of more than zero. The *No Change* group includes all the target price changes that have a revision equal to zero. The *Down* group includes all the target price revisions that have a revision of less than zero. The earnings forecast groups are also defined in the same manner.

$$Inconsistent = \beta_0 + \beta_1\, Subsidy + \beta_2 Loan + \ \beta_3(Controls) + \varepsilon \quad (1)$$

$$Inconsistent = \beta_0 + \beta_1\, TaxSubsidy + \beta_2\, CashSubsidy + \beta_3 Loan + \ \beta_4(Controls) + \varepsilon \quad (2)$$

$$Inconsistent = \beta_0 + \beta_1\, FedSubsidy + \beta_2\, NonFedSubsidy + \beta_3 Loan + \ \beta_4(Controls) + \varepsilon \quad (3)$$

Where *Inconsistent* is an indicator variable equal to one if the revisions to earnings and target price forecasts are in opposite direction and zero otherwise. In model (1), *Subsidy* is the one-year lagged total dollar value of subsidies per firm-year scaled by the market capitalization of the firm at the end of the previous year. In model (2), we aim to capture the effect of the different types of subsidies (i.e., the granting method) on analyst directional inconsistency by including *TaxSubsidy* and *CashSubsidy* as separate variables. In model (3), we include variables for the granting authorities, i.e., *FedSubsidy* and *NonFedSubsidy*, to separately capture their effect on analyst directional inconsistency. We expect the coefficients of our subsidy-related variables to be positive, supporting our argument on increased analyst directional inconsistency in response to higher government subsidies.

Following Iselin et al. (2021), we control for several factors that are likely to drive a wedge between short-term earnings and long-term target price forecasts. For instance, we include analysts' forecast horizon (*Log (Horizon))*, research and advertising expenditures (*R&D/Adv*), variability of earnings (*Std.Dev (ROA)*), an indicator for a loss during a financial year (*Loss*), and the variability of returns (*Std.Dev (Ret)*). We also append the absolute values of the changes in the market-wide P/E ratio (|Δ*PE Ratio*|) to consider market-wide changes in the discount rates or earnings multiples between the analyst report dates. In particular, the variable (|Δ*PE Ratio*|) is expected to account for the possibility that an analyst could increase a firm's earnings forecast

while applying a lower earnings multiple or a higher discount rate (amidst a decline in market-wide multiples), resulting to a net negative effect on the target price forecast.

To account for firm-specific information events immediately before the analyst forecasts, we include earnings announcements (*EA Before*) and management earnings forecasts (*EG Before*). Further, we capture investment banking relationships through capital structure changes and include debt and share issuances as part of our control variables. *Debt Issue* indicates whether the firm issued debt, whereas *Share Issue* indicates whether a firm experienced a 10% increase in common shares in the previous year.

In some cases, analysts may issue target price and earnings forecasts, which are hard to reconcile with one another. Analysts may subsequently adjust (revise) each output, bringing them to more reasonable levels, leading to an internal inconsistency. We capture this effect with the *Med_Split* variable, which takes the value of one when an analyst's original earnings estimate was above (below) the median for all analysts covering the firm, whereas the target price was below (above) the median for all analysts covering the firm and zero otherwise. We consider all the control variables with a lag of one year before the issuance of target price forecasts. We define all the variables in the Appendix (Table A1).

3.2 Baseline Results

Table 2 reports the baseline results for our multivariate logistic regression model, estimating the impact of government subsidy amounts on analyst directional inconsistency. Column (1) of Panel A reports that the coefficient for *Subsidy* is positive and statistically significant, indicating that larger subsidies are associated with higher probability of analyst directional inconsistency. We also report the marginal effects in Panel B of Table 2. Column (1) of

Panel B indicates that a one standard deviation increase in *Subsidy* is associated with a 12.10 percent increase in the likelihood of an inconsistent analyst revision. Our findings are consistent with our expectations that higher government subsidies are associated with a higher likelihood of analyst directional inconsistency. In Columns (4) and (7) of Panel A, we estimate the results substituting industry fixed effects with firm fixed effects and analyst fixed effects. Our results remain qualitatively similar to Column (1) of Panel A, supporting that our results are not driven by unobserved firm or analyst-level heterogenous factors.

In Column (2) of Panel A, we examine whether the categorization of subsidies, according to the type of subsidy such as *TaxSubsidy* or *CashSubsidy* affect our baseline results. The coefficients of both these variables remain positive and statistically significant. The marginal effects in Panel B highlight that a one standard deviation increase in *TaxSubsidy* and *CashSubsidy* is associated with a 12.4 percent and 12.0 percent increase in the likelihood of an inconsistent analyst revision, respectively. In Columns (5) and (8) of Panel A, we further estimate these effects with alternative fixed effects specifications. Our findings remain qualitatively similar.

We also examine whether the effect of government subsidies on analyst directional inconsistency depends on the level of government that awarded the subsidy. Prior studies argue that state-level politicians benefit from subsidies, as these officials use successful subsidy programs to build their reputation (Jensen & Mackley, 2018; Slattery, 2021). Raghunandan (2024), Pappas et al. (2024), and Huang (2022) also assert that state-level officials are incentivized to favor subsidy receivers. Therefore, because of political costs associated with increased voter scrutiny, we may expect state/local-level government subsidies to influence the understanding of capital market participants, such as sell-side analysts, in assessing firm-level prospects than federal subsidies.

In Column (3) of Panel A, we consider *FedSubsidy* and *NonFedSubsidy* to identify the separate effects of subsidies awarded by the federal government versus the other governments (i.e., the state and local governments). In this case, we find that there is no statistically significant relationship between *FedSubsidy* and *Inconsistent*, indicating that federal subsidies are unlikely to drive analyst directional inconsistency. On the other hand, the *NonFedSubsidy* has a positive and statistically significant effect, extending prior evidence on state/local-level government subsidies while documenting an increased analyst inconsistency. Our findings remain qualitatively similar to alternative fixed effects. We also include a separate variable (i.e., *Loan*) indicating the loans provided by all levels of the government on concessionary terms. We observe a negative association between *Loan* and analyst inconsistency, suggesting that a larger loan (in proportion to the market capitalization) tends to decrease the likelihood of analyst directional inconsistency.[6]

Overall, the coefficients of the control variables are consistent with Iselin et al. (2021). *Log (Horizon)* has a negative and statistically significant association with analyst inconsistency, highlighting that larger horizon for earnings forecasts are associated with more consistent analyst revisions. We observe a positive and statistically significant coefficient for *R&D/Adv*, when controlled for industry fixed effects, suggesting that these expenses lead to a wedge between short-term and long-term analyst estimates. The capital structure-related variables (*Stock Issue* and *Debt Issue*) offer weak evidence to suggest that investment banking relationships influence analyst directional inconsistency.

[6] A closer examination of the Subsidy Tracker database shows that a substantially large proportion of loans are granted at the federal level. On average, there are 11,064 annual loans granted by the federal government compared to only 103 annual loans granted by the state governments. The average annual loan value granted by the federal government is $448,328 million compared to $1,259.5 million granted by the state governments.

Our coefficient for |Δ*PE Ratio*| is positive and statistically significant. The evidence suggests that when earnings forecasts change, the market-wide multiples also adjust, engendering a higher probability of analyst inconsistency. Absolute stock returns (|*Ret*|) have a negative association with the likelihood of analyst inconsistency. Further, we find a positive and statistically significant coefficient for the *Med_Split* variable, reflecting that a higher divergence between the original earnings and target price forecasts is related to more analyst inconsistency. Overall, our study extends the findings of Iselin et al. (2021) by documenting the significant role of government subsidy amounts in influencing the likelihood of analyst directional inconsistency. This increased analyst inconsistency in response to government subsidies varies depending upon the level of awarding government (e.g., federal and state/local governments).

3.3 Firm-Level Earnings Release and Informativeness

In the previous section, we document that high government subsidies are associated with increased analyst directional inconsistency—a pattern consistent with a subsidy-induced reduction in earnings informativeness. To quantify the role of firm-level earnings, we employ two different approaches. First, we examine whether earnings announcements issued before analysts revise their projections moderate this relationship. We argue that when subsidy-receiving firms release earnings reports ahead of analyst forecast updates, the sensitivity of analyst directional inconsistency to subsidies will be even higher, reflecting the role of earnings informativeness. Second, we directly investigate the earnings informativeness of high versus low subsidized firms and relate unexpected earnings to analyst directional inconsistency.

Prior studies, such as Huang (2022) and Pappas et al. (2024), argue that firms provide more subsidy-related information and smooth their earnings while evading political costs associated with increased public scrutiny. This act of income smoothing decreases the informativeness of earnings for subsidy-receiving firms. Since earnings informativeness decreases, we expect the magnitude of association between government subsidies and analyst directional inconsistency to be higher when firms release earnings reports ahead of analyst forecast updates. Panel A of Table 3 presents results for the moderating effect of the firm-specific earnings releases.

We include an interaction term to capture the role of earnings announcements (*Subsidy* × *EA Before*) in increasing analyst directional inconsistency. *EA Before* is an indicator variable equal to one if there was an earnings announcement by the firm on any of the prior seven calendar days, including the revision date, and zero otherwise. The coefficient of the interaction term (*Subsidy* × *EA Before*) is positively and statistically significant. It suggests that the association between government subsidies and analyst inconsistency is higher when firms announce earnings before analyst revisions. The new earnings releases appear to amplify the impact of government subsidies on analyst directional inconsistency, spotlighting the role of reduced earnings informativeness associated with increased public scrutiny of subsidy-receiving firms.

Following Easton and Zmijewski (1989), Dechow et al. (2010), and Binz and Graham (2022), Panel B of Table 3 further investigates earnings informativeness by examining the sensitivity of stock returns to unexpected earnings separately for high and low-subsidized firms. We expect that if earnings informativeness decreases due to government subsidies, the effect will be pronounced in firms that receive high subsidies. To directly test the association between subsidies and earnings informativeness, we determine the earnings response coefficient, i.e., ERC, the slope coefficient generated by regressing cumulative three-day abnormal stock returns (*CARs*)

around the earnings announcement on unexpected earnings (ΔE) at the firm-level. We adopt a subsample regression specification by dividing our sample into two groups based on the median value of the government subsidy amounts. Our findings report that the coefficient of ΔE is negative and statistically significant only for the high government subsidies. It suggests that earnings informativeness is significantly lower for higher government subsidies than for lower government subsidies subsample.

We further append an interaction term to our baseline model to capture whether higher government subsidies, conditional on unexpected earnings (given earnings informativeness is lower for high government subsidy firms), are associated with a higher likelihood of analyst directional inconsistency. Our findings in Panel C of Table 3 indicate that the interaction term, i.e., ΔE*$High\_Gov\_Subsidy$,[7] is positive and statistically significant, implying that high government subsidies and unexpected earnings are significantly associated with an increased directional inconsistency between revisions to earnings and target price forecasts.

To summarize, our findings suggest that the effect of government subsidies on analyst inconsistency is higher when there is an earnings announcement by firms before forecast revisions. Under conditions of earnings informativeness potentially reduced by heightened voter scrutiny surrounding government subsidies—analysts' understanding of firm-level fundamentals is affected, leading to higher analyst directional inconsistency.

[7] Here, ΔE is the unexpected earnings computed as the change in earnings relative to the previous fiscal year, and *High_Gov_Subsidy* is an indicator variable that takes the value of one for high subsidy-receiving firms based on the median value of government subsidy amounts and zero otherwise.

3.4 Entropy Balancing

To examine the relationship between government subsidies and analyst directional inconsistency, we scaled government subsidy amounts by the market capitalization to provide deeper insights into the size effects through a continuous variable. However, one could argue that firms receiving higher subsidies are fundamentally different from those receiving lower subsidies. In other words, there could potentially be an element of selection bias. To account for the selection bias, we also adopt an entropy balancing approach to investigate the relationship between government subsidies and analyst directional inconsistency.

Our sample contains 66,235 observations. We divide them into two groups, i.e., *High-Subsidy* (above median values) and *Low-Subsidy* (below median values) groups. The treatment variable takes the value of one if the observation is in the *High-Subsidy* group and zero otherwise. We utilize all control variables employed in the baseline regression for the balancing procedure. Panel A of Table 4 shows the differences between the Treatment (*High-Subsidy*) and Control (*Low Subsidy*) groups for the original and the re-weighted samples. The summary statistics for the original sample highlight significant differences in the means for multiple variables across high and low-subsidy-receiving firms. Therefore, high subsidy-receiving firms fundamentally differ from those receiving low subsidies. Through the entropy balancing approach, we investigate whether our baseline results remain consistent after accounting for this selection bias.

We apply the approach of Hainmueller (2012) based on a maximum entropy re-weighting scheme that provides weights to ensure an exact balance on the first, second, and higher moments of the covariate distributions (Fei et al., 2023; Chen et al., 2023). The approach re-weights the control group to match and ensure a balance with the treatment group. The method satisfies the

balancing conditions while remaining as close as possible to the uniform distribution without the loss of information. We refer to the first moment of covariates and match the means of covariates for the high-subsidy sample to the means of the covariates of the low-subsidy sample.

After having a sample of matched observations, we re-examine the association between government subsidies and analyst inconsistency. We provide the summary statistics for the re-weighted sample in Panel A of Table 4, indicating the standardized differences between the treatment and control groups. The differences for the variables are close to zero, indicating that entropy balancing has corrected the inherent imbalances in the first moment of the covariates. Panel B of Table 4 reports the regression results for the re-weighted (matched) sample. The coefficient of the *Subsidy* variable remains positive and statistically significant, confirming our baseline result. The probability of analyst directional inconsistency increases in response to larger government subsidy amounts.

4. Cross-Sectional Analyses

In the next set of results, we adopt different firm-level characteristics and examine whether they affect the relationship between government subsidies and analyst inconsistency. We consider firm-level information opacity, governance quality, and product market competition while modeling the sensitivity of analyst directional inconsistency to government subsidies. To the extent that government subsidies signal variations in earnings informativeness and increased political costs associated with public scrutiny of subsidy-receiving firms, we expect our results of increased analyst inconsistency to vary depending upon these firm-level characteristics.

4.1 Information Opacity

Firms' information environment plays a potent role in directing the quality of analyst forecasts. Previous studies have examined the effects of various financial and non-financial disclosures on analyst outcomes. For instance, analyst forecast accuracy increases with the overall quality of financial information (Hope, 2003; Lambert et al., 2007; Bozzolan et al., 2009; Tsao et al., 2016), CSR disclosures (Dhaliwal et al., 2012; Muslu et al., 2019), hiring of top accounting firms (De Franco et al., 2011), ESG practices and incidents (Bernardi & Stark, 2018; Cui et al., 2018), and issuance of management earnings forecasts (Hilary & Shen, 2013). Since we argue that government subsidies affect analysts' understanding of firm-level prospects, we expect increased analyst inconsistency in response to government subsidies to pronounce mainly for informationally opaqued firms.

We utilize a sub-sample approach, examining the association between government subsidies and the likelihood of analyst directional inconsistency. We divide our sample into two groups, i.e., high and low information opacity sub-samples, based on the median values of our respective information opacity measures. Studies have documented that firms with lower analyst coverage and higher Bog index operate in an asymmetric information environment (e.g., Chang et al., 2006; Bonsall et al., 2017; Balachandran et al., 2019; Blankespoor et al., 2020; Lee et al., 2020; Hasan, 2020; Nadeem, 2022). Therefore, we consider analyst coverage (number of analysts following a firm in a given year) and the Bog index as firms' information environment proxies. The Bog index is inversely related to the readability of financial statements. Table 5 reports our results for government subsidies, analyst inconsistency, and information opacity.

Our results report that the positive association between government subsidies and analyst inconsistency exists for firms with low analyst coverage and higher Bog index. The coefficient of *Subsidy* is positive and statistically significant for only the *High-Bog* and *Low-Analyst* subsamples. In other words, the sensitivity of analyst inconsistency in response to government subsidies depends on the existing information environment. Information opacity meaningfully directs the effect of government subsidies on analyst directional inconsistency, suggesting that subsidy-induced reduction in earnings informativeness affects analyst understanding of firm-level prospects, specifically when firms operate under an asymmetric environment.

4.2 Governance Quality

Studies have argued that governance quality is associated with a higher extent of real earnings management (Cheng et al., 2016), weaker firm monitoring (Coles et al., 2014), and higher agency costs (Cain et al., 2017). Thus, an analyst may find it challenging to assess firm-level prospects in the presence of government subsidies, especially when a firm's governance quality is weak. We expect the increase in analyst directional inconsistency to be pronounced mainly for firms with weak governance quality.

We use four different measures of governance quality. Our first governance measure is investor distraction from Kempf et al. (2017). Distracted investors are less likely to discipline ineffective directors, resulting in weaker board oversight and a poor corporate governance environment. Table 6 reports our results for government subsidies, analyst inconsistency, and governance quality. We divide our sample into two subsamples, i.e., low and high groups, based on the median value of the investor distraction measure. Our findings show that analyst inconsistency increases in response to government subsidies for firms with highly distracted

investors. The coefficient of *Subsidy* is positive and statistically significant only for the *High Distraction* sub-sample. Firms with highly distracted investors (highlighting weaker board oversight) affect analysts' understanding of firm-level prospects, supporting a positive association between government subsidies and analyst inconsistency.

Second, we use the degree of board co-option based on Coles et al. (2014) as another measure of governance quality. Co-option is the fraction of the board appointed after a CEO assumes office. The idea is that the directors appointed by the CEOs share allegiance with the management, decreasing the quality of their monitoring. Thus, a lower level of co-option is associated with a higher quality of governance. We divide our sample into two groups, i.e., low and high, based on the median value of the board co-option measure. Our results indicate that analyst inconsistency increases in response to government subsidies for firms with higher board co-option. The coefficient of *Subsidy* is positive and statistically significant for the *High Co-opted* sub-sample. In other words, firms with a weak governance environment, captured through a higher degree of board co-option, experience a positive association between government subsidies and analyst directional inconsistency.

Third, we use the internal governance measure proposed by Cheng et al. (2016) to examine whether the quality of governance affects the relationship between government subsidies and analyst inconsistency. Cheng et al. (2016) laid out the role of key subordinate executives in providing checks and balances in corporate decisions. We expect firms with weak internal corporate governance to experience a positive association between government subsidies and analyst inconsistency. Weak internal governance reflects a lower quality of governance in firms. We divide our sample into two groups, i.e., low and high, based on the median value of the internal governance measure. Our results support a positive relationship between government subsidies

and analyst inconsistency for firms with weak internal governance. The coefficient of *Subsidy* is positive and statistically significant for the *Low Int-Gov* sub-sample.

Lastly, we examine whether the takeover susceptibility of a firm influences the relationship between government subsidies and analyst inconsistency. We use the *Takeover Index* created by Cain et al. (2017) as our final governance quality measure. The authors find that higher takeover protection is related to entrenchment and agency costs. Thus, hostile takeover susceptibility infuses discipline while providing oversight of firm affairs. Firms with low takeover risk are associated with a weak corporate governance. Therefore, we expect firms with low takeover susceptibility to experience a positive association between government subsidies and analyst inconsistency. We divide our sample into two groups, i.e., low and high, based on the median value of the hostile takeover susceptibility measure. Consistent with our assertions, our results support a positive relationship between government subsidies and analyst inconsistency for firms with lower hostile takeover susceptibility. The coefficient of *Subsidy* is positive and statistically significant for the *Low Hostile* sub-sample. Collectively, our results suggest that the quality of corporate governance channelizes the response of analyst directional inconsistency to government subsidies.

4.3 Product Market Competition

Previous studies often resonate product market competition with higher firm-level uncertainty, especially concerning less readable financial statements, higher trade secrecy, and highly ambiguous financial disclosures (Hoberg et al., 2014; Shi et al., 2018; Rahman et al., 2021; Allee et al., 2021). Given higher product market competitiveness is associated with higher uncertainty, we expect it may affect analysts' understanding of firm-level prospects. Therefore, we expect the association between government subsidies and analyst inconsistency to be pronounced

for firms operating in a highly competitive environment. We use the product fluidity measure constructed by Hoberg et al. (2014) to estimate the impact of product market competition on the relationship between government subsidies and analyst directional inconsistency. Table 7 reports our results for government subsidies, analyst inconsistency, and product market competition.

We divide our sample into two groups, i.e., low and high, based on the median value of the product fluidity measure. Consistent with our expectations, our results show a positive relationship between government subsidies and analyst inconsistency for firms with higher product market competition. The coefficient of *Subsidy* is positive and statistically significant for the *High Competition* sub-sample. Overall, our findings suggest that the likelihood of analyst inconsistency increases in response to government subsidies when firms operate in a highly competitive environment.

Our collective cross-sectional results across all the firm-level characteristics suggest that the positive association between government subsidies and analyst directional inconsistency exists for informationally opaqued firms, firms with a weak governance environment, and firms operating in a highly competitive environment.

5. Target Price Accuracy and Implied Volatility

In the previous sections, we document that the likelihood of analyst directional inconsistency increases in response to government subsidies. Firms with informationally opaqued environments, weak governance quality, and highly competitive environments experience this positive association between government subsidies and analyst inconsistency. The effect of government subsidies is stronger when there is an earnings release by firms before the issuance of forecast revisions. Therefore, in this section, we explore whether increased analyst directional

inconsistency in response to government subsidies drives the accuracy of target price forecasts. For this purpose, we employ the following multivariate regression setting:

$$TPAcc = \beta_0 + \beta_1\, Inconsistent + \beta_2\, Subsidy + \beta_3\, Inconsistent \times Subsidy + \beta_4\, (Controls) + \varepsilon \quad (4)$$

Where *TPAcc* is the target price accuracy and is computed as the absolute difference between the revised target price and the actual stock price 12 months after the release of the target price scaled by the stock price two days before the revision and multiplied by minus one (Iselin et al., 2021). We include *Subsidy* with a two-year lag, whereas all other independent variables (including *Inconsistent*) have a one-year lag. Table 8 reports our results for the effect of increased analyst directional inconsistency, potentially driven by government subsidies, on target price accuracy.

We don't observe any statistically significant association between one-year lagged analyst inconsistency and target price accuracy. Similarly, the sensitivity of target price accuracy to government subsidies remains statistically insignificant. However, government subsidies-induced (at *t-2*) increase in analyst directional inconsistency (at *t-1*) is related to a lower target price accuracy (at *t*). The coefficient of the interaction term, i.e., *Subsidy* × *Inconsistency*, is negative and statistically significant. We control for firm and year fixed effects in Column (1) of Table 8 and analyst and year fixed effects in Column (2) of Table 8. Our findings remain consistent even after absorbing unobserved firm and analyst-level heterogeneous factors. In other words, inconsistent analyst revisions issued after larger government subsidies tend to be associated with less accurate target prices.

Following Iselin et al. (2021), we further examine whether analyst directional inconsistency is associated with investor uncertainty, using option-implied volatility around the release of analyst reports. If heightened analyst directional inconsistency—potentially driven by government subsidies—reduces target price accuracy, we may expect a corresponding increase in short-term implied volatility, reflecting higher investor uncertainty on revision days. To capture this relationship, we analyze changes in implied volatility surrounding analyst report dates (Rogers et al., 2009; Neururer et al., 2016; Fedyk et al., 2020). Specifically, we estimate the following regression model to assess the effect of subsidy-induced changes in analyst directional inconsistency on the implied volatility:

$$\Delta ImpliedVol = \beta_0 + \beta_1 Inconsistent + \beta_2 Subsidy + \beta_3 Inconsistent \times Subsidy + \beta_4 (Controls) + \varepsilon \quad (5)$$

Where $\Delta ImpliedVol$ is the natural logarithm of the option-based implied volatility from two days after the analyst revision divided by the implied volatility from two days before the analyst revision. Table 9 reports our results for government subsidies, analyst inconsistency, and implied volatility. We find no statistically significant association between analyst directional inconsistency and changes in implied volatility after appending firm-year and analyst-year fixed effects. However, in Columns (1) and (2) of Table 9, we find a statistically significant positive coefficient for the interaction term, i.e., *Inconsistent* × *Subsidy*, implying that heightened analyst directional inconsistency (at *t-1*), potentially driven by government subsidies (at *t-2*), increases short-term option-based implied volatility (at *t*). Government subsidies and resulting analyst directional inconsistency do not resolve investor uncertainty but add to the implied volatility in the market. The collective takeaway from our results is that increased analyst inconsistency in response to government subsidies reduces target price forecast accuracy and heightens implied volatility, reflecting investor perception of analyst revisions as being lower quality.

6. Target Price Forecasts and Stock Recommendations Inconsistency

After exploring the relationship between government subsidies and analyst directional inconsistency between earnings and target price forecasts, we also examine the association between government subsidies and analyst directional inconsistency between target price forecasts and stock recommendations. For this analysis, we follow a similar framework and determine directional inconsistencies between target price forecasts and stock recommendations. We used these directional inconsistencies and investigated their sensitivity to government subsidies. Table 10 reports our results for government subsidies and analyst directional inconsistency between target price forecasts and stock recommendations. We estimate the results using industry-year fixed effects (Columns (1) to (3)), firm-year fixed effects (Columns (4) to (6)), and analyst-year fixed effects (Columns (7) to (9)).

Our results indicate that the coefficient for the *Subsidy* variable remains qualitatively similar across Columns (1), (4), and (7) of Table 10. Larger government subsidies are associated with a higher likelihood of directional inconsistency between revisions to target price forecasts and stock recommendations. Consistent with our baseline results, non-federal subsidies have a positive and statistically significant effect on the directional inconsistencies between revisions to target price forecasts and stock recommendations. When the subsidies are separated based on the type of subsidy (i.e., *CashSubsidy* and *TaxSubsidy*), both increase the likelihood of analyst directional inconsistency. Overall, like earnings and target price forecasts, we observe a directional inconsistency between analyst revisions to target price forecasts and stock recommendations in response to larger government subsidies.

7. Robustness

We also investigate the extent to which potentially omitted variables would invalidate the documented effect of government subsidies on analyst directional inconsistency, using the impact threshold for a confounding variable (ITCV) analysis (Larcker & Rusticus, 2010; Busenbark et al., 2022). The latter approach estimates a pattern of partial correlations that an omitted variable must have with the dependent and independent variables, which would invalidate the main results. In other words, how large an omitted variable should be correlated with *Inconsistent* and *Subsidy* to invalidate our documented results. Table 11 provides our results for the ITCV analysis. We find the ITCV threshold value to be 0.119, exceeding the absolute impact values of the control variables. This result shows that confounding variables are unlikely to invalidate our results.

Following Frank et al. (2013), we also report results for the percent bias analysis. Our results indicate that a confounding variable bias requires about 86% of the sample to be affected to invalidate our main results. Thus, this statistic confirms the low probability of omitted variable bias to invalidate our main results.

8. Conclusion

This study examines how government subsidies affect analysts' internal consistency, with important implications for capital market participants. We contribute to the literature by assessing consistency based on analysts' prior forecasts—rather than cross-analyst benchmarks that can mask information gaps. Using a sample of US firms from 2005 to 2016, we show that larger government subsidies significantly increase the probability of inconsistency between earnings and target price revisions. These results hold after accounting for the selection bias and potential omitted variable bias. We relate subsidies-induced increased analyst directional inconsistency to

firm-level earnings releases and informativeness. We find that earnings announcements immediately before the forecast revision day appear to amplify the impact of the government subsidies on analyst inconsistency. Earnings informativeness is significantly lower for firms receiving high government subsidies compared to low government subsidies. Further, high government subsidies conditional on unexpected earnings are associated with an increased likelihood of analyst directional inconsistency.

To the extent that government subsidies affect analysts' understanding of short-term and long-term firm-level fundamentals, our results indicate that this increased analyst inconsistency is pronounced mainly for firms with opaqued information environments, weak governance quality, and high product market competition. We also find that increased analyst inconsistency in response to higher government subsidies reduces target price forecast accuracy and heightens implied volatility in the short term, reflecting investor concerns over the quality of analyst reports. The increase in the likelihood of analyst inconsistency isn't confined to earnings and target price forecasts—higher government subsidies also noticeably increase the divergence between analyst target price forecasts and their stock recommendations.

Our study carries important implications for investors, policymakers, and firms. For investors, analyst directional inconsistency offers incremental insight into how government assistance can misalign earnings and target price forecasts, with direct consequences for portfolio valuations when firms receive larger subsidies. At the policy level, our results spotlight that government subsidy programs—by reducing earnings informativeness amidst increased voter scrutiny—may unintentionally hamper analysts' ability to assess firm prospects. At the firm level, we show that these inconsistency effects are most pronounced for firms with opaqued information

environments or weaker governance structures, highlighting the critical need for robust disclosure standards and governance mechanisms to mitigate subsidy-related distortions in analyst forecasts.

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Table 1: Descriptive Statistics

This table presents the descriptive statistics of the main variables. All variables are defined in the Appendix. The table presents the number of observations, standard deviation (SD), 25th percentile (P25), median, and the 75th percentile (P75) values.

Variable	N	Mean	SD	P25	Median	P75
Inconsistent	66,235	0.180	0.384	0.000	0.000	0.000
Subsidy	66,235	0.050	0.327	0.001	0.007	0.029
TaxSubsidy	66,235	0.027	0.119	0.000	0.002	0.013
CashSubsidy	66,235	0.010	0.077	0.000	0.000	0.002
FedSubsidy	66,235	0.005	0.059	0.000	0.000	0.000
NonFedSubsidy	66,235	0.043	0.316	0.001	0.006	0.026
Loan	66,235	0.023	0.140	0.000	0.000	0.000
Horizon	66,235	881	305	730	730	1095
Market Value ($Bn)	66,235	30.965	57.15	3.195	9.386	30.16
Std.Dev (ROA)	66,235	0.035	0.052	0.011	0.021	0.040
Share Issue	66,235	0.051	0.220	0.000	0.000	0.000
Debt Issue	66,235	0.697	0.460	0.000	1.000	1.000
Loss	66,235	0.078	0.267	0.000	0.000	0.000
R&D/Adv	66,235	0.031	0.061	0.000	0.000	0.047
EA Before	66,235	0.615	0.465	0.000	1.000	1.000
EG Before	66,235	0.513	0.499	0.000	1.000	1.000
|Ret|	66,235	0.095	0.091	0.032	0.070	0.130
|Δ PE Ratio|	66,235	0.026	0.028	0.009	0.021	0.032
Med_Split	66,235	0.431	0.495	0.000	0.000	1.000
Std.Dev (Ret) (%)	66,235	8.489	4.495	5.451	7.413	10.375

Table 2: Baseline Regression

This table provides the results for the effect of government subsidies on the likelihood of analyst directional inconsistency (*Inconsistent*), using a logistic regression model. We use five measures of subsidies: total subsidies ((*Subsidy*), tax-based subsidies (*TaxSubsidy*), cash-based subsidies (*CashSubsidy*), federal government subsidy (*FedSubsidy*), and Non-federal government subsidy (*NonFedSubsidy*). *Subsidy* is the total dollar value of subsidies (excluding loans) per firm-year scaled by the market value of the firm at the end of the previous year. *Inconsistent* is an indicator variable equal to one for all earnings forecasts that are part of a revision pair where the aggregated earnings forecast revision moves in the opposite direction from the target price revision and zero otherwise. Panel A presents the coefficients, whereas Panel B presents the marginal effects. All the variables are defined in the Appendix. *, ** and *** denote statistical significance for the coefficients at 10%, 5%, and 1% respectively. We control for the industry and year fixed effects in Columns (1) to (3), firm and year fixed effects in Columns (4) to (6), and analyst and year fixed effects in Columns (7) to (9). Standard errors are clustered at the firm and year level.

Panel A: Coefficients

Variables	***(1) Inconsistent***	***(2) Inconsistent***	***(3) Inconsistent***	***(4) Inconsistent***	***(5) Inconsistent***	***(6) Inconsistent***	***(7) Inconsistent***	***(8) Inconsistent***	***(9) Inconsistent***
Subsidy	0.835***			0.902***			0.890***		
	(6.58)			(7.61)			(7.29)		
TaxSubsidy		0.826***			0.860***			0.882***	
		(6.26)			(5.48)			(6.26)	
CashSubsidy		0.854***			0.691***			0.869***	
		(3.78)			(3.07)			(3.40)	
FedSubsidy			0.0561			0.279			-0.0129
			(0.14)			(0.72)			(-0.03)
NonFedSubsidy			0.754***			0.847***			0.838***
			(4.98)			(5.90)			(5.76)
Loan	-0.0136**	-0.0124*	-0.00632	-0.0246***	-0.0238***	-0.0163**	-0.0170***	-0.0156**	-0.00787
	(-2.08)	(-1.87)	(-0.90)	(-3.52)	(-3.50)	(-2.37)	(-2.66)	(-2.45)	(-1.16)
Log (Horizon)	-0.454***	-0.455***	-0.459***	-0.519***	-0.520***	-0.521***	-0.626	-0.627	-0.628
	(-14.83)	(-14.91)	(-15.00)	(-17.02)	(-17.11)	(-17.01)	(-0.69)	(-0.69)	(-0.69)
Std.Dev (ROA)	-0.871**	-0.840**	-0.620	-0.110	-0.107	0.0413	-0.398	-0.365	-0.207
	(-2.23)	(-2.13)	(-1.64)	(-0.31)	(-0.29)	(0.11)	(-0.74)	(-0.68)	(-0.40)
Stock Issue	0.0964	0.0939	0.0990	0.146**	0.147**	0.158**	0.0365	0.0352	0.0276
	(1.45)	(1.41)	(1.49)	(2.17)	(2.16)	(2.32)	(0.50)	(0.48)	(0.37)
Debt Issue	0.0465	0.0401	0.0329	-0.00604	-0.0184	-0.00809	0.0411	0.0360	0.0275
	(1.29)	(1.12)	(0.91)	(-0.14)	(-0.44)	(-0.19)	(0.57)	(0.50)	(0.37)
Loss	0.0304	0.0309	0.0315	0.0100	0.00683	-0.00361	-0.0611	-0.0618	-0.0556
	(0.44)	(0.45)	(0.44)	(0.13)	(0.09)	(-0.05)	(-0.76)	(-0.77)	(-0.69)
R&D/Adv	0.569**	0.591**	0.473*	-1.029*	-1.032*	-1.151**	-0.436	-0.414	-0.479
	(2.01)	(2.16)	(1.69)	(-1.86)	(-1.87)	(-2.02)	(-0.77)	(-0.76)	(-0.85)

EA Before	0.0188	0.0152	0.0159	0.0223	0.0189	0.0191	0.0448	0.0417	0.0416
	(0.66)	(0.54)	(0.56)	(0.77)	(0.66)	(0.66)	(0.74)	(0.69)	(0.69)
EG Before	0.00997	0.00930	0.0101	0.0277	0.0278	0.0289	0.0348	0.0332	0.0349
	(0.33)	(0.31)	(0.33)	(0.90)	(0.90)	(0.93)	(0.74)	(0.71)	(0.75)
|Ret|	-0.465***	-0.467***	-0.480***	-0.392**	-0.386**	-0.426***	-0.291	-0.296	-0.305
	(-3.04)	(-3.05)	(-3.12)	(-2.51)	(-2.48)	(-2.71)	(-1.42)	(-1.45)	(-1.51)
|Δ PE Ratio|	2.331***	2.325***	2.392***	2.399***	2.392***	2.456***	1.873***	1.848***	1.878***
	(4.76)	(4.75)	(4.85)	(4.75)	(4.73)	(4.82)	(2.65)	(2.61)	(2.66)
Med_Split	0.0694***	0.0685***	0.0721***	0.0582***	0.0571**	0.0607***	0.0656*	0.0653*	0.0682**
	(3.14)	(3.10)	(3.24)	(2.59)	(2.54)	(2.69)	(1.93)	(1.93)	(1.99)
Std.Dev (Ret)	-0.0130***	-0.0129***	-0.0125***	0.00445	0.00574	0.00466	-0.0105	-0.0101	-0.0101
	(-3.03)	(-3.04)	(-2.94)	(0.93)	(1.20)	(0.96)	(-0.98)	(-0.94)	(-0.95)
N	66,213	66,213	66,213	65,345	65,345	65,345	63,293	63,293	63,293
Pseudo R^2	0.017	0.015	0.016	0.042	0.040	0.040	0.013	0.011	0.011
Industry & Year FEs	Yes	Yes	Yes	No	No	No	No	No	No
Firm & Year FEs	No	No	No	Yes	Yes	Yes	No	No	No
Analyst & Year FEs	No	No	No	No	No	No	Yes	Yes	Yes

Panel B: Marginal Effects

Variables	***Unit Chg.***	***(1)***	***(2)***	***(3)***	***(4)***	***(5)***	***(6)***	***(7)***	***(8)***	***(9)***
Subsidy	Std.Dev	0.121			0.130			0.120		
TaxSubsidy	Std.Dev		0.124			0.123			0.118	
CashSubsidy	Std.Dev		0.120			0.099			0.109	
FedSubsidy	Std.Dev			0.008			0.040			-0.013
NonFedSubsidy	Std.Dev			0.111			0.122			0.108
Loan	Std.Dev	-0.002	-0.002	-0.001	-0.003	-0.003	-0.002	-0.002	-0.002	-0.002
Industry & Year FEs		Yes	Yes	Yes	No	No	No	No	No	No
Firm & Year FEs		No	No	No	Yes	Yes	Yes	No	No	No
Analyst & Year FEs		No	No	No	No	No	No	Yes	Yes	Yes

Table 3: Government subsidies, analyst inconsistency, and earnings releases & informativeness

This table provides the results for the effect of government subsidies on the likelihood of analyst directional inconsistency (*Inconsistent*) after considering the role of earnings releases and informativeness. Panel A reports results for earnings announcements immediately before analyst revisions. Panel B presents results for earnings informativeness by examining the sensitivity of cumulative three-day abnormal stock returns (*CARs*) to unexpected earnings (ΔE) separately for high and low-subsidized firms. Panel C reports results for the sensitivity of analyst inconsistency to high government subsidies conditional on unexpected earnings. *Subsidy* is the total dollar value of subsidies (excluding loans) per firm-year scaled by the market value of the firm at the end of the previous year. *Inconsistent* is an indicator variable equal to one for all earnings forecasts that are part of a revision pair where the aggregated earnings forecast revision moves in the opposite direction from the target price revision and zero otherwise. *EA Before* is an indicator variable equal to one if there was an earnings announcement for the firm on any of the prior 7 calendar days including the revision date and zero otherwise. ΔE is the unexpected earnings computed as the change in earnings relative to the previous fiscal year. *High_Gov_Subsidy* is an indicator variable that takes the value of one for high subsidy-receiving firms based on the median value of government subsidy amounts and zero otherwise. All the variables are defined in the Appendix. *, ** and *** denote statistical significance for the coefficients at 10%, 5%, and 1% respectively. Standard errors are clustered at the firm and year level.

Panel A: Earnings announcements immediately before analyst revisions

Variables	***(1)*** ***Inconsistent***
Subsidy	1.059***
	(6.51)
Loan	-0.0207**
	(-2.51)
Subsidy×EA Before	0.542**
	(2.37)
EA Before	0.0156
	(0.52)
N	66,213
Firm & Year FEs	Yes
Controls	Yes
Pseudo R^2	0.045

Panel B: Government subsidies and earnings informativeness

Variables	***(1)***		***(2)***
	High Subsidies	***Low Subsidies***	***High-Low Chi-Squared [p-value]***
	CARs	***CARs***	
ΔE	-0.100**	0.0187	10.17***
	(-2.24)	(0.28)	[0.00]
N	1,990	1,994	
Firm & Year FEs	Yes	Yes	
Controls	Yes	Yes	
Adj. R^2	0.036	0.074	

Panel C: Government subsidies, unexpected earnings, and analyst inconsistency

Variables	***(1)***
	Inconsistent
ΔE	-2.069
	(-0.70)
High_Gov_Subsidy	0.235***
	(5.89)
$\Delta E \times$ *High_Gov_Subsidy*	6.780**
	(1.99)
N	65,345
Firm & Year FEs	Yes
Controls	Yes
Pseudo R^2	0.05

Table 4: Entropy Matching

This table estimates the effect of government subsidies on analyst directional inconsistency, using the entropy balancing approach. We separate our sample into High-Subsidy and Low-Subsidy groups, where High-Subsidy (Low-Subsidy) is the Treatment (Control). Panel A provides the summary statistics for the original and the reweighted samples. Panel B presents the regression results for the re-weighted sample. All the variables are defined in the Appendix. Standard errors are clustered at the firm and year level. *, ** and *** denote statistical significance for the coefficients at 10%, 5% and 1% respectively.

Panel A: Summary Statistics

	Original Sample (Mean)			*Re-Weighted Sample (Mean)*		
Variable	***Treatment (N=33,087)***	***Control (33,148)***	***Difference [t-stat]***	***Treatment (N=33,087)***	***Control (N=33,148)***	***Difference [t-stat]***
Log (Horizon)	6.716	6.722	-0.006	6.716	6.716	-0.000
			(-1.08)			(-0.00)
Std.Dev (ROA)	0.037	0.032	0.005***	0.037	0.037	-0.000
			(3.06)			(-0.00)
Stock Issue	0.057	0.046	0.011	0.057	0.057	0.000
			(1.49)			(0.000)
Debt Issue	0.700	0.694	0.006	0.700	0.700	0.000
			(0.37)			(0.00)
Loss	0.095	0.060	0.035***	0.095	0.095	0.000
			(3.62)			(0.00)
R&D/Adv	0.026	0.037	-0.010	0.026	0.026	-0.000
			(-4.05)			(-0.00)
EA Before	0.680	0.687	-0.007	0.680	0.680	-0.000
			(-1.44)			(-0.000)
EG Before	0.513	0.512	0.005	0.513	0.513	0.000
			(0.06)			(0.000)
|*Ret*|	0.099	0.089	0.009***	0.099	0.099	0.000
			(5.17)			(0.000)
|Δ *PE Ratio*|	0.025	0.026	-0.001	0.025	0.025	-0.000
			(-1.77)			(-0.010)
Med_Split	0.431	0.431	0.000	0.431	0.431	0.000
			(0.05)			(0.000)
Std.Dev (Ret)	9.069	7.910	1.159***	9.069	9.068	-0.001
			(7.41)			(-0.00)

Panel B: Regression Analysis (Reweighted Sample)

Variables	***(1) Inconsistent***
Subsidy	0.932***
	(7.53)
N	65,364
Pseudo. R^2	0.042
Controls	Yes
Firm & Year FEs	Yes

Table 5: Government subsidies, analyst inconsistency, and informational opacity

This table presents the main results separately for high and low information opacity sub-samples. We employ two main measures of information opacity, i.e., the Bog financial readability index and the analyst coverage, and divide them into two groups based on their respective median values. All the variables are defined in the Appendix. Standard errors are clustered at the firm and year level. *, ** and *** denote statistical significance for the coefficients at 10%, 5% and 1% respectively.

Variable	***(1) Inconsistent High-Bog***	***(2) Inconsistent Low-Bog***	***(3) Inconsistent High-Analyst***	***(4) Inconsistent Low-Analyst***
Subsidy	0.757***	0.103	-0.505	0.671***
	(4.06)	(0.55)	(-1.28)	(4.54)
N	28,595	35,323	30,960	35,089
Pseudo R^2	0.016	0.017	0.014	0.020
Controls	Yes	Yes	Yes	Yes
Firm & Year FEs	Yes	Yes	Yes	Yes

Table 6: Government subsidies, analyst inconsistency, and governance quality

This table presents the main results separately for high and low governance quality sub-samples. We use four different measures of governance quality: Shareholder distraction, directors' board co-option, internal governance, and the hostile takeover index. Sub-samples are created using the governance quality measures and by dividing our sample into High (above median values) and Low (below median values) groups. All the variables are defined in the Appendix. Standard errors are clustered at the firm and year level. *, ** and *** denote statistical significance for the coefficients at 10%, 5% and 1% respectively.

Variables	***(1) Inconsistent High Distraction***	***(2) Inconsistent Low Distraction***	***(3) Inconsistent High Co-opted***	***(4) Inconsistent Low Co-opted***	***(5) Inconsistent High Int-Gov***	***(6) Inconsistent Low Int-Gov***	***(7) Inconsistent High Hostile***	***(8) Inconsistent Low Hostile***
Subsidy	0.944**	0.228	0.843***	0.530	-0.022	0.695***	-0.177	0.124***
	(2.21)	(0.36)	(4.72)	(1.60)	(-0.10)	(4.46)	(-0.58)	(3.27)
N	7,781	7,741	24,764	26,104	28,296	28,538	26,847	26,615
Pseudo R^2	0.088	0.084	0.041	0.045	0.049	0.045	0.046	0.045
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm & Year FEs	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Table 7: Government subsidies, analyst inconsistency, and product market competition

This table presents the main results separately for high and low product market competition sub-samples. We use the product fluidity measure proposed by Hoberg et al. (2014) to measure product market competition. Sub-samples are created using the product fluidity measure and by dividing our sample into High (above median values) and Low (below median values) groups. All the variables are defined in the Appendix. Standard errors are clustered at the firm and year level. *, ** and *** denote statistical significance for the coefficients at 10%, 5% and 1% respectively.

Variables	***(1) Inconsistent***	***(2) Inconsistent***
	High Competition	***Low Competition***
Subsidy	0.506***	0.277
	(3.07)	(1.29)
N	32,393	32,381
Pseudo R^2	0.018	0.014
Controls	Yes	Yes
Firm & Year FEs	Yes	Yes

Table 8: Government subsidies, analyst inconsistency, and target price accuracy

This table presents the regression results for the effect of increased analyst inconsistency in response to government subsidies on target price accuracy. *TPAcc* is the target price accuracy computed as the absolute difference between the revised target price and the actual stock price 12 months after the release of the target price scaled by the stock price two days before the revision and multiplied by minus one. We include *Subsidy* with a two-year lag, whereas all other independent variables (including *Inconsistent*) have a one-year lag. All the variables are defined in the Appendix. Standard errors are clustered at the firm and year level. *, ** and *** denote statistical significance for the coefficients at 10%, 5% and 1% respectively.

Variables	***(1)***	***(2)***
	TPAcc	***TPAcc***
Inconsistent	0.0416	0.0827
	(1.44)	(1.48)
Subsidy	0.182	-0.861
	(0.71)	(-0.66)
Log (Market Value)	0.831***	0.0801
	(3.85)	(0.69)
Book-to-Market	0.161	0.388
	(1.20)	(1.21)
ROA	-0.211	-2.367
	(-0.36)	(-1.60)
Std.Dev (ROA)	0.237	1.764
	(0.28)	(0.96)
Subsidy × Inconsistent	-0.226**	-0.728**
	(-1.98)	(-2.22)
N	49,436	49,436
Adj. R^2	0.659	0.263
Firm FEs	Yes	No
Analyst FEs	No	Yes
Year FEs	Yes	Yes

Table 9: Government subsidies, analyst inconsistency, and implied volatility

This table presents the regression results for the effect of increased analyst inconsistency in response to government subsidies on implied volatility. $\Delta ImpliedVol$ is the natural log of the option-based implied volatility from two days after the analyst revision divided by the implied volatility from two days before the analyst revision. We include *Subsidy* with a two-year lag, whereas all other independent variables (including *Inconsistent*) have a one-year lag. All the variables are defined in the Appendix. Standard errors are clustered at the firm and year level. *, ** and *** denote statistical significance for the coefficients at 10%, 5% and 1% respectively.

Variables	***(1)*** ***ΔImpliedVol***	***(2)*** ***ΔImpliedVol***
Inconsistent	-0.000402	-0.000785
	(-0.25)	(-0.47)
Subsidy	-0.00790**	-0.00850*
	(-2.24)	(-1.75)
|*TP Revision*|	0.000448***	0.000138
	(2.94)	(1.18)
|*EPS Revision*|	-0.00411***	-0.00324***
	(-3.92)	(-2.77)
EPS Down	0.00482***	0.00679***
	(2.89)	(4.05)
TP Down	0.0158***	0.0159***
	(7.88)	(7.85)
Log (Market Value)	-0.00834	-0.00136
	(-1.62)	(-1.03)
Book-to-Market	-0.00312	0.0112**
	(-0.66)	(2.16)
R&D/Adv	-0.0824	-0.107**
	(-0.73)	(-2.42)
Std.Dev (ROA)	-0.0151	0.0233
	(-0.34)	(0.67)
Loss	-0.00733	-0.00433
	(-1.12)	(-0.81)
Log (Horizon)	-0.000207	-0.00162
	(-0.14)	(-0.91)
Med_Split	0.000985	0.00148
	(0.69)	(1.00)
EA Before	-0.160***	-0.161***
	(-31.54)	(-31.84)
Inconsistent × *Subsidy*	0.00828**	0.00825**
	(2.42)	(1.98)
N	385,975	385,975
Adj. R^2	0.342	0.333
Firm FEs	Yes	No
Analyst FEs	No	Yes
Year FEs	Yes	Yes

Table 10: Government subsidies and analyst inconsistency: Target price forecasts and stock recommendations

This table presents the results for the association between government subsidies and analyst directional inconsistency between target price forecasts and stock recommendations. All the variables are defined in the Appendix. We control for industry-year fixed effects in Columns (1) to (3), firm-year fixed effects in Columns (4) to (6), and analyst-year fixed effects in Columns (7) to (9). Standard errors are clustered at the firm and year level. *, ** and *** denote statistical significance for the coefficients at 10%, 5% and 1% respectively.

Variables	***(1) Inconsistent***	***(2) Inconsistent***	***(3) Inconsistent***	***(4) Inconsistent***	***(5) Inconsistent***	***(6) Inconsistent***	***(7) Inconsistent***	***(8) Inconsistent***	***(9) Inconsistent***
Subsidy	0.424***			0.412***			0.434***		
	(3.40)			(4.06)			(5.46)		
FedSubsidy		0.140			0.116			0.148	
		(1.58)			(0.86)			(1.33)	
NonFedSubsidy		1.181***			1.188***			1.186***	
		(4.28)			(4.13)			(6.91)	
CashSubsidy			0.256***			0.241*			0.273***
			(2.07)			(1.80)			(2.15)
TaxSubsidy			1.000***			0.974***			1.012***
			(3.34)			(3.19)			(4.99)
Loan	-0.00157	0.00551	0.00440	-0.00264	0.00444	0.00266	-0.00334	0.00383	0.00309
	(-0.16)	(0.77)	(0.59)	(-0.24)	(0.63)	(0.35)	(-0.33)	(0.58)	(0.43)
N	14,859	14,859	14,859	14,859	14,859	14,859	14,859	14,859	14,859
Industry & Year FEs	Yes	Yes	Yes	No	No	No	No	No	No
Firm & Year FEs	No	No	No	Yes	Yes	Yes	No	No	No
Analyst & Year FEs	No	No	No	No	No	No	Yes	Yes	Yes
Pseudo R^2	0.067	0.071	0.067	0.078	0.072	0.076	0.065	0.068	0.065
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Table 11: ITCV analysis

This table presents results for the impact threshold for a confounding variable (ITCV) analysis, examining partial correlations between each of the control variables and the dependent variable (*Inconsistent*) and the partial correlations between each of the control variables and the independent variable of interest (*Subsidy*). We present the ITCV threshold in Column (1) for the *Subsidy* variable and the absolute impact values for each of the control variables in Column (2).

Variables	***(1)*** ***ITCV***	***(2)*** ***Absolute Values***
Subsidy	0.119	
Loan		0.114
Log (Horizon)		0.000
Std.Dev (ROA)		0.003
Stock Issue		0.004
Debt Issue		0.008
Loss		0.100
R&D/Adv		0.000
EA Before		0.080
EG Before		0.032
|Ret|		0.045
|Δ PE Ratio|		0.045
Med_Split		0.095
Std.Dev (Ret)		0.055
Percent of bias		85.72%

Appendix

Table A1: Variable definitions

This table provides the definitions for all the variables undertaken for the study.

Variables	Definitions
Dependent	
Inconsistent	An indicator variable equal to one for all the earnings forecasts that are part of a revision pair where the aggregated earnings forecast revision moves in the opposite direction from the target price revision and zero otherwise (Iselin et al., 2021)
TPAcc	The absolute difference between the revised target price and the actual stock price 12 months after the release of the target price scaled by the stock price two days before the revision and multiplied by minus one (Iselin et al., 2021)
Δ*ImpliedVol*	The natural logarithm of the implied volatility from two days after the analyst revision divided by the implied volatility from two days before the analyst revision
Independent	
Subsidy	The total dollar value of subsidies (excluding loans) per firm-year scaled by the market value of the firm at the end of the previous year
CashSubsidy	The total dollar value of cash subsidies per firm-year scaled by the market value of the firm at the end of the previous year
TaxSubsidy	The total dollar value of tax subsidies per firm-year scaled by the market value of the firm at the end of the previous year
Loan	The total dollar value of loans per firm-year scaled by the market value of the firm as at the end of the previous year
FedSubsidy	The total dollar value of subsidies (excluding loans) per firm-year awarded by the federal government scaled by the market value of the firm as at the end of the previous year
NonFedSubsidy	The total dollar value of subsidies (excluding loans) per firm-year awarded by the non-federal governments (i.e., local and state) scaled by the market value of the firm as at the end of the previous year
Log (Horizon)	The logarithm of the number of days between the revised forecast date and the fiscal period end date of the longest horizon forecasted period
Std.Dev (ROA)	The standard deviation of the annual return-on-assets (*ROA*) over the previous five fiscal years
Stock Issue	An indicator variable equal to one if the total shares outstanding increased by 10% or more over the prior fiscal year and zero otherwise
Debt Issue	An indicator variable equal to one if the firm issued debt during the prior fiscal year and zero otherwise
Loss	An indicator equal to one if the firm reported a loss in the prior fiscal year and zero otherwise
R&D/Adv	The sum of research and development (*R&D*) and advertising expenditures divided by the total assets
EA Before	An indicator variable equal to one if there was an earnings announcement for the firm on any of the prior 7 calendar days including the revision date and zero otherwise
EG Before	An indicator variable equal to one if there was a management earnings forecast for the firm on any of the prior 7 calendar days including the revision date and zero otherwise
|*Ret*|	The absolute value of the firm's raw return between the date of the initial forecast date and the forecast revision date
|Δ*PE Ratio*|	The absolute value of the change in the cyclically adjusted market-wide P/E ratio taken from Robert Shiller's website
Med_Split	An indicator variable equal to one if the initial target price was above the median consensus target price outstanding at the time of the revision and the initial earnings forecast was below the median consensus earnings forecast outstanding at the time of the revision or vice versa and zero if both were either above or below the median consensus
Std.Dev (Ret)	The standard deviation of the stock returns over the twelve months of the prior fiscal year
Log (Market Value)	The logarithm of the market value of equity measured as of the end of the prior fiscal year
Book-to-Market	The book value of assets divided by the market value of assets

ROA	The net income divided by the total assets
|*TP Revision*|	The absolute value of the target price revision scaled by stock price two days prior to the revision
|*EPS Revision*|	The absolute value of the annualized aggregated earnings per share revision scaled by stock price two days prior to the revision
EPS Down	An indicator variable equal to one if the aggregated earnings estimate was revised downward and zero otherwise
TP Down	An indicator variable equal to one if the target price estimate was revised downward and zero otherwise

Table A2: Percentages of earnings estimate revisions directionally inconsistent with target price revisions

This table replicated the directional inconsistencies between the revisions to target price and earnings forecasts (Iselin et al., 2021). It shows the percentage of these observations where the direction of the earnings estimate revision is inconsistent with the direction of the target price revision separately for each year of the sample period and each fiscal period from 1 to 7 quarters into the future and from 1 to 5 years into the future. The bottom row presents the directional inconsistencies for the full sample.

Year	***Fiscal Period Forecasted***												
	Qtr. 1	***Qtr. 2***	***Qtr.3***	***Qtr. 4***	***Qtr. 5***	***Qtr. 6***	***Qtr. 7***	***Year 1***	***Year 2***	***Year 3***	***Year 4***	***Year 5***	***Total***
2004	20.8%	19.60%	18.90%	17.89%	18.30%	16.40%	15.81%	16.97%	13.10%	19.31%	19.05%	19.53%	17.20%
2005	22.4%	20.80%	21.20%	18.50%	18.50%	15.70%	17.56%	18.90%	13.50%	19.01%	19.45%	18.31%	18.45%
2006	24.2%	23.70%	23.94%	22.30%	19.50%	18.90%	20.90%	21.60%	16.30%	22.14%	22.50%	22.40%	21.30%
2007	23.8%	24.80%	24.41%	20.91%	17.47%	19.30%	19.38%	21.40%	15.50%	19.50%	22.70%	21.90%	20.70%
2008	17.03%	17.70%	17.85%	17.10%	14.39%	16.70%	18.50%	18.99%	13.01%	14.50%	20.05%	19.50%	15.92%
2009	27.80%	28.10%	27.01%	22.81%	23.01%	23.50%	25.00%	24.57%	20.00%	21.0%	28.50%	27.07%	24.68%
2010	25.40%	25.10%	25.40%	21.20%	22.10%	19.80%	19.50%	21.90%	17.60%	18.00%	25.50%	22.40%	22.14%
2011	26.17%	25.20%	25.50%	22.10%	19.71%	20.02%	19.96%	22.50%	17.26%	17.80%	24.51%	24.07%	22.00%
2012	28.20%	25.60%	25.70%	24.50%	24.22%	21.36%	21.70%	23.05%	19.19%	20.82%	26.70%	27.50%	23.53%
2013	34.70%	33.50%	32.60%	30.30%	30.05%	28.30%	29.40%	27.89%	24.50%	25.45%	29.80%	28.60%	29.56%
2014	35.20%	28.70%	31.50%	25.40%	24.85%	25.30%	25.40%	26.70%	21.45%	21.70%	26.90%	23.77%	27.05%
2015	32.95%	30.10%	28.95%	25.30%	25.11%	25.80%	26.70%	27.12%	22.20%	21.60%	26.50%	26.52%	27.17%
2016	33.02%	31.40%	31.85%	27.38%	26.90%	28.50%	28.50%	27.60%	23.50%	24.20%	29.20%	26.71%	28.50%
2017	35.40%	32.30%	31.07%	27.48%	27.80%	26.80%	27.30%	26.70%	22.70%	24.40%	29.30%	26.50%	28.10%
2018	32.05%	31.01%	29.60%	25.80%	26.10%	27.02%	27.04%	28.70%	22.25%	24.10%	27.89%	27.71%	27.52%
													24.80%
N	495,344	474,361	428,470	373,663	272,431	197.635	146,957	581,217	571,459	242,633	38,630	22,107	3,844,907

Table A3: Frequency of upward and downward revisions

This table shows a frequency table for the direction of the revisions to the concurrent earnings (down the Rows) and target price forecasts (across the Columns). The bottom row indicates the total revisions in each target price revision categories, whereas the rightmost column indicates the total number of revisions in each earnings forecast revision categories.

	Target Price Direction			
Earnings Direction	***Down***	***No Change***	***Up***	***Total***
Down	125,262	2,224	48,346	175,832
No Change	2,731	2,437	4,307	9,475
Up	50,068	3,079	233,010	286,157
Total	178,061	7,740	285,663	471,464