The Ripple Effect of IPO Underwriting Bias on Peer-Firm Analyst Recommendations*

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Abstract

We document a novel, indirect form of analyst bias, which we term *Peer-firm IPO Optimism* (PFIO): when a brokerage underwrites an IPO, its affiliated analysts issue more favorable recommendations for the issuer's product-market peers. Using 1,730 U.S. IPOs from 2003 to 2023, we show that from two months before through one month after the IPO listing date, affiliated analysts become significantly more optimistic about peers: the probability of a buy recommendation increases by 5.6% and the probability of a sell recommendation decreases by 21.6%. PFIO predicts a lower likelihood of "broken" IPOs (negative first-day returns) and is stronger when underwriting incentives are larger and when covered peers are more visible or more complex. PFIO-affected positive recommendations are less informative, and EPS and long-term growth forecasts exhibit no systematic inflation, helping rule out key non-strategic explanations. Markets do not differentially discount PFIO-affected recommendations, and PFIO persists at banks sanctioned under the 2003 Global Analyst Research Settlement, indicating limited investor and regulatory adjustment to this indirect bias.

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1 Introduction

A well-executed initial public offering (IPO) is central to an underwriter's franchise. In the near term, the bank earns an underwriting spread of roughly 3%–7% of proceeds and may realize additional trading profits via the greenshoe option. Over the longer run, successful distribution enhances the bank's reputation, attracts future mandates, and strengthens client relationships. However, IPO underwriting entails substantial overpricing risk. Over the past two decades, roughly 20% of U.S. IPOs have posted negative first-day returns, becoming "broken" IPOs. Broken IPOs are costly: when the aftermarket price falls below the offer price, the underwriter incurs stabilization and inventory costs, strains relationships with institutional clients that receive allocations, and undermines its perceived ability to price and place issues, ultimately jeopardizing market share in future offerings (Booth and Smith, 1986; Dunbar, 2000). Given these stakes, underwriters actively promote offerings through roadshows, marketing campaigns, and investor outreach to build demand and reduce the likelihood of a broken IPO.

Affiliated equity analysts can complement these efforts by shaping investor sentiment around the issuer's product-market space. Even when analysts are restricted from discussing the IPO firm directly, they can still influence the valuation environment in which the deal is priced and received by issuing research on the issuer's peers. Three forces make such indirect support particularly attractive. First, IPO pricing often relies on relative valuation using industry comparables, which reflect not only fundamentals but also sentiment and prevailing market conditions (Ritter and Welch, 2002).[1] Second, during the regulatory "quiet period"—from the submission of the preliminary prospectus to 25 days after listing—affiliated analysts are prohibited from discussing the IPO firm with market participants outside the prospectus, but they may continue regular coverage of peer firms, creating a channel for indirect promotion. Consistent with this mechanism, Alhusaini et al. (2024) find that institutional investors

[1]Prior research shows that investment banks strategically select high-growth, highly valued peers in IPO and M&A settings to justify the offering price (Eaton et al., 2022b; Paleari et al., 2014).

trade on the IPO date on information contained in analysts' recommendation revisions of peer firms during the quiet period. Third, despite regulatory efforts to mitigate conflicts of interest, such as the 2003 Global Analyst Research Settlement (the Global Settlement), analysts continue to face reputational and commercial pressures aligned with their firms' investment banking activities (Corwin et al., 2017). While the Global Settlement targeted overt bias in coverage of banking clients, strategic optimism directed at peer firms without a direct banking relationship is less transparent and harder to monitor.

These incentives make optimism toward peer firms an appealing but risky strategy. Overly favorable reports can degrade research quality, compromise analysts' fiduciary duties to institutional investors, and expose them to reputational or regulatory sanctions. In addition, if investors view peer firms as close competitors, excessive praise may reduce the relative appeal of the IPO issuer itself. Whether affiliated analysts actually engage in this behavior remains an open empirical question.[2]

In this paper, we first examine whether IPO underwriting increases affiliated analysts' optimism toward peer firms, a phenomenon we term *Peer-firm IPO Optimism* (PFIO). Using analyst recommendations for U.S.-listed firms from 2003 to 2023, we find robust evidence consistent with PFIO. We define the IPO underwriting window as the period from two months before through one month after the IPO listing date, when underwriters are most actively engaged in marketing and supporting the offering. We find that, during this window, affiliated analysts issue more favorable recommendations for product-market peers of the IPO issuer. The result holds when we examine buy and sell recommendations separately: the probability of a buy recommendation increases by 2.87 percentage points (5.6% relative to the unconditional mean), while the probability of a sell recommendation decreases by 1.34 percentage points (21.6% relative to the unconditional mean). To isolate the source of this effect, we include analyst–month and firm–month joint fixed effects, ensuring that our

[2]Internet Appendix Figure IA.1 illustrates our research question: Do affiliated analysts at Broker A strategically tilt their recommendations toward Firm 1 when Broker A is underwriting the IPO of Firm 2, a peer firm?

estimates reflect *within-analyst* and *within-firm* variation rather than cross-sectional differences in firm characteristics or time-varying changes in an analyst's overall recommendation tendency.

To examine whether PFIO reflects analysts' strategic behavior to support the IPO, we test two predictions that link PFIO to IPO outcomes and to deal- and peer-level incentives. First, if PFIO serves to bolster demand, it should be associated with a lower probability that an IPO breaks. We construct two measures of PFIO: *PFIO coverage* (extensive margin), an indicator equal to one if at least one peer is covered by an analyst affiliated with the lead underwriter during the offering window, and *PFIO level* (intensive margin), which benchmarks the affiliated analyst's recommendation tone against that of unaffiliated analysts across the issuer's peer firms. Both measures significantly predict a lower probability that an IPO breaks.

Second, we examine whether PFIO intensifies when the IPO is high stakes and for peer firms that are more visible or more complex. At the deal level, PFIO is stronger for offerings with larger proceeds, higher gross spreads, and more lead underwriters, settings in which underwriters' incentives to support the IPO are greater. At the peer-firm level, PFIO is amplified for peers that are more visible (larger market capitalization, higher EDGAR download activity) and more complex (higher intangible-asset intensity), suggesting that affiliated analysts direct optimism toward firms where it is likely to have the greatest impact and to be harder to verify. Taken together, these patterns are consistent with PFIO as a deliberate, sentiment-shaping behavior deployed during the IPO underwriting window.

We also rule out several non-strategic explanations for PFIO. First, superior information possessed by affiliated analysts is unlikely to be the primary driver because PFIO-affected positive recommendations (buys and upgrades) are *less* informative. Portfolios formed by following PFIO-affected positive recommendations earn 12-month DGTW-adjusted buy-and-hold abnormal returns (BHARs) that are 2.97% (buys) to 4.64% (upgrades) lower than those following comparable non-PFIO recommendations. Second, behavioral mechanisms such as

the endowment effect or distraction from IPO-related workload do not explain PFIO: during IPO underwriting, we observe neither inflation nor deterioration in the accuracy of one-year-ahead EPS forecasts, and no systematic increase in long-term growth (LTG) forecasts. Finally, hot-issue IPO-cycle dynamics are unlikely to account for our results. The findings are robust to controls for industry returns and to the inclusion of high-dimensional fixed effects (firm–month and analyst–month), which absorb time-varying industry-level market sentiment.

Having established that affiliated analysts engage in strategic PFIO, we next examine whether investors recognize this bias and adjust their reactions accordingly. After conditioning on firm and analyst characteristics and including high-dimensional fixed effects, we find that markets do not discount PFIO-affected positive recommendations (buys and upgrades) and find only mixed evidence of stronger reactions to negative recommendations (sells and downgrades). These results indicate that investors do not fully adjust to PFIO.

We then test whether regulation targeting direct-affiliation bias, specifically the 2003 Global Settlement, curbs PFIO. Unlike Corwin et al. (2017), who show that direct-affiliation bias disappears at sanctioned banks but remains at non-sanctioned banks, we find that PFIO persists across both groups. Therefore, regulation that constrains overt bias does not materially reduce PFIO, which is more subtle and indirect.

Our findings are robust to several additional checks. First, to address concerns that recommendation labels are subjective, we replace recommendations with target prices and re-estimate our baseline models; the PFIO indicator remains positive and significant, implying higher target prices for peers covered by affiliated analysts during the underwriting window. Second, we tighten the peer definition from the top 15 TNIC peers to the top 10 and top 5; the results remain statistically robust, and the economic magnitudes increase monotonically as similarity intensifies, indicating that PFIO is strongest for the closest comparables.

Our study contributes to research on analysts' conflicts of interest arising from investment banking affiliations. Prior work shows that affiliated analysts provide optimistically

biased coverage for investment banking clients in order to attract future business (Cliff and Denis, 2004; Dechow et al., 2000; James and Karceski, 2006; Krigman et al., 2001; Michaely and Womack, 1999; O'brien et al., 2005). Although the 2003 Global Analyst Research Settlement reduced direct-affiliation bias at sanctioned banks, it persisted at non-sanctioned banks (Corwin et al., 2017), and markets did not fully offset these biases (Dechow et al., 2000; Michaely and Womack, 1999).

We extend this literature by documenting a novel, indirect channel: PFIO, whereby affiliated analysts strategically inflate recommendations for peer firms when their brokerage underwrites an IPO. This bias can arise regardless of whether the peer firm has a direct banking relationship with the underwriter, making it subtler and harder to regulate while posing similar risks to market efficiency. To our knowledge, we provide the first systematic evidence on PFIO.

Our paper also contributes to the literature on shared analyst coverage and cross-firm information links. While prior studies show that common analyst coverage conveys valuable information about firm fundamentals (Alhusaini et al., 2024; Ali and Hirshleifer, 2020), we show that such links may also facilitate information *distortion* in the presence of investment banking incentives. Moreover, our results complement Pisciotta (2023), who document that IPO involvement impairs analysts' research quality due to cognitive limitations, by showing that analysts may also strategically bias their reports as part of broader IPO support efforts.

The remainder of the paper is organized as follows. Section 2 describes the data. Section 3 documents the existence of PFIO. Section 4 examines the strategic motives behind PFIO by analyzing its impact on the probability of a broken IPO and by conducting IPO- and peer-level heterogeneity tests. Section 5 rules out alternative non-strategic explanations for PFIO. Section 6 presents additional analyses, including evidence on market reactions, PFIO in target prices, the impact of regulatory constraints on PFIO, and robustness checks. Section 7 concludes.

2 Data and Key Variables Construction

2.1 Data

Data on U.S. IPOs are obtained from Refinitiv's Securities Data Company (SDC) database. We focus on U.S.-listed IPOs on the American Stock Exchange, New York Stock Exchange, and NASDAQ that issue ordinary common shares over 2003–2023. We exclude financial firms, foreign issues, real estate investment trusts, follow-on offerings, American depositary receipts (ADRs), closed-end funds, unit issues, blank check companies, rights issues, and trusts. We further require non-missing `gvkey` identifiers from Compustat and post-IPO return data from CRSP.

Data on analysts' recommendations, target prices, one-year-ahead earnings per share (EPS) forecasts, and long-term earnings growth (LTG) forecasts are obtained from the I/B/E/S database. Following Pisciotta (2023), we begin the sample in 2003 to ensure a consistent analyst regulatory environment and, in particular, a consistent recommendation system. In 2002, the NYSE adopted Rule 472 and NASD adopted Rule 2711, prompting the majority of brokerage houses to move from a five-tier stock-rating system to a coarser three-tier system (Birru et al., 2024; Kadan et al., 2009).

We match I/B/E/S brokerage firms to IPO underwriters by name. Because I/B/E/S provides only an identifier for each brokerage (typically an abbreviation of the full name, e.g., GOLDMAN for Goldman Sachs), we improve matching accuracy by collecting full brokerage names from Capital IQ's Transcript data.[3] Out of 3,190 IPOs, we retain 2,369 deals for which at least one lead underwriter can be matched to I/B/E/S.

We next identify peer firms for these IPOs. Following prior studies (e.g., Eaton et al.,

[3]Specifically, we match the full name of each analyst participating in conference calls from Transcript data to analysts in I/B/E/S covering the corresponding firm in the same year. We then link the analyst's affiliation in Transcript data to their `ESTIMID` in I/B/E/S. In some cases, multiple affiliations map to the same `ESTIMID` or vice versa due to name duplication or analyst turnover. We manually verify each instance and retain only precise matches based on abbreviations. Finally, we match brokerage firm names to underwriters in SDC.

2022a; Guo et al., 2023), we match each IPO firm to product-market peers using the Hoberg–Phillips[4] Text-based Network Industry Classifications (TNIC)[5]. TNIC defines firm-centric peer sets using continuous similarity in 10-K product descriptions, assigning each firm a set of close competitors in product-market space. In our main specification, for each IPO firm we select the fifteen firms with the highest TNIC product similarity; results are robust to using the top five or top ten matches. IPOs without TNIC matches are excluded. Because the TNIC data are currently available through 2023, our sample ends in 2023.

In our heterogeneity test, we incorporate EDGAR daily download volume from James Ryans's website.[6] We also use the Fama–French 48 industry returns and the Fama–French 12 industry classifications from Kenneth R. French's data library.[7]

In Table IA.1 in the Internet Appendix, we show that our results are qualitatively similar, though slightly smaller in magnitude, when we extend the sample back to 1991, the earliest year for which IPOs can be jointly mapped to I/B/E/S underwriters and TNIC peers.

2.2 Key Variables Construction

2.2.1 Analyst Recommendations and Target Prices

We construct a comprehensive monthly panel dataset of analyst recommendations for publicly listed U.S. companies. For each analyst–firm–month observation, we retain the most recent available recommendation, excluding those with revision dates prior to the announcement date. Following Malmendier and Shanthikumar (2014), we restrict the sample to recommendations issued within 180 days of their last revision date. Recommendations are

[4]We thank Professors Gerard Hoberg and Gordon Phillips for making the TNIC data publicly available at `https://hobergphillips.tuck.dartmouth.edu/`.

[5]We also identify peer firm information in IPO prospectuses, but most prospectuses do not list specific peers for valuation and instead only reference prominent industry leaders for context or broad comparison purposes.

[6]We thank Professor James Ryans for making the EDGAR daily download volume available at `http://www.jamesryans.com/`. Due to data availability, these EDGAR log files span January 2003 through June 2017.

[7]We thank Professor Kenneth R. French for making the data available at `https://mba.tuck.dartmouth.edu/pages/faculty/ken.french/data_library.html`.

standardized to a five-point scale, where *Strong Sell* equals 1 and *Strong Buy* equals 5. We also construct two dummy variables indicating whether a recommendation is classified as a *Buy* or *Sell*, based on whether the score is greater than or less than 3, respectively.

Similarly, we follow Bradshaw et al. (2019) to construct a monthly panel dataset of analyst target prices, using the latest target price issued by each analyst. Specifically, we scale the most recent target price by the stock price at the beginning of the month and exclude observations where the target price exceeds 400% or falls below 70% of the current stock price (adjusted for currency and stock splits). Additionally, we exclude companies with a stock price below $1. Although most target prices in I/B/E/S have an effective period of 12 months, actual adjustment frequencies are typically shorter. To account for this, we apply a similar restriction as with recommendations, limiting target prices to those issued within 180 days of their most recent announcement. However, our results remain robust to variations in the effective period.

2.2.2 Analyst EPS and Long-term Growth Forecasts

To rule out the alternative explanations that PFIO is driven by additional information or behavioral biases of affiliated analysts during the IPO underwriting period, we also construct a monthly panel of one-year-ahead EPS forecasts and long-term EPS growth forecast.

For each analyst, we retain the most recent one-year-ahead EPS forecast as of the end of each month and calculate the forecast error as follows:

$$\textit{Forecast Error}_{i,j,t} = \textit{EPS Forecast}_{i,j,t} - \textit{Actual EPS}_{j,t}, \tag{1}$$

where i, j, and t index the analyst, firm, and month, respectively. Following prior literature (e.g., Clement, 1999; Harford et al., 2019), we use three measures to assess forecast quality relative to the consensus forecast for the same firm over a comparable horizon. First, we

compute the proportional mean forecast bias ($PMFB$):

$$PMFB_{i,j,t} = \frac{Forecast\ Error_{i,j,t} - Consensus\ Forecast\ Error_{j,t}}{|Consensus\ Forecast\ Error_{j,t}|}. \tag{2}$$

Second, we calculate the proportional mean absolute forecast error ($PMAFE$):

$$PMAFE_{i,j,t} = \frac{|Forecast\ Error_{i,j,t}| - Consensus\ Absolute\ Error_{j,t}}{Consensus\ Absolute\ Error_{j,t}}. \tag{3}$$

Finally, we define relative accuracy as:

$$Accuracy_{i,j,t} = \frac{Median\ Absolute\ Error_{j,t} - |Forecast\ Error_{i,j,t}|}{SD(Absolute\ Errors)_{j,t}}. \tag{4}$$

$PMFB$ captures directional bias, while $PMAFE$ and $Accuracy$ measure scaled absolute forecast error. All variables are winsorized at the 1% level.

Analysts also issue long-term EPS growth (LTG) forecasts with a three- to five-year horizon. As with the one-year-ahead EPS forecast, we construct a monthly panel by retaining, for each firm, the most recent LTG forecast issued by each analyst. Because the LTG horizon is imprecisely defined, forecast errors will be measured with greater noise than for EPS. We therefore normalize each LTG forecast by subtracting the latest available consensus LTG (or, alternatively, scaling by it), which captures an analyst's optimism about a firm's LTG relative to other analysts covering the same firm.

2.2.3 Peer Firm IPO Event

Our primary independent variable is an indicator, $IPO\ underwriting_{i,j,t}$, which equals one for firm j covered by analyst i at time t if analyst i's brokerage firm is underwriting an IPO and firm j is a TNIC-defined peer of the IPO issuer; it equals zero otherwise. The underwriting window spans from two months before to one month after the calendar month containing the IPO's listing date ($[-2, +1]$ months). This interval captures the period during

which underwriters are most actively engaged in IPO-related activities, including roadshows, marketing, pricing, share allocation, and aftermarket price stabilization.

2.2.4 Other Variables

To assess whether PFIO is strategic, we conduct heterogeneity tests based on IPO deal attributes and firm characteristics. For each of the three IPO attributes—total proceeds, gross spread, and number of lead underwriters—we further classify the *IPO underwriting* dummy into two dummy variables, *High* and *Low*, depending on whether the corresponding IPO falls into the top tertile among all IPOs in our sample. For each of the three firm characteristics—firm size, EDGAR downloads, and report complexity—we construct a dummy variable equal to one if the firm falls into the top tertile in a given year, and zero otherwise.

Following prior research (e.g., Hirshleifer et al., 2019; Pursiainen, 2022), we control for factors that may influence analysts' reporting behavior to isolate the effect of our primary independent variable. Specifically, we include: an indicator for investment banking relationships between the brokerage and the covered firm (*IB affiliation*); firm coverage, the number of analysts following the firm (*Firm coverage*); analyst coverage, the number of firms covered by the analyst (*Analyst coverage*); broker size, the number of analysts employed by the brokerage (*Broker size*); firm-specific experience, measured as the number of months since the analyst began covering the firm (*Firm expertise*); and general experience, measured as the number of months since an analyst issued her first report (*Analyst experience*). We also control for the logarithm of the firm's stock price at the end of the previous month (*Log price*) and the one-month value-weighted return of the corresponding Fama-French 48 industry (*Industry VW return*). For detailed variable definitions, see Appendix A.

Table 1 reports descriptive statistics for our variables. The average recommendation is 3.655, with a median of 4, indicating a tilt toward *Buy* rather than *Sell* recommendations. The mean of the IPO-underwriting indicator is 0.009. In our I/B/E/S sample, 2,238 of 6,870 firms experience at least one IPO by a peer firm underwritten by a brokerage whose analysts

cover it, indicating that although peer IPOs are infrequent, exposure is widespread across firms. On average, each analyst covers 19 firms, and each firm is followed by 17 analysts. Analysts have an average of 13 years of experience and cover a given firm for 4.5 years. Lastly, the average brokerage in our sample employs 67 analysts, consistent with I/B/E/S's greater representation of larger brokerages.

3 IPO Underwriting and Analyst Peer Recommendation

In this section, we examine whether affiliated analysts issue systematically more optimistic recommendations toward peer firms when their brokerage underwrites an IPO, which we refer to as the PFIO phenomenon. Across a range of specifications, we find robust evidence consistent with PFIO. We further study the timing of this effect by replacing the underwriting indicator with relative-time indicators around the IPO listing date. The resulting event-time profile shows a clear increase in optimism that peaks during our predefined underwriting window and then attenuates thereafter, consistent with a temporary shift in relative optimism.

3.1 Baseline Results

In our baseline analysis, we estimate the following regression:

$$Recommendation_{i,j,t} = \beta_1 IPO\ underwriting_{i,j,t} + \beta_2 \mathbf{X}_{i,j,t} + \delta_{i,t} + \delta_{j,t} + \epsilon_{i,j,t}, \tag{5}$$

where $Recommendation_{i,j,t}$ denotes analyst i's effective stock recommendation for firm j in month t. The key regressor $IPO\ underwriting_{i,j,t}$ captures PFIO, and $\mathbf{X}i, j, t$ is the vector of controls defined in Subsection 2.2. We include analyst–month ($\delta_{i,t}$) and firm–month ($\delta_{j,t}$) fixed effects to absorb time-varying analyst- and firm-specific factors. This specification therefore exploits within-analyst and within-firm variation, alleviating concerns that results are driven by changes in firm fundamentals or by analysts' general propensity to be more

favorable during IPO event periods. Given potential analyst–firm matching, we also report estimates with analyst–firm and month fixed effects.

The results are presented in Table 2. Columns 1–4 report estimates for the recommendation scale, whereas Columns 5–8 present results for the *Buy* and *Sell* recommendation dummies, respectively. In the odd-numbered columns, we report estimates with analyst–firm and month fixed effects to account for the possibility that analysts are matched to firms they are more optimistic about. In each even-numbered column, we report our main-specification estimates with firm–month and analyst–month fixed effects, emphasizing within-firm and within-analyst comparisons.

As shown in Columns 1–4, *IPO underwriting* is associated with significantly more positive stock recommendations for peer firms of the IPO firm. The coefficients remain relatively stable across different specifications, with the coefficient of 0.0399 in Column 4 implies that affiliated analysts' recommendations for peer firms are, on average, 0.0399 points higher, equivalent to a 1.1% increase relative to the mean recommendation level of 3.655. Although this effect appears modest, it is approximately 42.9% of the effect of a direct investment banking relationship, as reflected in the coefficient on *IB affiliation* (0.0931), which has been well documented as a key driver of analyst optimism bias.

The results using *Buy* and *Sell* dummies as dependent variables remain consistent. Under the most stringent specification in Column 6, affiliated analysts are 2.87 p.p. more likely to issue a buy recommendation for peer firms when their brokerage underwrites an IPO. This corresponds to a 5.6% increase relative to the unconditional probability of a buy recommendation (51.7%). Similarly, Column 8 shows that affiliated analysts are 1.34 p.p. less likely to issue a sell recommendation for peer firms, representing a 21.6% decrease. Across measures, the coefficient on *IPO underwriting* is stably around half the magnitude of the coefficient on *IB affiliation*. This benchmarking suggests that the bias we document is not only statistically significant but also economically meaningful relative to a canonical source of analyst optimism, consistent with the presence of a distinct underwriting-related incentive

to issue more favorable recommendations for peer firms.[8]

The coefficients on the remaining control variables align with expectations. Analysts who cover more firms, are employed at larger brokerages, or have greater general experience tend to issue less optimistic recommendations, consistent with the view that these analysts face fewer career concerns and possess greater bargaining power, thereby reducing incentives to issue biased reports. By contrast, analysts with longer firm-specific experience tend to issue more favorable recommendations, potentially reflecting closer relationships with firm management.

3.2 Dynamic Effects

To better understand the dynamic evolvement of PFIO before, during, and after the underwriting window, we replace *IPO underwriting*$_{i,j,t}$ with a set of event-time indicators, *Relative period*$^q_{i,j,t}$, where $q \in \{-2, -1, 0, 1, 2\}$ and each q corresponds to a four-month bin. By construction, *Relative period*$^0_{i,j,t}$ corresponds to our four-month underwriting window and therefore coincides with *IPO underwriting*$_{i,j,t}$ in the baseline regression. For $q \neq 0$, *Relative period*$^q_{i,j,t}$ equals one if, in month t, firm j is in event-time bin q relative to a *peer firm's* IPO listing date, where that IPO was underwritten by analyst i's brokerage. The omitted category consists of all months outside these five four-month periods centered around the listing date.

Figure 1 plots the estimated coefficients from regressions with the recommendation scale as the dependent variable. Panel (a) reports estimates from specifications with analyst–firm and month fixed effects, while Panel (b) reports estimates from specifications with analyst–month and firm–month fixed effects.[9] Across both specifications, the event-time coefficients exhibit a pronounced hump-shaped pattern: they rise as the IPO listing date approaches,

[8]The coefficient on *IB affiliation* is much smaller when we instead include analyst–firm and month fixed effects because, although our definition of an investment banking relationship is in principle time-varying (i.e., whether there exists a direct investment banking relationship in the previous five years), in our data this variable is largely persistent within analyst–firm pairs and is therefore absorbed by the fixed effects.

[9]The dynamic pattern is qualitatively similar when using the peer *Buy* and *Sell* indicators as dependent variables.

peak in the underwriting window ($q = 0$), and then decline in the post-IPO periods. In Panel (a), the coefficient nearly doubles, rising from 0.015 in period $q = -2$ to 0.028 at $q = 0$, before falling to 0.017 by $q = +2$. Panel (b) shows a similar profile, rising from 0.024 to 0.036 at $q = 0$ and declining to 0.027 at $q = +2$.[10] This timing is consistent with a temporary increase in relative optimism toward peer firms concentrated around the underwriting window, providing dynamic support for our baseline PFIO results.

In sum, both the baseline regressions and the event-time evidence indicate that affiliated analysts issue systematically more optimistic recommendations toward peer firms when their brokerage underwrites an IPO, with the effect peaking during the underwriting window and attenuating thereafter.

4 PFIO as a Strategic IPO Behavior

In the previous section, we show that when a brokerage underwrites an IPO, its affiliated analysts issue more optimistic recommendations for the IPO firm's peers. We argue that this PFIO reflects analysts' incentives to support the IPO by conveying a more favorable view of peer firms. In this section, we test this strategic-optimism mechanism in two ways. First, we examine whether PFIO is positively associated with IPO outcomes—specifically, a lower likelihood of a "broken" IPO. Second, we test whether PFIO is more pronounced when the IPO is high-stakes or when the forecasted peer firms are more visible or operationally complex.

[10] Nonzero coefficients in the outer bins ($q = \pm 2$) are plausible for two reasons. First, IPO underwriting timelines vary widely (roughly three to 12 months from filing to listing), so PFIO may begin earlier than our four-month window for deals with longer pre-listing periods. Second, because event time is defined relative to peer firms' listing dates, event windows can overlap: in a given analyst–firm–month observation, firm j may be in $q = -2$ relative to one peer IPO while simultaneously being in $q = 0$ relative to another peer IPO, which can mechanically distribute the estimated effect across bins.

4.1 PFIO and the Risk of Broken IPOs

We first show that PFIO benefits IPOs underwritten by analysts' brokerage firms. A salient measure of IPO success is whether the aftermarket price soon falls below the offer price; such an IPO is commonly termed a "broken IPO."[11] Avoiding a broken IPO is particularly important because it is both immediately observable and readily interpretable as a negative signal about deal quality and pricing, making it a natural focal point for investor scrutiny and media coverage. For example, the 2019 Uber Technologies IPO closed about 7% below its offer price on its first trading day and was widely reported as a "broken" IPO, drawing immediate attention to the deal's pricing and reception.[12]

Beyond the optics, a broken IPO can impose immediate and persistent costs along several dimensions. In the near term, it can force costly price stabilization, including exercising overallotment (greenshoe) options, conducting open-market purchases, and warehousing inventory, which ties up balance-sheet capacity and increases inventory risk. Beyond these direct pecuniary costs, it can harm two core constituencies and, in turn, the underwriter's franchise. First, institutional investors allocated shares suffer prompt mark-to-market losses, potentially leading them to curtail participation in the bank's future deals, demand larger discounts, or reallocate commission business. Second, the issuer faces a negative market impression of its valuation and prospects, which can raise its cost of capital and make subsequent financing more difficult. Together, these effects can damage the underwriter's longer-run reputation as a pricer and distributor, jeopardizing future mandates and research credibility (Booth and Smith, 1986; Dunbar, 2000).

If affiliated analysts persistently and purposefully exhibit PFIO to reduce IPO break risk by bolstering market sentiment and secondary-market demand, PFIO should be negatively

[11] We do not view underpricing, measured as the first-day return, as an appropriate success metric because multiple competing incentives complicate the underwriters' preferred degree of underpricing. Consistent with this view, in unreported tests we examine the relationship between PFIO and underpricing and find no significant results.

[12] For example, *Wall Street Journal*: `https://www.wsj.com/articles/uber-stumbles-in-trading-debut-11557503554`.

related to the likelihood of a broken IPO. We test this prediction while controlling for issuer fundamentals and market conditions.

For each IPO, we construct two PFIO measures at the extensive and intensive margins. *PFIO coverage* equals one if the IPO has at least one peer firm covered by a lead underwriter during the IPO underwriting window; it captures the feasibility of expressing optimism through peer coverage and thus operates on the extensive margin. *PFIO level* is the average, across all peer firms of the IPO firm, of the difference between affiliated and unaffiliated analysts' recommendation scales; by benchmarking against unaffiliated analysts, it quantifies the intensity of affiliated analysts' optimism, conditional on *PFIO coverage* = 1, and thus measures PFIO on the intensive margin. *PFIO coverage* applies to all IPOs, whereas *PFIO level* is defined only when *PFIO coverage* = 1, which reduces the sample size.

Our dependent variable, *Broken IPO*, equals one if the first-day return of the IPO firm is negative, i.e., the first-day closing price is below the offer price. All models include controls for documented IPO characteristics related to pricing and underpricing: *Log assets*, *Log age*, *VC-backed*, *Tech industry*, *Top underwriter*, *Log proceeds*, and *Log filing-period duration*. We further control for broader market and industry conditions and sentiment: *Pre-IPO market excess return*, *Pre-IPO industry return*, and *Pre-IPO industry market-to-book ratio*. See Table A in the Appendix for detailed variable definitions and Table IA.3 in the Internet Appendix for summary statistics. Year and industry fixed effects are included in all specifications and standard errors are clustered at both the year and industry levels.

The results are reported in Table 3. Columns 1–2 present specifications using *PFIO coverage*, and Columns 3–4 present those using *PFIO level*. Across all specifications, PFIO is negatively related to the likelihood that an IPO breaks, with effects that are both statistically significant and economically meaningful. The Column 2 coefficient on *PFIO coverage* implies that having any peer firm covered by an affiliated analyst is associated with a 6.05 percentage point reduction in the probability of a broken IPO, nearly a 23.08% decline relative to the unconditional broken rate of 26.21% in our sample. Likewise, the Column 4 coefficient on

PFIO level indicates that a one-standard-deviation increase in PFIO (0.451) is associated with a 1.50 percentage point decrease in the probability of a broken IPO, a 5.73% decline.

The coefficients on the control variables are broadly consistent with expectations. Two characteristics that significantly predict the probability of a broken IPO are VC backing and total proceeds. VC-backed IPOs and larger deals are less likely to fall below the offer price, plausibly because reputable venture investors certify issuer quality, enhance pre-IPO governance and disclosure, and provide stronger aftermarket support, while larger offerings typically reflect stronger fundamentals, deeper demand, and more robust bookbuilding. Higher market sentiment—captured by pre-IPO market and industry returns and industry market-to-book ratio—is also associated with a lower probability of breaking. Interestingly, whether the lead underwriter is among the top 11 by deal size is not significantly related to this probability,[13] indicating that even top underwriters face material risk of a broken IPO.

4.2 IPO-level Heterogeneity Tests

A complementary way to assess whether PFIO reflects strategic behavior aimed at supporting the IPO is to examine whether its magnitude varies with deal characteristics. If PFIO is strategic, it should be more pronounced when the economic stakes are larger or when the underwriter has stronger incentives to influence market sentiment. We focus on three attributes: **total proceeds**, **gross spread**, and the **number of lead underwriters**. For each attribute, we partition IPOs using the cross-sectional distribution and define *High* as an indicator equal to one for observations in which *IPO underwriting* = 1 and the corresponding IPO falls in the top tercile of that attribute; *Low* is defined analogously for the remaining two terciles. Table 4 reports the results.

Total proceeds proxy for the size of the offering and, by extension, the financial stakes and market attention it attracts. Underwriters have stronger incentives to support larger IPOs because fees scale with proceeds and reputational consequences are amplified for large

[13] We obtain the list of top underwriters from Professor Jay Ritter's website: `https://site.warrington.ufl.edu/ritter/ipo-data/`.

deals; consequently, we expect more pronounced PFIO for large offerings. Columns 1–2 confirm this prediction: affiliated analysts' recommendations for peer firms are higher by 0.0063 when the IPO is in the top tercile of total proceeds, which is 17.5% larger than the effect for other IPOs. This pattern indicates that affiliated analysts' optimism is stronger when the associated IPO involves a larger deal size.

The **gross spread**, expressed as a percentage of total proceeds, captures underwriters' direct compensation and hence their financial incentive to promote the offering. Higher gross spreads should strengthen the motivation to ensure IPO success, potentially prompting greater PFIO. Columns 3–4 support this prediction: affiliated analysts' recommendations for peer firms are higher by 0.0296 when the IPO's gross spread is in the top tercile—approximately double the effect for other IPOs—indicating that PFIO is amplified when underwriters receive higher compensation.

Finally, **number of lead underwriters** reflects the breadth of syndicate participation. When more lead underwriters are involved, inflating market sentiment through peer-firm coverage is more effective because coordinated signals from multiple reputable brokerages more strongly shape buy-side perceptions and comparables-based narratives. With a larger syndicate, strategic PFIO is also less likely to be detected or singled out, since similar behavior by other prominent banks provides plausible deniability and reduces scrutiny of any one underwriter's research tone. As a result, strategic PFIO should be more pronounced for IPOs with more lead underwriters. Consistent with this logic, Columns 5–6 show that PFIO for IPOs with a high number of lead underwriters is 46.5% higher than for other IPOs.

Overall, PFIO is stronger for IPOs that offer greater incentives to underwriters, whether via larger proceeds, higher gross spreads, or broader syndicates, supporting the interpretation that PFIO reflects strategic efforts by affiliated analysts to enhance IPO outcomes during the offering period.

4.3 Firm-level Heterogeneity Tests

If PFIO is strategic, affiliated analysts should selectively vary their additional optimism across peer firms based on (i) the potential influence of a peer on market perceptions and (ii) the risk that biased recommendations are detected. Specifically, PFIO should be stronger for peers that are more visible, so that any optimistic signal has a larger market impact; and for peers that are more complex, so that recommendation adjustments are harder to detect. We test these hypotheses in Table 5. For visibility, we use firm size and EDGAR filing download volume; for opacity, we proxy with the intangible-asset ratio. For each characteristic, we define a dummy equal to one if the covered firm falls in the top tercile of the annual distribution and zero otherwise.

Firm size is measured by market capitalization at the end of the previous year. Larger firms attract more trading activity, institutional ownership, and media coverage, magnifying the impact of analyst opinions. As a second, direct measure of investor attention, we use the total number of human downloads of a firm's EDGAR filings in the prior year (Drake et al., 2017). High-profile peers with greater EDGAR download volumes should amplify any sentiment generated by optimistic coverage. If affiliated analysts seek to bolster sentiment for the IPO via peer coverage, the incentive should therefore be stronger for large and high-profile peers. Consistent with this prediction, Columns 1–2 show that the interaction between *IPO underwriting* and the *Big firm* dummy is positive and statistically significant, and Columns 3–4 show that the interaction between *IPO underwriting* and the *High profile* dummy is likewise positive and statistically significant.

We proxy opacity with the ratio of intangible assets to total assets, following Jiao (2023). When valuation is harder, analysts enjoy greater latitude to adjust recommendations without easy detection. If PFIO is strategic, it should be stronger for more complex peers. Columns 5–6 confirm this: the interaction between *IPO underwriting* and the *High complexity* dummy is positive and statistically significant.

In summary, the results in this subsection are consistent with PFIO as a deliberate strategy: affiliated analysts disproportionately direct optimistic coverage toward peers with greater capacity to shape market sentiment and toward peers where detection risk is lower.

5 Ruling Out Alternative Explanations

In the previous section, we presented evidence that PFIO is likely a strategic behavior used to support IPO underwriting. However, alternative interpretations of our main results may exist. This section discusses and seeks to rule out three potential explanations for the PFIO pattern we document.

5.1 Better Informativeness

IPO underwriting involves intensive due diligence and frequent interactions with the issuer's management (Alhusaini et al., 2024), which could provide affiliated analysts with superior information about industry conditions and peer-firm fundamentals. Under this information-based view, the incremental optimism we document could reflect genuinely better news about sector prospects. A key implication is that PFIO-affected recommendations should be *more informative*: investors who follow them should earn superior subsequent (medium-term) returns. By contrast, if PFIO reflects strategic bias rather than information, the return implications should reverse. In particular, PFIO-related positive recommendations (buys or upgrades) should underperform otherwise comparable non-PFIO positive recommendations, whereas PFIO-related negative recommendations should outperform their non-PFIO counterparts.

To assess whether PFIO-affected recommendations are more or less informative, we follow the panel-regression approaches in Birru et al. (2024) and Cohen et al. (2010). Our dependent variables are post-recommendation DGTW-adjusted buy-and-hold abnormal re-

turns (BHAR) computed over multiple investment horizons.[14] To abstract from immediate announcement effects, we exclude the recommendation day and the subsequent trading day; we analyze short-run price reactions separately in Section 6.1. We estimate the models separately by recommendation type (buy, upgrade, sell, and downgrade).

The key regressor, *IPO underwriting*, equals one if the recommendation on firm j is issued by analyst i at time t when analyst i's brokerage is underwriting an IPO and firm j is a TNIC-defined peer of the IPO issuer. As in earlier sections, we include a comprehensive set of analyst-, broker-, and firm-level controls. All regressions include analyst–firm and month fixed effects.[15]

We plot the estimated coefficients on *IPO underwriting* for DGTW-adjusted BHARs over the 1-, 3-, 6-, and 12-month horizons in Figure 2. The corresponding regression results are reported in Internet Appendix Table IA.4. Panel (a) shows that although following a PFIO-affected buy recommendation delivers an insignificantly higher BHAR of 32 basis points in the first month, the strategy begins to underperform comparable buy recommendations by month 3, and this shortfall persists thereafter. At the 12-month horizon, PFIO-affected buy recommendations yield, on average, a 2.97% lower BHAR than comparable buy recommendations. Panel (b) reports analogous results for upgrades. PFIO-affected upgrades begin to underperform in the first month, and the performance gap widens over time, culminating in a 4.64% shortfall in abnormal returns after one year. In contrast, there is no significant difference in returns between PFIO and non-PFIO sell or downgrade recommendations at any horizon; the estimated coefficients are smaller in magnitude and statistically insignificant.

Taken together, the sizable underperformance of PFIO-affected positive recommendations suggests that they are less informative. This pattern contradicts the view that affiliated analysts' additional optimism reflects superior industry insight acquired through IPO

[14] In Internet Appendix Figure IA.2 and Table IA.4, we also report results using cumulative daily DGTW-adjusted abnormal returns; the conclusions are qualitatively unchanged.

[15] We do not employ analyst–month or firm–month fixed effects, unlike in the main analysis, because the number of recommendations per analyst–month or firm–month is limited, which would result in sparse cells and over-differencing.

underwriting. Instead, it supports the interpretation of PFIO as a strategic effort to promote the IPO.

5.2 Behavioral Explanations: Endowment and Distraction

PFIO may arise non-strategically from behavioral forces rather than from deliberate attempts to support the IPO. We consider two related mechanisms: (i) an *endowment effect*, whereby analysts become genuinely more optimistic about the issuer and its sector after intensive IPO involvement, and (ii) *analyst distraction*, whereby IPO-related workload diverts attention from other coverage tasks and degrades output quality (Pisciotta, 2023). Both mechanisms predict that the incremental optimism observed in recommendations should be accompanied by detectable changes in analysts' fundamentals-based outputs.

Endowment effect. If affiliated analysts become sincerely more optimistic about the sector, we should observe inflation not only in recommendations but also in the fundamentals-based inputs that underlie valuations (Kecskes et al., 2017). Holding discount rates fixed, genuinely higher valuations should be justified by either higher expected cash flows or higher expected growth. Accordingly, sincere optimism should manifest in analysts' one-year-ahead EPS forecasts and/or long-term EPS growth (LTG) forecasts.

To test this implication, we replace recommendations with three standard measures of EPS forecast bias and accuracy (Clement, 1999; Harford et al., 2019; Hirshleifer et al., 2019). *PMFB* captures directional bias, whereas *PMAFE* and *Accuracy* capture forecast precision. Each metric benchmarks an analyst's one-year-ahead EPS forecast error for a given firm against the average error of all analysts covering the same firm at the same horizon. Panel A of Table 6 reports the results. Across specifications, the coefficients on *IPO underwriting* are economically small and statistically insignificant: affiliated analysts' EPS forecasts for peer firms are neither systematically more biased nor less accurate than those of unaffiliated analysts covering the same firm.

We next examine LTG forecasts. As discussed in Section 2.2.2, the LTG horizon is analyst-specific and often not explicitly defined. To capture relative optimism, we normalize each analyst's LTG forecast by the latest median consensus, either by subtracting it (LTG (Demedian)) or dividing by it (LTG (Ratio)). Panel B of Table 6 reports the results: Columns 1–2 use the subtraction-based normalization, whereas Columns 3–4 use the ratio-based normalization. Across specifications, the coefficients on *IPO underwriting* are economically small, change sign across models, and are statistically insignificant. Thus, we find no evidence that affiliated analysts become more optimistic about peers' long-run earnings growth during the IPO underwriting window.

Distraction. A different non-strategic mechanism is distraction. If heightened IPO workload diverts analysts' attention from other coverage, forecast quality should deteriorate during underwriting windows (Pisciotta, 2023). Under this limited-attention view, the elevated recommendations we document could reflect coarse updating or heuristics rather than strategic manipulation. However, our EPS-forecast results provide little support for this explanation: we do not observe any decline in affiliated analysts' peer-firm EPS forecast accuracy during underwriting windows.[16]

Taken together, affiliated analysts issue more optimistic recommendations without simultaneously forecasting higher near-term EPS or stronger long-term growth, and without a deterioration in forecast accuracy. This disconnect is hard to reconcile with either sincere optimism about peers' fundamentals or distraction-driven inattention. Instead, it suggests that recommendations are the primary margin of strategic PFIO. While a strategic analyst could, in principle, also inflate EPS or LTG forecasts, these forecasts are more verifiable ex post than recommendations, and forecast accuracy is a key criterion by which institutional investors evaluate analysts (Ljungqvist et al., 2007). As a result, strategically biasing EPS

[16]One reason our findings may differ from Pisciotta (2023) is that his study examines *all* firms covered by an underwriting analyst and documents a decline in average forecast accuracy, whereas we focus on the subset of *peer firms* of the IPO firm. These peer firms may benefit from analysts' enhanced industry engagement gained through IPO involvement (Brown et al., 2015; Green et al., 2014).

or LTG forecasts is likely more costly, making recommendations a comparatively cheaper vehicle for conveying optimism during the IPO underwriting window.

5.3 IPO Cycle

A last concern with our results is that both excessive optimism and IPO underwriting activity may be driven by common factors, the most salient of which is the IPO cycle. Prior research has shown that IPO volumes fluctuate significantly over time and that firms are more likely to go public when both they and their peers are highly valued by the market (Lowry and Schwert, 2004). Analysts' optimism and IPO underwriting arrangements could both be influenced by abnormally high market sentiment toward a sector experiencing an IPO surge.

However, this is unlikely to be the primary driver of our results. First, as shown in Table 2, our findings remain robust after controlling for monthly industry value-weighted returns and firm stock prices, which largely capture overall market sentiment toward the industry and the firm. Second, in our most stringent specification, we also include analyst–month and firm–month fixed effects. This approach allows us to compare the attitudes of affiliated and unaffiliated analysts toward the same firm while controlling for the average optimism of each analyst. To the extent that overall market sentiment should affect all analysts covering the same firm similarly, our high-dimensional fixed effects likely absorb the influence of the IPO cycle, thereby ruling out this alternative explanation.

6 Additional Analysis

In this section, we present additional analyses related to strategic PFIO. Specifically, we examine the short-term market reaction to PFIO-affected recommendations, assess whether regulations targeting direct affiliation bias curtail or enhance PFIO, explore whether PFIO is reflected in price targets, and verify the robustness of our peer-firm measure.

6.1 Market Reaction

So far, we have shown that PFIO is strategically employed to support the IPO and benefits the underwriter by reducing the risk of a deal break. This comes at the cost of lower recommendation informativeness: following PFIO-affected positive recommendations yields a 3% BHAR underperformance over a one-year horizon. A natural next question is whether investors recognize PFIO and adjust their responses to such recommendations. If investors learn and adapt, the benefits of strategic optimism, and hence the incentives to engage in it, should diminish.

If investors discount PFIO, market reactions to PFIO-affected recommendations should differ systematically from otherwise similar recommendations, with the direction depending on recommendation tone. For PFIO-affected buys and upgrades, investors should anticipate lower informativeness and respond less. By contrast, a sell or downgrade issued by an affiliated analyst may be perceived as unusually credible, implying a sharper negative reaction than for the average sell or downgrade.

To test these predictions, we compute three-day cumulative daily DGTW-adjusted abnormal returns (CAR) around each recommendation and compare CARs by *IPO underwriting* status, defined as in Section 5.1.[17] The results are reported in Table 7. Panel A presents t-tests for buys and sells, and for upgrades and downgrades relative to the prior recommendation. Panels B and C report regressions of announcement CAR on *IPO underwriting* with controls matching earlier sections and a range of fixed effects.

Panel A shows that PFIO-affected recommendations are associated with stronger market reactions across all categories. The average three-day CAR for a buy is 1.91%, rising to 2.55% under PFIO. For sells, the average CAR declines from -3.31% to -4.39%. Upgrades and downgrades exhibit similar magnification, with PFIO-affected recommendations generating 42.9% and 65.7% larger reactions in magnitude, respectively.

[17] In unreported analyses, we also examine market reactions in terms of aggregate trading volume and retail trading imbalances; the results are qualitatively similar.

These univariate differences could reflect confounding factors. Affiliated analysts are more likely to be employed by larger brokerages with greater reach, and peer firms may be larger and more visible on average. To address these concerns, Panels B and C estimate regressions that control for firm and analyst coverage, broker size, analyst experience, and past stock and industry returns, and include firm–month and analyst–month fixed effects as well as analyst–firm matching.

Columns 1–2 of Panel B report results for buys and Columns 3–4 for upgrades. For positive recommendations, the estimates indicate that markets do not discount the optimism of analysts expected to be subject to PFIO: the coefficients on *IPO underwriting* remain positive and economically meaningful once we impose analyst–firm matching and rely on within-firm and within-analyst variation.

Panel C presents results for sells and downgrades. For sells, the coefficients on *IPO underwriting* are negative across specifications, but are statistically significant only when including both analyst–month and firm–month fixed effects. As discussed in Section 5.1, these saturated specifications may create sparse cells and over-differencing, so we interpret this evidence cautiously. For downgrades, the coefficient is negative and statistically significant with analyst–firm matching, but changes sign across specifications, likely reflecting reduced power due to the smaller downgrade sample. Overall, the regression evidence provides at best limited and specification-sensitive support for stronger reactions to negative recommendations once confounding factors are addressed.

In sum, investors do not appear to discount positive recommendations that may be influenced by PFIO, and there is only limited evidence that negative recommendations receive stronger reactions. Because markets do not fully adjust for potential optimism, affiliated analysts retain incentives to issue strategically optimistic recommendations during the IPO period.

6.2 Impact of the Global Settlement

There has been increased regulatory scrutiny of affiliated-analyst bias, particularly following the 2003 Global Settlement. Corwin et al. (2017) show that, among the 12 sanctioned banks, direct affiliation bias largely disappeared, whereas affiliated analysts at non-sanctioned banks continued to display excessive optimism toward firms with direct investment-banking ties. Does the same regulation curtail PFIO, or does it intensify it? For PFIO, the direction is theoretically ambiguous. On the one hand, higher expected costs of biased coverage at sanctioned banks could spill over to reduce PFIO through stronger internal monitoring and a culture of research independence. On the other hand, because PFIO is more subtle and harder to detect, sanctioned banks may substitute toward these less observable relationships when direct affiliations are tightly policed. The net effect is therefore an empirical question.

To explore this, we define a dummy variable, *Sanctioned*, equal to one if the lead underwriter is among the 12 investment banks sanctioned under the 2003 settlement, and zero otherwise. We then interact *Sanctioned* with both *IPO underwriting* and *IB affiliation* to assess potential heterogeneity between sanctioned and non-sanctioned banks. The results are reported in Table 8. Columns 1 and 3 present estimates controlling for analyst–firm matching, and Columns 2 and 4 report results with firm–month and analyst–month fixed effects. Across all specifications, the coefficients on *IPO underwriting* remain positive and statistically significant while the interaction term between *IPO underwriting* and the *Sanctioned* dummy is small and not statistically significant. These results suggest that sanctioned and non-sanctioned banks exhibit equally strong PFIO.

In contrast, the results for direct underwriting bias exhibit a different pattern. The coefficient on *IB affiliation* increases from 0.0931 in Table 2 to 0.1276 in Column 4, indicating substantial direct affiliation bias among non-sanctioned banks. Meanwhile, the interaction term *IB affiliation*$\times$*Sanctioned* is negative and statistically significant, offsetting nearly 45% of the main *IB affiliation* effect. This pattern suggests that direct affiliation bias declined

markedly among sanctioned banks after the 2003 settlement, consistent with Corwin et al. (2017).[18]

In summary, while the 2003 Global Settlement appears effective in curbing analyst bias toward firms with direct investment banking relationships, it has not mitigated PFIO, likely because of its more subtle and less detectable nature.

6.3 Peer Target Price

A key limitation of analyst recommendations is their inherent subjectivity—identical ratings from different analysts may convey different implications for a firm's value or expected stock performance. To address this concern, we also examine the analyst's target price relative to the stock's price at the beginning of each month. We conduct a similar regression analysis following the approach outlined in Section 3, replacing recommendations with analyst target prices.

The results, reported in Table 9, are consistent with those based on stock recommendations. The coefficient on *IPO underwriting* remains significantly positive across specifications. The estimate in Column 2, 0.0077, implies a 3.8% increase in the expected stock price growth relative to the mean expected growth of 20.2%. These findings suggest that affiliated analysts also raise their target prices for peer firms during the IPO period when their brokerage underwrites the IPO.

6.4 Peer-Group Robustness

To evaluate the sensitivity of our findings to peer group construction, we re-estimate our baseline models using a narrower definition of product-market peers. While the baseline analysis relies on the top 15 most similar firms according to Hoberg-Phillips TNIC similarity scores, the robustness tests restrict the peer set to the top 10 and, alternatively, top 5 most

[18]In Internet Appendix Table IA.6, we replace the dependent variable with peer target prices, and the results remain qualitatively similar.

similar firms for each IPO. The results are reported in Table 10. Panel A presents estimates based on the top 5 peers, and Panel B reports results using the top 10 peers.

Across all outcome variables, the coefficients on *IPO underwriting* in both Panel A and Panel B remain positive and statistically significant. Relative to the main specification, the point estimates for the three recommendation measures uniformly increase, indicating that affiliated analysts deliberately direct their optimism toward the most comparable firms.

7 Conclusion

This paper documents a previously unrecognized form of analyst bias, *Peer-firm IPO Optimism* (PFIO), whereby affiliated analysts strategically inflate recommendations for peer firms when their brokerage is underwriting an IPO. Using a comprehensive sample of analyst recommendations from 2003 to 2023 and 1,730 U.S. IPOs, we show that affiliated analysts are 5.6% more likely to issue buys and 21.6% less likely to issue sells on peer firms during the underwriting window.

Our evidence indicates that PFIO is strategic and supports underwriting objectives. Higher PFIO, measured at both the extensive and intensive margins, predicts a lower probability that an IPO becomes "broken," and PFIO intensifies when the deal is higher stakes and when the targeted peers are more visible or more complex. These patterns are consistent with affiliated analysts selectively directing optimism toward the most consequential and hardest-to-verify settings.

We also rule out key alternative explanations. PFIO is unlikely to reflect superior information: PFIO-affected positive recommendations are less informative and underperform comparable non-PFIO recommendations by 2.97% to 4.64% in one-year DGTW-adjusted BHARs. Nor is PFIO explained by behavioral mechanisms such as sincere optimism (endowment effect) or IPO-induced distraction: affiliated analysts do not issue more optimistic one-year-ahead EPS forecasts or LTG forecasts for peer firms during underwriting windows,

and we observe no deterioration in EPS forecast accuracy. Finally, the results are robust to controls for IPO-cycle conditions, including industry-return controls and high-dimensional firm–month and analyst–month fixed effects.

PFIO persists in part because markets and regulation do not fully adjust to it. Even after conditioning on firm and analyst characteristics and using within-firm and within-analyst comparisons, investors do not systematically discount PFIO-affected positive recommendations. Moreover, PFIO remains present at banks sanctioned under the 2003 Global Settlement, underscoring a limitation of oversight frameworks that primarily target direct analyst–issuer links while overlooking indirect channels operating through peer-firm coverage.

By uncovering PFIO, the paper contributes to research on analyst incentives, conflicts of interest, and cross-firm information links. More broadly, our findings suggest that as constraints tighten on direct affiliation bias, incentives may shift toward subtler forms of influence that are harder to detect yet still move prices. An important direction for future work is to examine whether similar indirect promotion arises around other investment-banking events and through other information intermediaries.

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Figure 1: **Dynamics of Peer-Firm IPO Optimism (PFIO)**
This figure examines the dynamic evolution of Peer-firm IPO Optimism (PFIO) before, during, and after the IPO underwriting window. It plots estimated coefficients and 90% confidence intervals from event-time regressions that replace $IPO\ underwriting_{i,j,t}$ with indicators for five four-month bins relative to a peer firm's IPO listing date, $q \in \{-2, -1, 0, 1, 2\}$, where $q = 0$ corresponds to the four-month underwriting window. The omitted category includes all months outside these event-time bins. The dependent variable is the recommendation scale. Panel (a) reports estimates from specifications with analyst–firm and month fixed effects, while Panel (b) reports estimates from specifications with analyst–month and firm–month fixed effects. The sample period spans 2003–2023. Standard errors are clustered at both the analyst and month levels.

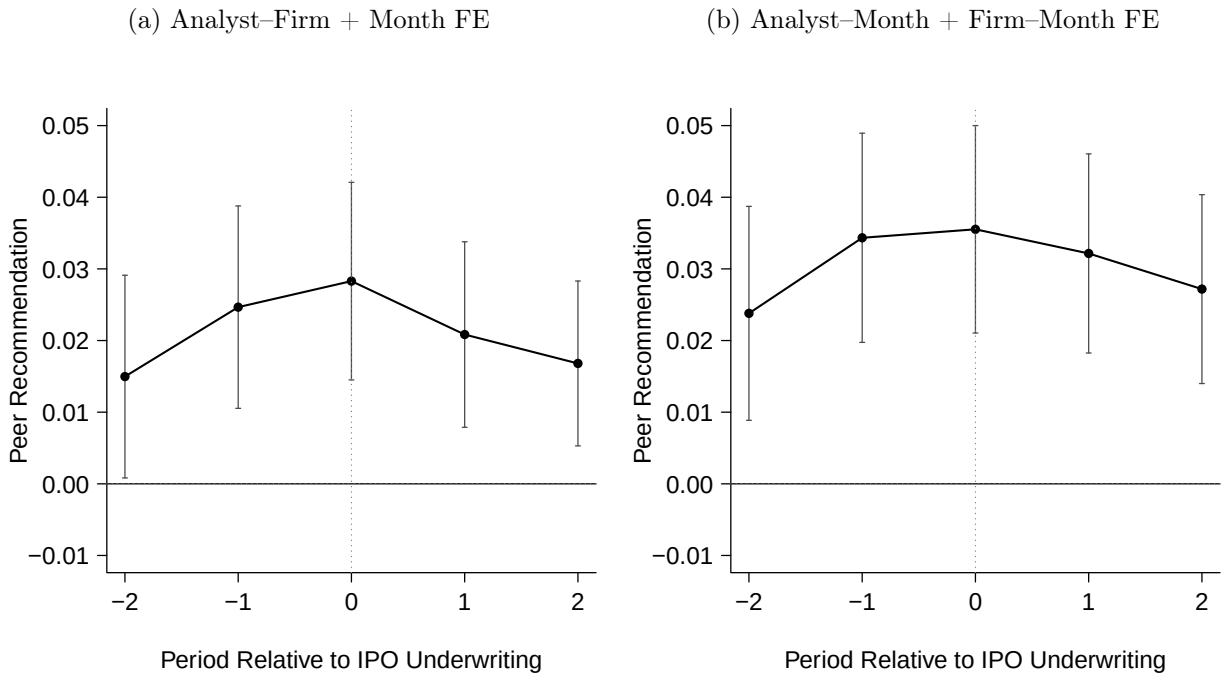


Figure 2: **PFIO-Affected Recommendation Informativeness: Mid-Term BHARs**
This figure examines the investment value, and hence the informativeness, of PFIO-affected recommendations. It plots the estimated coefficients and 90% confidence intervals on *IPO underwriting* for post-recommendation DGTW-adjusted buy-and-hold abnormal returns (BHARs) over the 1-, 3-, 6-, and 12-month horizons, by recommendation type (buy, upgrade, sell, and downgrade). The corresponding regression results are reported in Internet Appendix Table IA.4. Panel (a) reports results for buy recommendations, Panel (b) displays results for upgrades, Panel (c) presents results for sell recommendations, and Panel (d) shows results for downgrades.

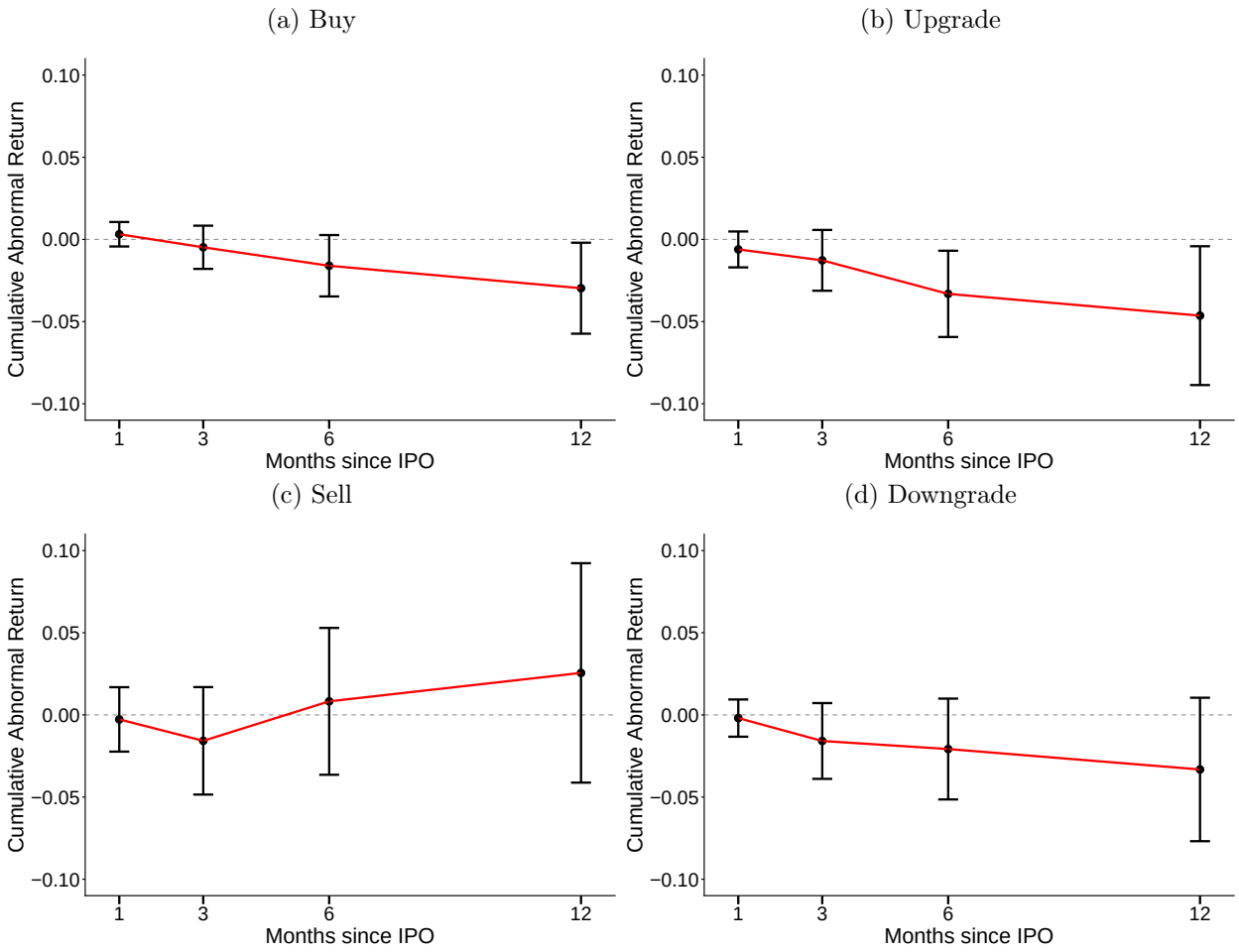


Table 1: **Summary Statistics**
This table reports summary statistics for the key variables used in the analysis, based on analyst–firm–month observations in the sample. The sample period covers 2003 to 2023. All variable definitions are provided in Appendix A.

Variable	Mean	St. Dev.	Min	p25	p50	p75	Max
Recommendations							
Recommendation	3.655	0.907	1.000	3.000	4.000	4.000	5.000
Buy recommendation	0.517	0.500	0.000	0.000	1.000	1.000	1.000
Sell recommendation	0.062	0.242	0.000	0.000	0.000	0.000	1.000
Broker relationship							
IPO underwriting	0.009	0.095	0.000	0.000	0.000	0.000	1.000
IB affiliation	0.079	0.270	0.000	0.000	0.000	0.000	1.000
Broker							
Broker size	66.943	61.622	1.000	21.000	46.000	105.000	300.000
Analyst							
Analyst coverage	18.853	15.500	1.000	13.000	18.000	23.000	487.000
Firm expertise	4.517	5.008	0.000	1.000	3.000	6.000	41.000
Analyst experience	13.004	9.707	0.000	5.000	11.000	20.000	41.000
Firm							
Firm coverage	17.311	10.401	3.000	9.000	16.000	24.000	66.000
Log price	3.398	1.038	0.683	2.766	3.453	4.058	6.018
Industry							
Industry VW return	1.019	5.609	−15.280	−2.200	1.260	4.430	15.870
Other Analyst Outputs							
Target price	1.202	0.256	0.769	1.050	1.156	1.289	2.351
PMFB	0.020	1.687	−8.176	−0.555	0.133	0.812	6.500
PMAFE	−0.089	0.566	−1.000	−0.450	−0.102	0.138	2.244
Accuracy	−0.014	0.876	−2.742	−0.403	0.000	0.486	2.024
Long-Term Growth (Demedian)	−0.841	9.946	−53.700	−3.700	−0.200	2.000	64.390
Long-Term Growth (Ratio)	0.048	0.926	−3.801	−0.250	−0.015	0.133	7.833

Table 2: **PFIO and Peer Recommendation**

This table reports regression results for analyst recommendations from the specification: $Recommendation_{i,j,t} = \beta_1 IPO\ underwriting_{i,j,t} + \beta_2 \mathbf{X}_{i,j,t} + \delta_{i,t} + \delta_{j,t} + \epsilon_{i,j,t}$. $Recommendation_{i,j,t}$ denotes one of three recommendation measures: (i) the recommendation score from 1 (*Strong Sell*) to 5 (*Strong Buy*); (ii) an indicator *Buy* equal to one if the recommendation is 4 (*Buy*) or 5 (*Strong Buy*); and (iii) an indicator *Sell* equal to one if the recommendation is 1 (*Strong Sell*) or 2 (*Sell*). $IPO\ underwriting_{i,j,t}$ equals one for firm j covered by analyst i at time t if analyst i's brokerage is underwriting an IPO and firm j is a TNIC-defined peer of the IPO issuer. $\mathbf{X}_{i,j,t}$ is a vector of control variables, including *IB affiliation*, an indicator equal to one if the brokerage serves as a lead underwriter for firm j's IPO; *Analyst coverage*, the number of firms covered by the analyst; *Broker size*, proxied by the number of analysts employed by the brokerage; *Firm expertise*, the analyst's experience covering firm j; *Analyst experience*, the analyst's overall work experience; *Log price*, the logarithm of the firm's lagged stock price; and *Industry VW return*, the monthly value-weighted return of the firm's Fama-French 48 industry. The sample period spans 2003–2023. Definitions of all variables are provided in Appendix A. Standard errors are clustered at both the analyst and month levels, and heteroskedasticity-consistent t-statistics are reported in parentheses. Significance levels: *0.10, **0.05, ***0.01.

Dependent Variables:	Peer recommendation				Peer buy rec.		Peer sell rec.	
Model:	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Variables								
IPO underwriting	0.0383***	0.0391***	0.0244***	0.0399***	0.0181***	0.0287***	−0.0061***	−0.0134***
	(5.3170)	(4.1100)	(3.4281)	(4.0729)	(4.4390)	(4.8846)	(−2.9929)	(−3.8713)
IB affiliation			0.0006	0.0931***	0.0096*	0.0550***	−0.0066**	−0.0284***
			(0.0602)	(12.7621)	(1.6766)	(12.8170)	(−2.2120)	(−11.9064)
Firm coverage			0.0155*	−0.5295	0.0158***	−0.9129	0.0026	−1.2939
			(1.7441)	(−0.0001)	(3.3410)	(−0.0004)	(1.2086)	(−0.0008)
Analyst coverage			−0.0026	−0.0488***	0.0010	−0.0237***	−0.0019	0.0123***
			(−0.3051)	(−3.1243)	(0.2532)	(−2.6388)	(−0.8938)	(2.8964)
Broker size			0.0214	−0.1018***	−0.0080	−0.0697***	0.0140***	0.0276***
			(1.3294)	(−6.9189)	(−1.2084)	(−8.1814)	(3.2879)	(7.3515)
Firm expertise			−0.0725***	0.0471***	−0.0397***	0.0309***	0.0139***	−0.0022
			(−5.8676)	(7.1451)	(−6.2689)	(8.1357)	(4.8534)	(−1.3077)
Analyst experience			0.0019	−0.0859***	0.0056	−0.0571***	0.0067	0.0153**
			(0.0956)	(−3.9049)	(0.5479)	(−4.5251)	(1.3776)	(2.4769)
Log price			0.1954***	−0.0112	0.1101***	−0.0552	−0.0342***	−0.3949
			(33.2616)	(0.0000)	(38.4674)	(0.0000)	(−21.7140)	(−0.0001)
Industry VW return			0.0003	0.0509	0.0002	0.1632	0.0000	0.4650
			(1.0384)	(0.0000)	(1.4098)	(0.0000)	(−0.4599)	(0.0002)
Fixed-effects								
Analyst-Firm	Yes		Yes		Yes		Yes	
Month	Yes		Yes		Yes		Yes	
Analyst-Month		Yes		Yes		Yes		Yes
Firm-Month		Yes		Yes		Yes		Yes
Fit statistics								
R^2	0.5456	0.4657	0.5521	0.4652	0.5146	0.4076	0.4842	0.3574
Observations	5,704,054	5,550,467	5,609,355	5,459,913	5,609,355	5,459,913	5,609,355	5,459,913

Table 3: **PFIO and Probability of Broken IPOs**

This table presents the regression results on the likelihood of a broken IPO, estimated as $\textit{Broken IPO}_{j,t} = \beta_1 \textit{PFIO}_{j,t} + \beta_2 \mathbf{X}_{j,t} + \delta_i + \delta_t + \epsilon_{j,t}$. $\textit{Broken IPO}_{j,t}$ is a dummy variable equal to one if the first-day closing price of IPO firm j falls below its offer price. $\textit{PFIO}_{j,t}$ denotes one of two measures capturing the extensive and intensive margins of PFIO. The extensive-margin measure, *PFIO coverage*, equals one if the IPO firm has at least one peer firm covered by its lead underwriters during the IPO underwriting window, reflecting the feasibility of PFIO. The intensive-margin measure, *PFIO level*, is defined as the difference in recommendation scales between affiliated and unaffiliated analysts across the IPO firm's peer firms, capturing the degree of PFIO conditional on peer-firm coverage. The sample period spans 2003–2023. The control vector $\mathbf{X}_{j,t}$ includes IPO characteristics (*Log assets*, *Log age*, *VC-backed*, *Tech industry*, *Top underwriter*, *Log proceeds*, *Log filing-period duration*) as well as market and industry sentiment variables (*Pre-IPO market excess return*, *Pre-IPO industry return*, *Pre-IPO industry market-to-book ratio*). Definitions of all variables are provided in Appendix A. All regressions include Fama-French 12 industry and year fixed effects. Standard errors are clustered at both the industry and year levels, and heteroskedasticity-consistent t-statistics are reported in parentheses. Significance levels: *0.10, **0.05, ***0.01.

Dependent Variable:	Broken IPO			
Model:	(1)	(2)	(3)	(4)
Variables				
PFIO coverage	−0.0670***	−0.0605***		
	(−5.1661)	(−6.2091)		
PFIO level			−0.0259***	−0.0333***
			(−3.1645)	(−3.8898)
Log assets	0.0013	0.0089	−0.0015	0.0066
	(0.1131)	(0.9072)	(−0.1882)	(0.8885)
Log age	−0.0028	−0.0009	−0.0042	−0.0018
	(−0.1914)	(−0.0691)	(−0.3714)	(−0.2265)
VC-backed	−0.0682***	−0.0687***	−0.0858***	−0.0863***
	(−3.7849)	(−4.0688)	(−4.8856)	(−6.3833)
Tech industry	0.0388	0.0286	0.0310	0.0388
	(1.3444)	(1.0253)	(0.8367)	(1.1088)
Top underwriter	0.0004	−0.0159	0.0162	0.0045
	(0.0124)	(−0.5790)	(0.4548)	(0.1432)
Log proceeds	−0.0421**	−0.0457**	−0.0401**	−0.0476**
	(−2.4261)	(−3.0216)	(−2.5770)	(−2.9834)
Log filing-period duration	0.0199	0.0183	0.0212	0.0205
	(1.1829)	(1.0932)	(0.9657)	(0.9498)
Pre-IPO market excess return	−0.0495	−0.0850	−0.1363	−0.1655
	(−0.1960)	(−0.3174)	(−0.3705)	(−0.4299)
Pre-IPO industry return	−0.1614	−0.1257	−0.1493	−0.1291
	(−1.1543)	(−1.0046)	(−0.6756)	(−0.6401)
Pre-IPO industry market-to-book ratio	−0.0101	−0.0180**	−0.0054	−0.0075
	(−1.1229)	(−2.2439)	(−0.4961)	(−0.6417)
Fixed-effects				
Year	Yes	Yes	Yes	Yes
FF12 Industry		Yes		Yes
Fit statistics				
R^2	0.0569	0.0700	0.0342	0.0540
Observations	3,060	3,060	1,682	1,682

Table 4: **IPO-Level Heterogeneity Tests**

This table reports regression results from heterogeneity tests based on three IPO attributes: total IPO proceeds, gross spread, and the number of lead underwriters. For each attribute, the IPO sample is divided into two groups based on the cross-sectional distribution, where *High* equals one for IPOs in the top tercile and *Low* equals one otherwise. The sample period spans 2003–2023. Control variables are the same as in Table 2. Definitions of all variables are provided in Appendix A. Standard errors are clustered at both the analyst and month levels, and heteroskedasticity-consistent t-statistics are reported in parentheses. Significance levels: *0.10, **0.05, ***0.01.

Dependent Variable:	Peer recommendation					
	Total Proceeds		Gross Spread		# of Lead Underwriters	
Model:	(1)	(2)	(3)	(4)	(5)	(6)
Variables						
High	0.0424***	0.0423***	0.0529***	0.0562***	0.0421***	0.0438***
	(3.6368)	(3.4975)	(3.9976)	(4.1431)	(3.7661)	(3.8008)
Low	0.0341**	0.0360***	0.0277**	0.0266**	0.0311**	0.0299**
	(2.5846)	(2.6649)	(2.3946)	(2.2275)	(2.1553)	(2.0181)
Controls	No	Yes	No	Yes	No	Yes
Analyst-Month	Yes	Yes	Yes	Yes	Yes	Yes
Firm-Month	Yes	Yes	Yes	Yes	Yes	Yes
Fit statistics						
R^2	0.4657	0.4652	0.4657	0.4652	0.4657	0.4652
Observations	5,550,787	5,460,231	5,550,787	5,460,231	5,550,787	5,460,231

Table 5: **Firm-Level Heterogeneity Tests**

This table presents regression results from heterogeneity tests based on three firm characteristics, including firm size, investor attention, and report complexity. *Big firm* is a dummy variable equal to one if the firm falls within the top tertile of the firm size distribution. *High profile* is a dummy variable equal to one if the firm's EDGAR download volume ranks in the top tertile, serving as a proxy for public attention. *High complexity* is defined as a dummy equal to one if the firm is in the top tertile of the ratio of intangible assets to total assets, capturing the complexity of financial reporting. The sample period spans from 2003 to 2023, except for public attention, which is limited to 2003 to 2017 due to the availability of EDGAR log files. Control variables are the same as in Table 2. Definitions of all variables are provided in Appendix A. Standard errors are clustered at both the analyst and month levels, and heteroskedasticity-consistent t-statistics are shown in parentheses. Significance levels: *0.10, **0.05, ***0.01.

Dependent Variable:	Peer recommendation					
Model:	(1)	(2)	(3)	(4)	(5)	(6)
Variables						
IPO underwriting × Big firm	0.0828***	0.0727***				
	(4.1295)	(3.5879)				
IPO underwriting × High profile			0.0643***	0.0567**		
			(2.8161)	(2.4302)		
IPO underwriting × High complexity					0.0345*	0.0322*
					(1.8977)	(1.7069)
Fixed-effects						
Analyst-Month	Yes	Yes	Yes	Yes	Yes	Yes
Firm-Month	Yes	Yes	Yes	Yes	Yes	Yes
Fit statistics						
R^2	0.4622	0.4624	0.4649	0.4646	0.4661	0.4659
Observations	5,217,537	5,197,202	3,385,615	3,353,705	4,749,841	4,682,017

Table 6: **Peer EPS and LTG Forecasts**

This table presents the regression results for analyst forecast bias and error, and long-term growth forecasts. The dependent variable is indicated at the top of each column. Panel A reports the results for peer earnings forecast bias and error, whereas Panel B shows the results for peer long-term growth forecasts. *PMFB* is the difference between the analyst forecast bias (the EPS estimate minus the actual reported EPS) and the consensus mean forecast bias, scaled by the absolute value of the consensus mean forecast bias. *PMAFE* is the difference between the absolute forecast error (the absolute value of the EPS estimate minus the actual reported EPS) and the consensus mean absolute forecast error, scaled by the consensus mean absolute forecast error. *Accuracy* is the difference between the consensus median forecast error and the absolute forecast error (the absolute value of the EPS estimate minus the actual reported EPS), scaled by the standard deviation of EPS forecast errors across all analysts. *LTG (demedian)* is defined as the difference between an individual long-term growth forecast and the most recent median consensus, while *LTG (ratio)* is calculated as the individual long-term growth forecast divided by the most recent median consensus. The sample period spans from 2003 to 2023. Control variables are the same as in Table 2. Definitions of all variables are provided in Appendix A. Standard errors are clustered at both the analyst and month levels, and heteroskedasticity-consistent t-statistics are shown in parentheses. Significance levels: *0.10, **0.05, ***0.01.

Panel A: Peer earnings forecast bias and error						
Dependent Variables:	*PMFB*		*PMAFE*		*Accuracy*	
Model:	(1)	(2)	(3)	(4)	(5)	(6)
Variables						
IPO underwriting	−0.0252	0.0020	0.0071	0.0088	−0.0106	−0.0169
	(−1.2683)	(0.1163)	(1.2432)	(1.1470)	(−1.1833)	(−1.2823)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Fixed-effects						
Analyst-Firm	Yes		Yes		Yes	
Month	Yes		Yes		Yes	
Analyst-Month		Yes		Yes		Yes
Firm-Month		Yes		Yes		Yes
Fit statistics						
R^2	0.2746	0.6562	0.2337	0.4081	0.2104	0.4039
Observations	2,214,994	1,950,725	2,686,477	2,432,397	2,670,239	2,422,103

Panel B: Peer long-term growth forecast				
Dependent Variables:	LTG (demedian)		LTG (ratio)	
Model:	(1)	(2)	(3)	(4)
Variables				
IPO underwriting	−0.1240	0.1378	−0.0006	0.0038
	(−0.6022)	(0.5590)	(−0.0340)	(0.1948)
Controls	Yes	Yes	Yes	Yes
Fixed-effects				
Analyst-Firm	Yes		Yes	
Month	Yes		Yes	
Analyst-Month		Yes		Yes
Firm-Month		Yes		Yes
Fit statistics				
R^2	0.6027	0.6370	0.5525	0.6462
Observations	949,229	731,252	948,178	730,568

Table 7: **Market Reactions to PFIO-Affected Recommendations**
This table summarizes the impact of PFIO on market reactions to recommendation announcements. Market reaction is measured as the three-day cumulative DGTW-adjusted abnormal return (Daniel et al., 1997), calculated over days −1 to +1 relative to the announcement date. Panel A reports average market reactions across recommendation categories, classified by *IPO underwriting* status. Panel B presents regression results for market reactions to buy recommendations and upgrade changes, and Panel C reports results for sell recommendations and downgrade changes. Control variables include IB relationship, firm coverage, analyst coverage, broker size, analyst experience, and past industry and stock returns. The sample period spans 2003–2023. Definitions of all variables are provided in Appendix A. Standard errors are clustered at the analyst and announcement date levels, and heteroskedasticity-consistent t-statistics are shown in parentheses. Significance levels: *0.10, **0.05, ***0.01.

Panel A: Overall market reactions

	Buy	Upgrade	Sell	Downgrade
IPO underwriting = 1	0.0255***	0.0420***	−0.0439***	−0.0550***
	(9.8099)	(9.6815)	(−7.4343)	(−10.6123)
IPO underwriting = 0	0.0191***	0.0294***	−0.0331***	−0.0335***
	(61.0981)	(66.4076)	(−38.9595)	(−45.1730)
Difference	0.0064***	0.0126***	−0.0108*	−0.0215***
	(2.6375)	(3.0054)	(−1.9497)	(−4.4534)

Panel B: Peer buy recommendations and upgrade changes				
	Buy Recommendation		Upgrade	
Model:	(1)	(2)	(3)	(4)
Variables				
IPO underwriting	0.0001	0.0015	0.0031	−0.0087
	(0.0327)	(0.1685)	(0.7736)	(−0.5207)
Controls	Yes	Yes	Yes	Yes
Fixed-effects				
Analyst-Firm	Yes		Yes	
Month	Yes		Yes	
Analyst-Month		Yes		Yes
Firm-Month		Yes		Yes
R^2	0.3810	0.7373	0.4179	0.6795
Observations	94,109	8,444	51,366	2,378
Panel C: Peer sell recommendations and downgrade changes				
	Sell Recommendation		Downgrade	
Model:	(1)	(2)	(3)	(4)
Variables				
IPO underwriting	−0.0077	−0.0844***	−0.0144***	0.0265
	(−1.2307)	(−4.9015)	(−2.6925)	(0.7017)
Controls	Yes	Yes	Yes	Yes
Fixed-effects				
Analyst-Firm	Yes		Yes	
Month	Yes		Yes	
Analyst-Month		Yes		Yes
Firm-Month		Yes		Yes
R^2	0.4512	0.6471	0.4552	0.7954
Observations	15,005	1,081	58,191	3,666

Table 8: **PFIO and Global Settlement**

This table presents the regression results from the heterogeneity analysis based on whether the brokerage firms are subject to sanctions under the 2003 Global Research Analyst Settlement. The 12 sanctioned banks include Bear Stearns, Bank of America Merrill Lynch, Lehman Brothers, Citigroup, Credit Suisse First Boston, Deutsche Bank, Goldman Sachs, J.P. Morgan, Morgan Stanley, Thomas Weisel, UBS, and Piper Jaffray. *IPO underwriting* equals one if a firm is covered by an analyst when the analyst's brokerage is underwriting an IPO and the firm is a TNIC-defined peer of the IPO issuer. *Sanction* is a dummy variable equal to one if the brokerage is included in this list. *IB affiliation* is a dummy variable that equals one if the brokerage underwrote the IPO of the firm, capturing the direct underwriting affiliation. The sample period spans from 2003 to 2023. Control variables are the same as in Table 2. Definitions of all variables are provided in Appendix A. Standard errors are clustered at both the analyst and month levels, and heteroskedasticity-consistent t-statistics are shown in parentheses. Significance levels: *0.10, **0.05, ***0.01.

Dependent Variable:	Peer recommendation			
Model:	(1)	(2)	(3)	(4)
Variables				
IPO underwriting	0.0439***	0.0323**	0.0253**	0.0336**
	(3.5531)	(2.1329)	(2.0520)	(2.1871)
IPO underwriting × Sanctioned	−0.0013	0.0100	0.0053	0.0096
	(−0.0904)	(0.5230)	(0.3626)	(0.4882)
IB affiliation	0.0229	0.1267***	0.0238	0.1276***
	(1.4499)	(10.6633)	(1.5213)	(10.6053)
IB affiliation × Sanctioned	−0.0096	−0.0553***	−0.0133	−0.0577***
	(−0.4542)	(−3.7348)	(−0.6324)	(−3.8566)
Sanctioned	−0.1600***	−0.2429***	−0.1859***	−0.2257***
	(−7.7545)	(−4.7702)	(−9.0387)	(−4.3623)
Fixed-effects				
Analyst-Firm	Yes		Yes	
Month	Yes		Yes	
Analyst-Month		Yes		Yes
Firm-Month		Yes		Yes
Fit statistics				
R^2	0.5461	0.4661	0.5527	0.4652
Observations	5,704,054	5,550,467	5,609,355	5,459,913

Table 9: **Peer Target Price**

This table presents regression results for analyst target prices. The dependent variable is defined as the most recent target price issued by an analyst within the past 180 days, divided by the stock price at the beginning of the corresponding month. Observations with values above 400% or below 70% are excluded to mitigate the influence of extreme outliers. The sample period spans 2003–2023. Control variables are the same as in Table 2. Definitions of all variables are provided in Appendix A. Standard errors are clustered at both the analyst and month levels, and heteroskedasticity-consistent t-statistics are reported in parentheses. Significance levels: *0.10, **0.05, ***0.01.

Dependent Variable:	Peer target price	
Model:	(1)	(2)
Variables		
IPO underwriting	0.0049**	0.0077***
	(2.2290)	(3.8638)
Controls	Yes	Yes
Fixed-effects		
Analyst-Firm	Yes	
Month	Yes	
Analyst-Month		Yes
Firm-Month		Yes
Fit statistics		
R^2	0.5428	0.7118
Observations	4,132,893	3,938,941

Table 10: **Robustness: Different Peer Group Definition**
This table presents robustness regression results for analyst recommendations, using the top 10 and top 5 firms with the highest TNIC product similarity as the peer firms. Panel A reports the results for the top 5 peers, and Panel B presents the results for the top 10 peers. The dependent variables are indicated at the top of each column. The sample period spans from 2003 to 2023. Control variables are the same as in Table 2. Definitions of all variables are provided in Appendix A. Standard errors are clustered at both the analyst and month levels, and heteroskedasticity-consistent t-statistics are shown in parentheses. Significance levels: *0.10, **0.05, ***0.01.

Panel A: Top 5 peer firms						
Dependent Variables:	Peer rec.		Peer buy rec.		Peer sell rec.	
Model:	(1)	(2)	(3)	(4)	(5)	(6)
Variables						
IPO underwriting	0.0348***	0.0656***	0.0230***	0.0448***	−0.0099***	−0.0196***
	(3.2904)	(4.5424)	(3.6137)	(5.1383)	(−3.4199)	(−4.1079)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Fixed-effects						
Analyst-Firm	Yes		Yes		Yes	
Month	Yes		Yes		Yes	
Analyst-Month		Yes		Yes		Yes
Firm-Month		Yes		Yes		Yes
Fit statistics						
R^2	0.5520	0.4658	0.5146	0.4084	0.4842	0.3585
Observations	5,577,630	5,427,767	5,577,630	5,427,767	5,577,630	5,427,767
Panel B: Top 10 peer firms						
Dependent Variables:	Peer rec.		Peer buy rec.		Peer sell rec.	
Model:	(1)	(2)	(3)	(4)	(5)	(6)
Variables						
IPO underwriting	0.0246***	0.0494***	0.0174***	0.0318***	−0.0081***	−0.0186***
	(2.9146)	(4.4876)	(3.4906)	(4.7722)	(−3.5031)	(−4.7727)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Fixed-effects						
Analyst-Firm	Yes		Yes		Yes	
Month	Yes		Yes		Yes	
Analyst-Month		Yes		Yes		Yes
Firm-Month		Yes		Yes		Yes
Fit statistics						
R^2	0.5520	0.4654	0.5146	0.4079	0.4842	0.3579
Observations	5,593,765	5,444,125	5,593,765	5,444,125	5,593,765	5,444,125

Appendix A Variable Definitions

Variables	**Definition**
Recommendation	Numeric code, ranging from 1 (*Strong Sell*) to 5 (*Strong Buy*).
Buy recommendation	A dummy variable equal to one if the recommendation is 4 (*Buy*) or 5 (*Strong Buy*).
Sell recommendation	A dummy variable equal to one if the recommendation is 1 (*Sell*) or 2 (*Strong Sell*).
IPO underwriting	A dummy variable equal to one if a peer j of the IPO issuer is covered by the analyst i and the affiliated brokerage is underwriting an IPO during the underwriting window, which spans from two months before to one month after the calendar month containing the IPO's listing date.
IB affiliation	A dummy variable equal to one if the brokerage served as a lead arranger on a syndicated loan, lead underwriter on a debt or equity issuance, or financial advisor on an M&A transaction for the firm within the last five years.
Broker size	The number of analysts employed by the brokerage who provide reports, including recommendations, target prices, or earnings-per-share forecasts.
Analyst coverage	The number of firms covered by analyst i.
Firm expertise	The time elapsed since analyst i first issued a recommendation, target price, or earnings-per-share forecast for firm j.
Analyst experience	The time elapsed since analyst i first issued a recommendation, target price, or earnings per share for any firm.
Firm coverage	The number of analysts following firm j.
Log price	The logarithm of firm j's stock price from the previous month.
Industry VW return	Monthly value-weighted return for the Fama-French 48 industry classification.
Broken IPO	A dummy variable equal to one if the first-day return of the IPO firm is negative, i.e., the first-day closing price is below the offer price.
PFIO coverage	A dummy variable equal to one if the IPO has at least one peer firm covered by a lead underwriter during the IPO window.
PFIO level	The average of the difference between affiliated and unaffiliated analysts' recommendation scale across all peer firms of the IPO firm during the IPO window.
Log assets	The logarithm of total assets for the IPO firm.
Log age	The logarithm of the number of years since the firm's founding.
VC-backed	A dummy variable equal to one if the IPO is backed by venture capital.
Tech industry	A dummy variable equal to one if the IPO firm is classified as part of the technology industry.
Top underwriter	A dummy variable equal to one if the IPO underwriter is included in the list of top underwriters provided by Professor Jay Ritter.
Log proceeds	The logarithm of total IPO proceeds.
Log filing-period duration	The logarithm of the duration (in days) between the IPO filing date and the offer date.
Pre-IPO market excess return	Value-weighted market excess return during the three months preceding the IPO listing.
Pre-IPO industry return	Value-weighted Fama-French 48 industry return during the three months preceding the IPO listing.
Pre-IPO industry market-to-book	Fama-French 48 industry market-to-book ratio during the three months preceding the IPO listing.

Variables	**Definition**
CAR	The cumulative DGTW-adjusted abnormal return for firm j over a specified horizon, centered on the recommendation announcement issued by analyst i at time t.
BHAR	The buy-and-hold return for firm j over a specified post-recommendation horizon.
Target price	Target price (no older than 180 days) divided by the stock price at the beginning of the month.
PMFB	Difference between analyst i's forecast error for firm j at time t and the consensus mean forecast error of all analysts covering firm j, scaled by the standard deviation of forecast errors for all analysts covering firm j. Forecast error is defined as the difference between analyst i's earnings estimate and actual earnings for firm j at time t.
PMAFE	Difference between absolute analyst i forecast error for firm j at time t and consensus mean absolute forecast error of all analysts covering firm j, scaled by consensus mean absolute forecast error of all analysts covering firm j.
Accuracy	Difference between the median EPS forecast error of all analysts covering firm j within the same 90-day period and the absolute value of the difference between the actual earnings and the earnings forecast made by analyst i for firm j at time t, scaled by the standard deviation of EPS forecast errors across all analysts covering firm j at time t.
LTG (demedian)	Difference between analyst i's long-term growth forecast for firm j and the most recent median consensus across all analysts.
LTG (ratio)	Analyst i's long-term growth forecast for firm j divided by the most recent median consensus across all analysts.
Big firm	A dummy variable equal to one if the firm falls within the top tertile of firm size, and zero otherwise.
High profile	A dummy variable equal to one if the firm falls within the top tertile of EDGAR download volume, and zero otherwise.
High complexity	A dummy variable equal to one if the firm falls within the top tertile of industry forecasting difficulty (or complexity) and zero otherwise.
High	A dummy variable equal to one if the IPO falls within the top tercile based on key IPO attributes, including total proceeds, gross spread, and the number of lead underwriters.
Low	A dummy variable equal to one if the IPO falls within the bottom two terciles based on key IPO attributes, including total proceeds, gross spread, and the number of lead underwriters.

Internet Appendix

Figure IA.1: **IPO Peers Network**
This figure illustrates the relationships among brokerage firms, an IPO firm, and its peer firms. Firm 2 represents the IPO firm, with Broker A acting as the lead underwriter for its IPO. Analysts affiliated with Broker A cover both Firm 1 and Firm 3; however, only Firm 1 is identified as a peer firm of Firm 2, while Firm 3 is not. Broker B also covers Firm 1 but is not a lead underwriter for Firm 2's IPO.

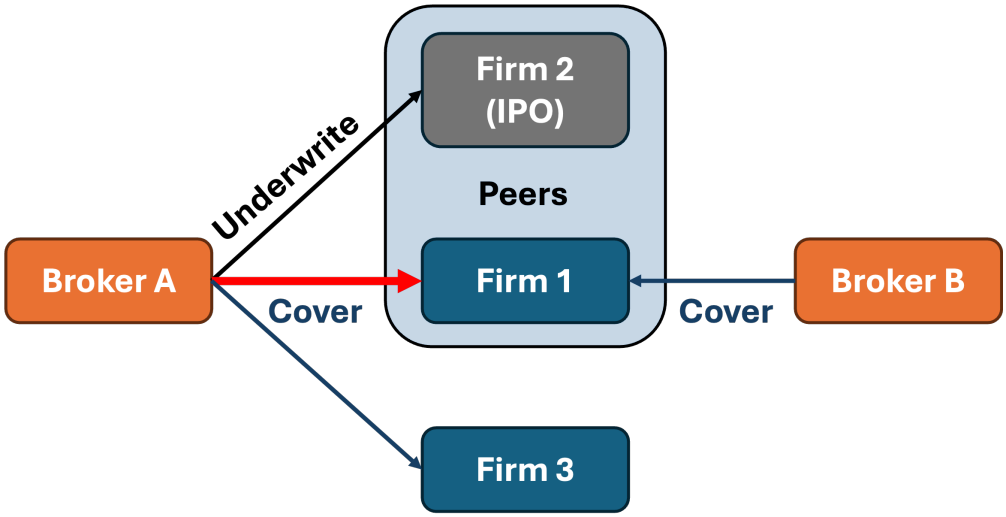
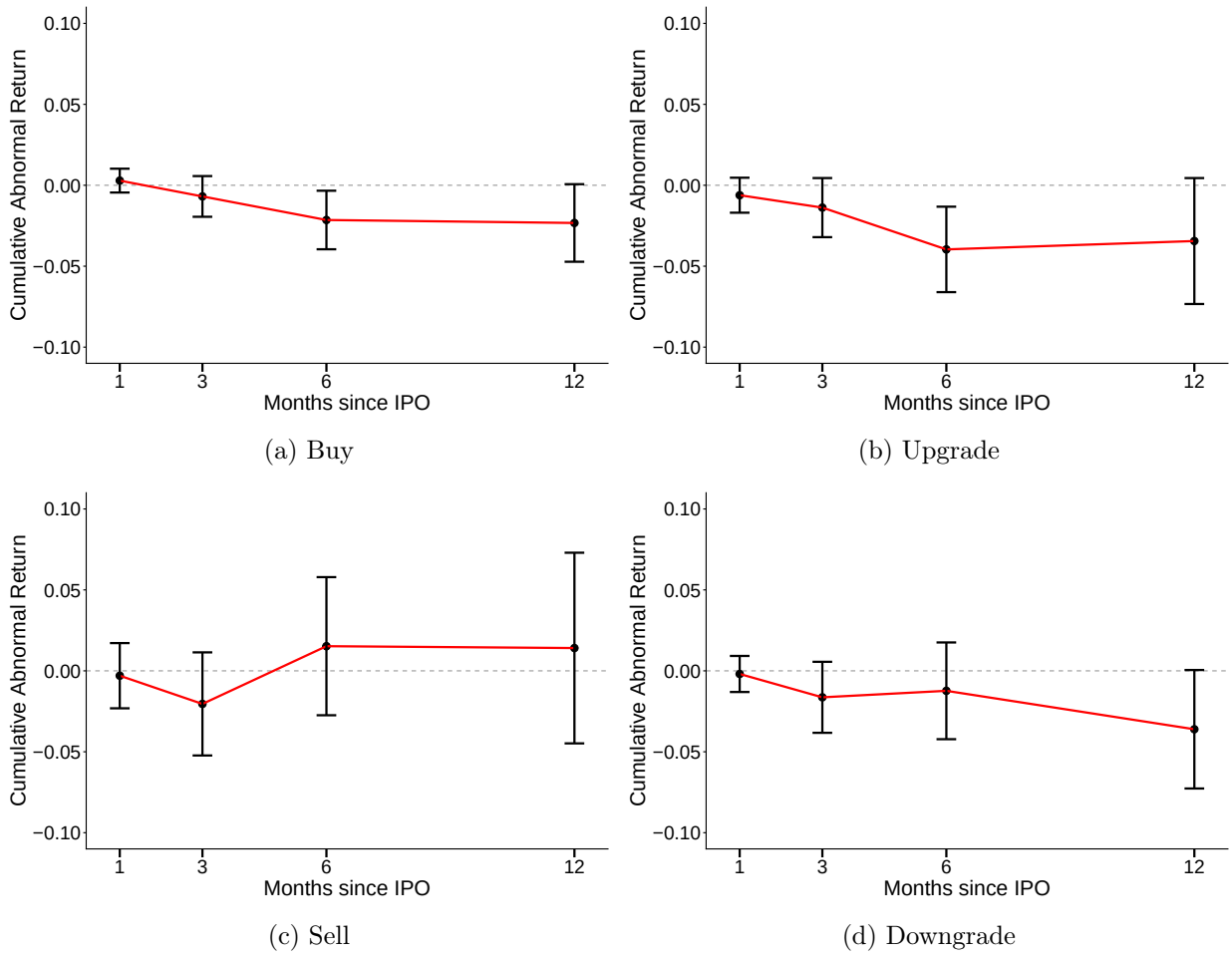


Figure IA.2: **PFIO-Affected Recommendation Informativeness: Mid-Term CARs**
This figure examines the investment value, and hence the informativeness, of PFIO-affected recommendations. It plots the estimated coefficients and 90% confidence intervals on *IPO underwriting* for post-recommendation cumulative DGTW-adjusted abnormal returns (CARs) over the 1-, 3-, 6-, and 12-month horizons, by recommendation type (buy, upgrade, sell, and downgrade). The corresponding regression results are reported in Internet Appendix Table IA.4. Panel (a) reports results for buy recommendations, Panel (b) displays results for upgrades, Panel (c) presents results for sell recommendations, and Panel (d) shows results for downgrades.



(a) Buy

(b) Upgrade

(c) Sell

(d) Downgrade

Table IA.1: **Robustness: IBES Full Sample**
This table re-estimates the baseline specifications in Table 2 on the full sample of IPO–underwriter–peer-firm matches from 1991 to 2023. All variable definitions are provided in Appendix A.

Dependent Variables:	Recommendation				Buy recommendation		Sell recommendation	
Model:	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Variables								
IPO underwriting	0.0471***	0.0311***	0.0264***	0.0331***	0.0189***	0.0226***	−0.0043**	−0.0100***
	(7.2153)	(3.8260)	(4.1093)	(3.9543)	(5.2930)	(4.4788)	(−2.5184)	(−3.5491)
IB affiliation			0.0059	0.0991***	0.0123**	0.0562***	−0.0066***	−0.0259***
			(0.6347)	(15.4244)	(2.4964)	(15.1378)	(−2.6232)	(−12.6532)
Firm coverage			0.0034	0.2867	0.0061	0.0372	−0.0019	−0.0514
			(0.4732)	(0.0000)	(1.6312)	(0.0000)	(−1.1598)	(0.0000)
Analyst coverage			−0.0058	−0.0276**	−0.0015	−0.0133*	0.0000	0.0067**
			(−0.8271)	(−2.2379)	(−0.4209)	(−1.8778)	(−0.0059)	(2.0565)
Broker size			0.0043	−0.0911***	−0.0095*	−0.0536***	0.0117***	0.0213***
			(0.3224)	(−8.1715)	(−1.6796)	(−8.3428)	(3.4521)	(7.6305)
Firm expertise			−0.1207***	0.0424***	−0.0688***	0.0234***	0.0166***	−0.0013
			(−11.2929)	(7.9905)	(−12.6708)	(7.5968)	(7.5426)	(−0.9891)
Analyst experience			0.0134	−0.0627***	0.0092	−0.0440***	0.0029	0.0058
			(0.8063)	(−3.6474)	(1.0996)	(−4.4779)	(0.7989)	(1.2862)
Log price			0.2189***	−0.3124	0.1201***	−1.0966	−0.0302***	−1.1041
			(41.9863)	(0.0000)	(48.1950)	(−0.0002)	(−23.1407)	(−0.0004)
Industry VW return			0.0003	−0.0697	0.0002*	−0.0001	−0.0001	0.0104
			(1.3341)	(−0.0005)	(1.9088)	(0.0000)	(−1.3722)	(0.0003)
Fixed-effects								
Analyst-Firm	Yes		Yes		Yes		Yes	
Month	Yes		Yes		Yes		Yes	
Analyst-Month		Yes		Yes		Yes		Yes
Firm-Month		Yes		Yes		Yes		Yes
Fit statistics								
R^2	0.5463	0.4900	0.5544	0.4885	0.5197	0.4350	0.4688	0.3719
Observations	8,049,759	7,806,012	7,844,282	7,611,695	7,844,282	7,611,695	7,844,282	7,611,695

Table IA.2: **Robustness: Remove post-IPO one-month from PFIO**
This table re-estimates the baseline specifications in Table 2 on the sample of IPO–underwriter–peer-firm matches from 2003 to 2023, removing the post-IPO one-month period from PFIO. All variable definitions are provided in Appendix A.

Dependent Variables:	Recommendation				Buy recommendation		Sell recommendation	
Model:	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Variables								
IPO underwriting	0.0371***	0.0388***	0.0242***	0.0394***	0.0177***	0.0282***	−0.0058***	−0.0129***
	(5.2816)	(4.1782)	(3.4745)	(4.1173)	(4.3842)	(4.9175)	(−2.9370)	(−3.8355)
IB affiliation			0.0007	0.0931***	0.0096*	0.0550***	−0.0066**	−0.0284***
			(0.0623)	(12.7633)	(1.6796)	(12.8119)	(−2.2139)	(−11.9075)
Firm coverage			0.0155*	−0.5090	0.0158***	−0.8981	0.0026	−1.3007
			(1.7437)	(−0.0001)	(3.3404)	(−0.0004)	(1.2090)	(−0.0008)
Analyst coverage			−0.0026	−0.0488***	0.0010	−0.0237***	−0.0019	0.0123***
			(−0.3019)	(−3.1243)	(0.2583)	(−2.6388)	(−0.8972)	(2.8964)
Broker size			0.0215	−0.1018***	−0.0080	−0.0697***	0.0139***	0.0276***
			(1.3329)	(−6.9186)	(−1.2017)	(−8.1809)	(3.2839)	(7.3508)
Firm expertise			−0.0725***	0.0471***	−0.0397***	0.0309***	0.0139***	−0.0022
			(−5.8674)	(7.1479)	(−6.2687)	(8.1395)	(4.8534)	(−1.3119)
Analyst experience			0.0019	−0.0859***	0.0056	−0.0571***	0.0067	0.0153**
			(0.0955)	(−3.9048)	(0.5478)	(−4.5251)	(1.3776)	(2.4768)
Log price			0.1954***	−0.0085	0.1101***	−0.0532	−0.0342***	−0.3959
			(33.2672)	(0.0000)	(38.4767)	(0.0000)	(−21.7191)	(−0.0001)
Industry VW return			0.0003	0.0369	0.0002	0.1532	0.0000	0.4697
			(1.0374)	(0.0000)	(1.4085)	(0.0000)	(−0.4592)	(0.0002)
Fixed-effects								
Analyst-Firm	Yes		Yes		Yes		Yes	
Month	Yes		Yes		Yes		Yes	
Analyst-Month		Yes		Yes		Yes		Yes
Firm-Month		Yes		Yes		Yes		Yes
Fit statistics								
R^2	0.5456	0.4657	0.5521	0.4652	0.5146	0.4076	0.4842	0.3574
Observations	5,704,054	5,550,467	5,609,355	5,459,913	5,609,355	5,459,913	5,609,355	5,459,913

Table IA.3: **Summary Statistics: Broken IPOs**
This table reports summary statistics for the key variables used in PFIO and risk of broken IPOs analysis. The sample period covers 2003 to 2023. *Broken IPO* is a dummy variable equal to one if the close price of an IPO firm falls below its offer price. *PFIO coverage* is a dummy equal to one if the IPO firm has at least one peer firm covered by its lead underwriters during the IPO underwriting window. *PFIO level* is defined as the difference in recommendation scales between affiliated and unaffiliated analysts across the IPO firm's peer firms. The sample period spans from 2003 to 2023. All variable definitions are provided in Appendix A.

Variable	Mean	St. Dev.	Min	p25	p50	p75	Max
Broken IPO	0.262	0.440	0.000	0.000	0.000	1.000	1.000
PFIO coverage	0.543	0.498	0.000	0.000	1.000	1.000	1.000
PFIO level	−0.159	0.451	−1.333	−0.426	−0.186	0.077	1.212
Log assets	4.364	2.093	0.127	2.961	4.192	5.793	9.045
Log age	2.477	0.887	0.000	1.946	2.398	2.944	4.615
VC-backed	0.436	0.496	0.000	0.000	0.000	1.000	1.000
Tech industry	0.559	0.497	0.000	0.000	1.000	1.000	1.000
Top underwriter	0.700	0.458	0.000	0.000	1.000	1.000	1.000
Log proceeds	4.625	1.206	0.710	3.987	4.625	5.382	7.073
Log filing-period duration	4.195	0.957	0.000	3.367	4.248	4.820	6.361
Pre-IPO market excess return	0.045	0.059	−0.238	0.008	0.048	0.076	0.264
Pre-IPO industry return	0.054	0.082	−0.274	0.008	0.053	0.096	0.636
Pre-IPO industry market-to-book ratio	4.235	2.097	0.862	2.564	3.846	5.556	11.111

Table IA.4: **PFIO-Affected Recommendation Informativeness**

This table reports coefficient estimates from regressions examining the informativeness of PFIO-affected recommendations. The dependent variable is either the cumulative abnormal DGTW characteristic-adjusted return (Daniel et al., 1997) or the buy-and-hold abnormal return over a specified horizon relative to the recommendation announcement date. The reported horizons correspond to 1-, 3-, 6-, and 12-month periods. Control variables include firm coverage, analyst coverage, broker size, analyst experience, and past industry and stock returns. The sample period spans from 2003 to 2023. Definitions of all variables are provided in Appendix A. Standard errors are clustered at the analyst and announcement date levels, and heteroskedasticity-consistent t-statistics are shown in parentheses. Significance levels: *0.10, **0.05, ***0.01.

Dependent Variables:	DGTW-adjusted return				Buy-and-hold abnormal return			
Months:	1-month	3-month	6-month	12-month	1-month	3-month	6-month	12-month
Types								
Buy	0.0029	−0.0069	−0.0215*	−0.0233	0.0032	−0.0048	−0.0160	−0.0297*
	(0.6413)	(−0.9023)	(−1.9516)	(−1.5988)	(0.6978)	(−0.5991)	(−1.4111)	(−1.7639)
Upgrade	−0.0061	−0.0138	−0.0396**	−0.0345	−0.0061	−0.0127	−0.0331**	−0.0464*
	(−0.9359)	(−1.2437)	(−2.4697)	(−1.4569)	(−0.9167)	(−1.1321)	(−2.0766)	(−1.8063)
Sell	−0.0030	−0.0204	0.0152	0.0141	−0.0027	−0.0158	0.0083	0.0255
	(−0.2452)	(−1.0557)	(0.5871)	(0.3932)	(−0.2297)	(−0.7939)	(0.3037)	(0.6294)
Downgrade	−0.0019	−0.0164	−0.0123	−0.0361	−0.0019	−0.0159	−0.0208	−0.0332
	(−0.2858)	(−1.2269)	(−0.6797)	(−1.6219)	(−0.2824)	(−1.1321)	(−1.1134)	(−1.2512)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Fixed-effects								
Analyst-Firm	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Month	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Table IA.5: **IPO- and Firm-Level Heterogeneity Tests: Peer Target Price**

This table presents regression results for peer target price from heterogeneity tests based on IPO attributes and firm characteristics, including total proceeds, gross spread, number of lead underwriters, firm size, investor attention, and report complexity. For each IPO attribute, we split the IPO sample into two groups using the cross-sectional distribution and define *High* as a dummy equal to one for IPOs in the top tercile and *Low* as a dummy equal to one otherwise. Regarding firm characteristics, *Big firm* is a dummy variable equal to one if the firm falls within the top tertile of the firm size distribution. *High profile* is a dummy variable equal to one if the firm's EDGAR download volume ranks in the top tertile, serving as a proxy for public attention. *High complexity* is defined as a dummy equal to one if the firm is in the top tertile of the ratio of intangible assets to total assets, capturing the complexity of financial reporting. Panel A reports the results for IPO-level heterogeneity, while Panel B shows the results for firm-level outcomes. The sample period spans from 2003 to 2023, except for public attention, which is limited to 2003 to 2017 due to the availability of EDGAR log files. Definitions of all variables are provided in Appendix A. Standard errors are clustered at both the analyst and month levels, and heteroskedasticity-consistent t-statistics are shown in parentheses. Significance levels: *0.10, **0.05, ***0.01.

Panel A: IPO-level heterogeneity tests						
	Total Proceeds		Gross Spread		# of Lead Underwriters	
Model:	(1)	(2)	(3)	(4)	(5)	(6)
High	0.0081***	0.0080***	0.0097***	0.0105***	0.0080***	0.0081***
	(3.7255)	(3.6472)	(3.1543)	(3.3888)	(3.8361)	(3.8493)
Low	0.0066**	0.0070**	0.0059***	0.0056***	0.0061*	0.0062*
	(2.1870)	(2.2987)	(2.8589)	(2.6844)	(1.7222)	(1.7321)
Controls	No	Yes	No	Yes	No	Yes
Analyst-Month FE	Yes	Yes	Yes	Yes	Yes	Yes
Firm-Month FE	Yes	Yes	Yes	Yes	Yes	Yes
R^2	0.7132	0.7118	0.7132	0.7118	0.7132	0.7118
Observations	3,992,929	3,939,229	3,992,929	3,939,229	3,992,929	3,939,229

Panel B: Firm-level heterogeneity tests						
Model:	(1)	(2)	(3)	(4)	(5)	(6)
IPO underwriting × Big firm	0.0216***	0.0182***				
	(5.2207)	(4.3840)				
IPO underwriting × High profile			0.0157***	0.0137***		
			(3.3760)	(2.8925)		
IPO underwriting × High complexity					0.0089**	0.0079**
					(2.5538)	(2.2426)
Controls	No	Yes	No	Yes	No	Yes
Analyst-Month FE	Yes	Yes	Yes	Yes	Yes	Yes
Firm-Month FE	Yes	Yes	Yes	Yes	Yes	Yes
R^2	0.7105	0.7099	0.7118	0.7108	0.7168	0.7157
Observations	3,810,700	3,798,745	2,277,969	2,259,946	3,408,246	3,367,620

Table IA.6: **PFIO and Global Settlement: Peer Target Price**
This table presents the regression results from the heterogeneity analysis based on whether the brokerage firms are subject to sanctions under the 2003 Global Research Analyst Settlement for peer target prices. The 12 sanctioned banks include Bear Stearns, Bank of America Merrill Lynch, Lehman Brothers, Citigroup, Credit Suisse First Boston, Deutsche Bank, Goldman Sachs, J.P. Morgan, Morgan Stanley, Thomas Weisel, UBS, and Piper Jaffray. *IPO underwriting* equals one if a firm is covered by an analyst when the analyst's brokerage is underwriting an IPO and the firm is a TNIC-defined peer of the IPO issuer. *Sanction* is a dummy variable equal to one if the brokerage is included in this list. *IB affiliation* is a dummy variable that equals one if the brokerage underwrote the IPO of the firm, capturing the direct underwriting affiliation. The sample period spans from 2003 to 2023. Control variables are the same as in Table 2. Definitions of all variables are provided in Appendix A. Standard errors are clustered at both the analyst and month levels, and heteroskedasticity-consistent t-statistics are shown in parentheses. Significance levels: *0.10, **0.05, ***0.01.

Dependent Variable:	Target price	
Model:	(1)	(2)
Variables		
IPO underwriting	0.0068**	0.0074**
	(2.2426)	(2.3261)
IPO underwriting × Sanctioned	0.0009	0.0005
	(0.2319)	(0.1235)
IB affiliation	0.0195***	0.0194***
	(9.0358)	(8.7177)
IB affiliation × Sanctioned	−0.0074***	−0.0074***
	(−2.7147)	(−2.7029)
Sanctioned	−0.0346**	−0.0264
	(−2.1877)	(−1.6469)
Controls	No	Yes
Fixed-effects		
Analyst-Month	Yes	Yes
Firm-Month	Yes	Yes
Fit statistics		
R^2	0.7133	0.7118
Observations	3,992,639	3,938,941