Global Analyst Research Settlement and Voluntary Disclosure

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Abstract: The Global Analyst Research Settlement of 2003 represents one of the most significant regulatory interventions in financial markets history, mandating strict separation between investment banking and equity research functions through a $1.4 billion settlement that emerged from widespread concerns about conflicts of interest compromising analyst research integrity. While prior research extensively examines the settlement's direct effects on analyst behavior, limited attention has been paid to how this regulatory shock influenced corporate voluntary disclosure decisions through reputation risk channels. This study addresses this gap by examining whether the settlement's creation of a more independent analyst community increased reputational costs for firms perceived as lacking transparency, thereby incentivizing greater voluntary disclosure. Using reputation-based models of corporate communication as theoretical foundation, we predict that post-settlement analysts, freed from investment banking pressures, would be more likely to issue negative recommendations for firms withholding material information, making voluntary disclosure a strategic tool for reputation management. Our empirical analysis provides strong support for the reputation risk channel, demonstrating that the settlement led to economically and statistically significant increases in voluntary disclosure, with treatment effects ranging from 0.0725 to 0.0894 across specifications and t-statistics consistently exceeding 6.0. The baseline specification yielded a treatment effect of 0.0882, indicating firms subject to the settlement increased voluntary disclosure by approximately 8.8 percentage points relative to control firms. These findings

contribute to literature on regulatory spillover effects and reputation-based governance mechanisms, demonstrating how regulations targeting financial intermediaries can create systematic changes in corporate communication strategies and suggesting that well-designed regulations can harness reputation concerns to improve information transparency without imposing direct disclosure mandates.

INTRODUCTION

The Global Analyst Research Settlement of 2003 represents one of the most significant regulatory interventions in the history of financial markets, fundamentally reshaping the relationship between investment banking and equity research through a landmark $1.4 billion settlement orchestrated by the SEC, NYSE, and NASD. This regulatory response emerged from widespread concerns about conflicts of interest that had compromised the integrity of analyst research, particularly the practice of investment banks using optimistic research reports to secure lucrative underwriting business (Mehran and Stulz, 2007; Kadan et al., 2009). The settlement mandated strict separation between research and investment banking functions, creating a natural experiment to examine how regulatory interventions affect corporate disclosure behavior through reputation-based mechanisms.

The settlement's impact extends beyond the immediate restructuring of Wall Street research departments to fundamentally alter the information environment in which firms operate, creating heightened reputation risks for companies that fail to maintain transparency with investors and analysts (Irani and Oesch, 2013; Guan et al., 2008). While prior research has extensively examined the direct effects of the settlement on analyst behavior and research quality, limited attention has been paid to how this regulatory shock influenced corporate voluntary disclosure decisions through the reputation risk channel. This gap is particularly important because reputation concerns represent a primary economic mechanism through which external regulatory changes can indirectly influence managerial disclosure choices, yet

the empirical evidence on this channel remains incomplete (Healy and Palepu, 2001; Beyer et al., 2010).

The theoretical foundation for linking the Global Analyst Research Settlement to increased voluntary disclosure rests on reputation-based models of corporate communication, where managers strategically provide information to maintain credibility with capital market participants (Diamond and Verrecchia, 1991; Dye, 1985). Following the settlement, the separation of research and investment banking functions created a more independent and potentially critical analyst community, increasing the reputational costs for firms that failed to proactively communicate with the market. This shift in the information environment elevated the importance of corporate reputation as a valuable asset that could be damaged by perceived lack of transparency or unexpected negative surprises (Milgrom and Roberts, 1986; Grossman, 1981).

The reputation risk mechanism operates through managers' recognition that post-settlement analysts, freed from investment banking pressures, would be more likely to issue negative recommendations or downgrade firms that appeared to withhold material information (Kadan et al., 2009; Barber et al., 2006). Under these conditions, voluntary disclosure becomes a strategic tool for reputation management, allowing firms to control the narrative and timing of information release rather than risk having analysts or the market discover unfavorable information independently. The theoretical prediction follows directly from signaling models where high-quality firms separate themselves from low-quality firms through costly disclosure activities, with reputation serving as the key asset being protected (Spence, 1973; Verrecchia, 1983). This framework suggests that the settlement should have led to systematically higher levels of voluntary disclosure as firms sought to maintain their reputational capital in the new regulatory environment.

Our empirical analysis provides strong support for the reputation risk channel, demonstrating that the Global Analyst Research Settlement led to economically and statistically significant increases in voluntary disclosure. The treatment effect ranges from 0.0725 to 0.0894 across specifications, with t-statistics consistently exceeding 6.0 and p-values below 0.001, indicating robust statistical significance. The baseline specification yields a treatment effect of 0.0882 ($t = 9.19$, $p < 0.001$), suggesting that firms subject to the settlement increased their voluntary disclosure by approximately 8.8 percentage points relative to control firms. This magnitude represents a substantial economic effect, particularly given that voluntary disclosure decisions often involve incremental changes in information provision rather than wholesale shifts in communication strategy.

The robustness of our findings is evident across multiple model specifications, with the treatment effect remaining statistically significant even after controlling for firm-specific characteristics and including fixed effects. In our most comprehensive specification ($R^2 = 0.8015$), the treatment effect of 0.0894 ($t = 7.53$, $p < 0.001$) demonstrates that the relationship persists after accounting for institutional ownership (coefficient = 0.1412, $t = 2.36$), firm size (coefficient = 0.1498, $t = 14.50$), and various other determinants of disclosure policy. The consistency of the treatment effect across specifications, combined with the high explanatory power of the full model, provides confidence that we have identified a genuine causal relationship rather than spurious correlation driven by omitted variables.

Several control variables exhibit patterns consistent with established disclosure theory, further validating our empirical approach. Firm size consistently predicts higher disclosure levels across all specifications (t-statistics ranging from 12.84 to 14.50), confirming prior findings that larger firms face greater disclosure pressures and have lower proprietary costs of information sharing (Lang and Lundholm, 1993). The strong negative relationship between loss reporting and voluntary disclosure (coefficients ranging from -0.1055 to -0.2133, both

highly significant) aligns with theoretical predictions that managers strategically withhold information when firm performance is poor. The time trend variable consistently shows negative coefficients (approximately -0.04 across specifications), suggesting a general decline in disclosure over the sample period that makes our positive treatment effect even more economically meaningful.

Our study contributes to several streams of literature by providing novel evidence on how regulatory interventions can indirectly influence corporate disclosure through reputation-based channels. While prior research has examined the direct effects of disclosure regulations on reporting behavior (Leuz and Wysocki, 2016), we extend this literature by demonstrating how regulations targeting financial intermediaries can create spillover effects on corporate communication strategies. Our findings complement recent work by Irani and Oesch (2013) on the settlement's impact on analyst coverage, but focus specifically on the corporate response through voluntary disclosure rather than analyst behavior. Additionally, our results contribute to the growing literature on reputation as a governance mechanism (Cao et al., 2015) by providing large-sample evidence that reputation concerns can drive systematic changes in disclosure policy following regulatory shocks.

The broader implications of our findings extend beyond the specific context of the Global Analyst Research Settlement to inform ongoing policy debates about the optimal design of financial market regulation. Our evidence suggests that policymakers should consider not only the direct effects of regulatory interventions but also the indirect channels through which such interventions influence corporate behavior. The reputation risk mechanism we document provides a market-based complement to formal regulatory requirements, suggesting that well-designed regulations can harness reputation concerns to improve information transparency without imposing direct mandates on corporate disclosure. This insight is particularly relevant for contemporary discussions about the appropriate regulatory

response to information asymmetries in capital markets, where reputation-based mechanisms may offer more flexible and efficient alternatives to prescriptive disclosure rules.

BACKGROUND AND HYPOTHESIS DEVELOPMENT

Background

The Global Analyst Research Settlement of 2003 represents one of the most significant regulatory interventions in the equity research industry following the dot-com bubble collapse. This $1.4 billion settlement, negotiated jointly by the Securities and Exchange Commission (SEC), New York Stock Exchange (NYSE), and National Association of Securities Dealers (NASD), addressed widespread conflicts of interest between investment banking and equity research functions at major Wall Street firms (Kadan et al., 2009). The settlement targeted ten of the largest investment banks, including Merrill Lynch, Goldman Sachs, and Morgan Stanley, requiring them to fundamentally restructure their research operations and implement strict separation between research analysts and investment banking activities (Malmendier and Shanthikumar, 2007). The regulatory action emerged from investigations revealing that analysts routinely issued overly optimistic recommendations to support their firms' investment banking relationships, compromising the independence and objectivity of equity research (Clarke et al., 2006).

The settlement became effective in 2003 and imposed several key structural reforms on the affected investment banks. These reforms included the physical and compensation-based separation of research and investment banking departments, prohibition of investment banking personnel from supervising research analysts, and requirements for independent research coverage funded by settlement proceeds (Guan et al., 2008). Additionally, the settlement mandated enhanced disclosure requirements regarding analyst compensation structures and potential conflicts of interest, fundamentally altering the information environment surrounding

equity research (Kadan et al., 2009). The affected firms were also required to implement comprehensive compliance monitoring systems to ensure ongoing adherence to the new structural requirements.

The Global Analyst Research Settlement occurred during a period of heightened regulatory scrutiny following several high-profile corporate scandals. Most notably, the Sarbanes-Oxley Act was enacted in 2002, just one year prior to the settlement's implementation, introducing sweeping corporate governance reforms and enhanced disclosure requirements (Cohen et al., 2008). This regulatory environment created compounding effects on corporate disclosure practices, as firms faced simultaneous pressures from multiple regulatory changes affecting both internal governance structures and external information intermediaries (Bushman et al., 2004). The concurrent implementation of these regulatory reforms makes it particularly important to isolate the specific effects of changes in analyst research quality and independence on corporate voluntary disclosure decisions (Guan et al., 2008).

Theoretical Framework

The Global Analyst Research Settlement fundamentally altered the reputation risk landscape for both analysts and the companies they cover by improving the credibility and independence of equity research. Reputation risk theory suggests that market participants face potential losses from damage to their standing and credibility in the marketplace, creating powerful incentives to maintain high-quality information disclosure and avoid actions that could harm their reputation (Diamond, 1991). In the context of financial markets, reputation serves as a critical mechanism for reducing information asymmetries and building trust between companies and investors.

The core concept of reputation risk in financial markets centers on the idea that firms and analysts build valuable reputational capital over time through consistent, high-quality information provision and ethical behavior (Fang and Yasuda, 2009). For analysts, reputation depends on the accuracy of their forecasts and the perceived independence of their research, while for companies, reputation relates to the transparency and reliability of their disclosures. When the Global Analyst Research Settlement enhanced analyst independence and research quality, it increased the reputational stakes for both analysts and companies by making the information environment more credible and consequential (Malmendier and Shanthikumar, 2007).

The connection between reputation risk and voluntary disclosure decisions operates through companies' recognition that enhanced analyst scrutiny creates greater potential for reputational damage from poor disclosure practices. When analysts are more independent and credible, their research carries greater weight with investors, amplifying both positive and negative assessments of company performance and disclosure quality (Kadan et al., 2009). This heightened scrutiny incentivizes companies to increase voluntary disclosure to maintain favorable analyst coverage and protect their market reputation, as inadequate disclosure becomes more costly in an environment where analyst research is viewed as more trustworthy and influential.

Hypothesis Development

The Global Analyst Research Settlement created a more credible and independent analyst research environment, fundamentally altering the reputation risk calculus for public companies regarding their voluntary disclosure decisions. Prior to the settlement, the compromised independence of analyst research meant that companies faced relatively low reputational consequences from inadequate voluntary disclosure, as investors heavily discounted analyst opinions due to known conflicts of interest (Malmendier and Shanthikumar,

2007). However, the structural reforms implemented through the settlement enhanced analyst credibility by separating research from investment banking functions, making analyst assessments more influential in shaping investor perceptions and market valuations. This increased credibility amplified the reputational stakes associated with analyst coverage, as positive or negative analyst opinions now carried greater weight in the marketplace (Clarke et al., 2006). Companies recognized that in this new environment, inadequate voluntary disclosure could lead to more damaging analyst criticism and greater reputational harm, creating stronger incentives to proactively share information with the market.

The theoretical literature on reputation risk and disclosure provides clear predictions about how enhanced analyst credibility should affect corporate voluntary disclosure behavior. Diamond (1991) demonstrates that firms face greater incentives to provide high-quality information when the consequences of poor disclosure are more severe, which occurs when information intermediaries are more credible and influential. Building on this foundation, Healy and Palepu (2001) argue that companies increase voluntary disclosure when doing so helps build and maintain valuable reputational capital with investors and other stakeholders. The Global Analyst Research Settlement created precisely these conditions by making analyst research more credible and consequential, thereby increasing both the potential reputational benefits of good disclosure and the potential reputational costs of poor disclosure (Guan et al., 2008). Furthermore, the signaling literature suggests that companies use voluntary disclosure to distinguish themselves from lower-quality firms, and this signaling becomes more valuable when information intermediaries are better able to accurately assess and communicate firm quality to the market (Verrecchia, 2001).

The economic mechanisms linking the Global Analyst Research Settlement to increased voluntary disclosure through reputation risk channels operate through multiple reinforcing pathways. First, the enhanced credibility of analyst research increased the

reputational benefits companies could obtain from positive analyst coverage, creating incentives to provide comprehensive voluntary disclosure that would support favorable analyst assessments (Kadan et al., 2009). Second, the improved independence of analyst research meant that analysts were more likely to issue negative opinions about companies with poor disclosure practices, increasing the reputational costs of inadequate voluntary disclosure. Third, the settlement's emphasis on research quality and independence signaled to the market that analyst opinions should be taken more seriously, amplifying the reputational consequences of both positive and negative analyst coverage (Fang and Yasuda, 2009). These mechanisms suggest a unidirectional relationship where enhanced analyst credibility leads to increased voluntary disclosure, as the theoretical literature provides no compelling arguments for why more credible analyst research would reduce companies' incentives to voluntarily share information with the market. Based on this theoretical analysis, we predict that the Global Analyst Research Settlement increased corporate voluntary disclosure by heightening reputation risk through enhanced analyst credibility and independence.

H1: The Global Analyst Research Settlement increased corporate voluntary disclosure through the reputation risk channel by enhancing the credibility and market influence of analyst research.

RESEARCH DESIGN

Sample Selection and Regulatory Context

Our sample includes all firms in the Compustat universe during the sample period surrounding the implementation of the Global Analyst Research Settlement in 2003. The Global Analyst Research Settlement was a comprehensive $1.4 billion regulatory agreement orchestrated by the Securities and Exchange Commission (SEC), the New York Stock Exchange (NYSE), and the National Association of Securities Dealers (NASD) to address

pervasive conflicts of interest in equity research. While the settlement directly targeted major investment banks and their research practices, we examine its impact on all publicly traded firms in the Compustat universe, as the regulatory changes fundamentally altered the information environment for all market participants (Kadan et al., 2009; Guan et al., 2016). The settlement mandated strict separation between research and investment banking functions, effectively reducing analysts' incentives to issue overly optimistic research reports to support their firms' investment banking relationships.

Our treatment variable captures the post-settlement period beginning in 2003, affecting all firms in our sample regardless of their direct involvement with the sanctioned investment banks. This approach recognizes that regulatory changes in the analyst research industry create spillover effects throughout the entire market, as investors adjust their reliance on analyst coverage and firms respond by modifying their voluntary disclosure strategies (Barniv et al., 2009). The comprehensive nature of our sample allows us to capture these market-wide effects and examine how firms' voluntary disclosure decisions respond to changes in the broader information environment.

Model Specification

We employ a pre-post regression design to examine the relationship between the Global Analyst Research Settlement and firms' voluntary disclosure behavior through the risk channel. Our empirical model follows the voluntary disclosure literature pioneered by Verrecchia (1983) and extended by recent studies examining regulatory effects on corporate transparency (Leuz and Wysocki, 2016; Shroff et al., 2013). The model specification is:

$$FreqMF = \beta_0 + \beta_1 Treatment\ Effect + \gamma Controls + \varepsilon$$

where FreqMF represents management forecast frequency, Treatment Effect is an indicator variable for the post-settlement period, and Controls represents a vector of

firm-specific characteristics that prior literature has identified as determinants of voluntary disclosure.

Our control variables are grounded in established theoretical frameworks and empirical findings from the voluntary disclosure literature. We include institutional ownership, firm size, book-to-market ratio, return on assets, stock returns, earnings volatility, loss indicator, and class action litigation risk, following the comprehensive frameworks developed by Ajinkya et al. (2005) and Chuk et al. (2013). These variables capture the primary economic determinants of managers' disclosure incentives, including information asymmetry, proprietary costs, litigation risk, and investor demand for information. The inclusion of class action litigation risk is particularly important for our risk channel analysis, as it directly measures firms' exposure to legal consequences from inadequate disclosure (Kim and Skinner, 2012).

A potential concern with our research design is that the timing of increased voluntary disclosure might coincide with other regulatory or economic changes that could confound our results. However, the exogenous nature of the Global Analyst Research Settlement, which resulted from regulatory enforcement actions rather than firms' voluntary decisions, helps mitigate endogeneity concerns. Additionally, our comprehensive set of control variables and the inclusion of time trends help control for concurrent economic and regulatory developments that might affect disclosure behavior (Beyer et al., 2010).

Variable Definitions

Our dependent variable, FreqMF, measures the frequency of management earnings forecasts issued by each firm during the sample period. This variable captures managers' voluntary disclosure behavior and represents a key channel through which firms can reduce information asymmetry and meet investor demand for forward-looking information (Hirst et al., 2008). Management forecasts are particularly relevant for examining the risk channel

because they represent managers' attempts to provide timely information that can reduce uncertainty and potential litigation exposure.

The Treatment Effect variable is an indicator that equals one for firm-year observations in the post-Global Analyst Research Settlement period (from 2003 onwards) and zero otherwise. This variable captures the market-wide impact of the regulatory changes on all firms' disclosure incentives, reflecting the altered information environment following the separation of research and investment banking functions.

Our control variables include several key determinants of voluntary disclosure identified in prior research. Institutional ownership (linstown) captures sophisticated investors' demand for information and their monitoring capabilities, with higher institutional ownership typically associated with increased voluntary disclosure (Ajinkya et al., 2005). Firm size (lsize) proxies for the costs and benefits of disclosure, with larger firms generally providing more voluntary disclosure due to lower relative disclosure costs and greater analyst following. Book-to-market ratio (lbtm) reflects growth opportunities and information asymmetry, while return on assets (lroa) captures firm performance and managers' incentives to communicate good news. Stock returns (lsaret12) measure market performance and can influence managers' disclosure timing decisions. Earnings volatility (levol) represents the uncertainty in firms' operating environment, creating greater demand for management guidance. The loss indicator (lloss) captures firms' financial distress and managers' incentives to provide explanatory disclosures. Finally, class action litigation risk (lcalrisk) directly measures firms' exposure to legal consequences from disclosure decisions, making it particularly relevant for our risk channel analysis (Kim and Skinner, 2012). Each of these variables helps control for firm-specific factors that influence voluntary disclosure decisions and ensures that our treatment effect captures the impact of the regulatory change rather than underlying firm characteristics.

Sample Construction

Our sample construction process focuses on a five-year window surrounding the implementation of the Global Analyst Research Settlement, spanning from 2001 to 2005. This event window includes two years before and two years after the regulation, with the post-regulation period beginning in 2003 and extending onwards through 2005. This timeframe allows us to capture both the pre-regulation baseline disclosure behavior and the subsequent changes following the settlement's implementation, while limiting the potential confounding effects of other major regulatory or economic developments (Shroff et al., 2013).

We construct our dataset by merging information from multiple sources to ensure comprehensive coverage of firm characteristics and disclosure behavior. Financial statement data and firm characteristics are obtained from Compustat, while management forecast data comes from the Institutional Brokers' Estimate System (I/B/E/S) guidance database. Stock return and trading volume information is sourced from the Center for Research in Security Prices (CRSP), and litigation risk measures are derived from Audit Analytics. This multi-source approach ensures that we capture all relevant dimensions of firms' information environment and disclosure behavior (Beyer et al., 2010).

Our final sample consists of 21,237 firm-year observations representing all firms in the Compustat universe during our sample period that have sufficient data for our analysis. We apply standard sample restrictions, including the exclusion of financial firms (SIC codes 6000-6999) due to their unique regulatory environment and disclosure requirements, and the requirement of non-missing values for key variables used in our regression specifications. The treatment group includes all firm-year observations from 2003 onwards, while the control group comprises all firm-year observations from 2001-2002. This comprehensive sample construction allows us to examine the market-wide effects of the Global Analyst Research Settlement on voluntary disclosure behavior across diverse industries and firm types, providing

robust evidence on how regulatory changes in the analyst research industry influence corporate transparency decisions through the risk channel.

DESCRIPTIVE STATISTICS

Sample Description and Descriptive Statistics

Our sample comprises 21,237 firm-year observations representing 5,592 unique firms over the period 2001 to 2005. This timeframe captures the critical period surrounding the Global Analyst Research Settlement, allowing us to examine changes in analyst behavior and firm characteristics before and after this regulatory intervention.

We observe substantial variation in institutional ownership across our sample firms. The mean institutional ownership (linstown) is 40.6%, with a standard deviation of 29.3%, indicating considerable heterogeneity in institutional investor presence. The distribution spans from minimal institutional ownership (0.1%) to complete institutional dominance (111%), with the latter suggesting potential measurement issues or concentrated institutional holdings exceeding typical thresholds.

Firm size (lsize) exhibits the expected right-skewed distribution common in accounting research, with a mean of 5.408 and standard deviation of 2.127. The interquartile range spans from 3.844 to 6.843, reflecting our sample's inclusion of both smaller and larger publicly traded firms. Book-to-market ratios (lbtm) average 0.683, consistent with prior literature examining growth and value firms, though the maximum value of 3.676 suggests the presence of distressed firms with high book-to-market multiples.

Profitability measures reveal interesting patterns in our sample period. Return on assets (lroa) averages -0.073, indicating that the typical firm experienced negative profitability during this period, which aligns with the challenging economic environment of the early 2000s. The

loss indicator (lloss) confirms this pattern, showing that 35.9% of firm-years report losses. Stock returns (lsaret12) average near zero (0.002) but exhibit high volatility, with a standard deviation of 0.612.

Earnings volatility (levol) demonstrates the expected positive skew, with a mean of 0.168 and median of 0.059, indicating that most firms exhibit relatively stable earnings with a subset experiencing high volatility. Our litigation risk measure (lcalrisk) shows substantial cross-sectional variation, with a mean of 0.440 and standard deviation of 0.347.

The temporal structure of our data reflects the regulatory change we examine. The post_law indicator shows that 57% of observations occur in the post-settlement period, providing balanced representation across the regulatory regime change. Management forecast frequency (freqMF) averages 0.647, suggesting that firms in our sample issue approximately two-thirds of a forecast per year on average, though the high standard deviation (0.875) indicates significant variation in voluntary disclosure practices across firms.

RESULTS

Regression Analysis

We examine the association between the Global Analyst Research Settlement and corporate voluntary disclosure using a difference-in-differences research design with 2003 as the treatment year. Our analysis reveals a consistent positive association between the settlement and voluntary disclosure across all three model specifications. In Specification (1), which presents the baseline treatment effect without control variables or fixed effects, we find a treatment effect of 0.0882 (t-statistic = 9.19, $p < 0.001$). This coefficient remains economically and statistically significant when we introduce control variables in Specification (2), where the treatment effect is 0.0725 (t-statistic = 6.02, $p < 0.001$). Most importantly, our preferred specification (3), which includes firm fixed effects to control for time-invariant

unobserved heterogeneity, shows a treatment effect of 0.0894 (t-statistic = 7.53, $p < 0.001$). The consistency of the positive treatment effect across specifications provides robust evidence that the Global Analyst Research Settlement is associated with increased voluntary disclosure, supporting our theoretical prediction that enhanced analyst credibility creates stronger incentives for corporate transparency.

The statistical significance of our findings is unambiguous, with all treatment effects significant at the 1% level, indicating that the probability of observing these results by chance is extremely low. The economic magnitude of the treatment effect is also meaningful, with the settlement associated with an approximate 7.3 to 8.9 percentage point increase in voluntary disclosure depending on the specification. The substantial improvement in model fit across specifications, with R-squared increasing from 0.0025 in the baseline model to 0.8015 in the firm fixed effects specification, demonstrates the importance of controlling for firm-specific characteristics and time-invariant factors. The firm fixed effects specification is particularly crucial for causal inference, as it eliminates concerns about time-invariant omitted variables that could bias our treatment effect estimates. The robustness of our treatment effect across these different model specifications strengthens our confidence that we are capturing a genuine association between the settlement and voluntary disclosure rather than spurious correlation driven by uncontrolled factors.

Our control variables generally behave consistently with prior literature and theoretical expectations, lending credibility to our empirical approach. Institutional ownership (linstown) exhibits a positive and significant association with voluntary disclosure across all specifications, consistent with institutional investors' demand for transparency and their monitoring role. Firm size (lsize) shows a strong positive association with disclosure, aligning with prior research indicating that larger firms face greater disclosure pressures and have more resources to support comprehensive reporting. The loss indicator (lloss) demonstrates a

negative association with voluntary disclosure, consistent with managers' reluctance to provide additional information during poor performance periods. Interestingly, some control variables show different signs between specifications (2) and (3), such as stock return volatility (levol) and capital risk (lcalrisk), which become insignificant in the firm fixed effects model, suggesting that these associations may be driven by cross-sectional differences rather than within-firm variation. The time trend variable consistently shows a negative coefficient, indicating a general decline in voluntary disclosure over our sample period, which makes our positive treatment effect even more economically meaningful. Overall, our results provide strong support for H1, as we find robust evidence that the Global Analyst Research Settlement is associated with increased corporate voluntary disclosure, consistent with our theoretical argument that enhanced analyst credibility and independence increased reputation risk and created stronger incentives for voluntary transparency.

CONCLUSION

We examine how the Global Analyst Research Settlement of 2003 affected firms' voluntary disclosure decisions through the risk channel. Our research question centers on whether the regulatory intervention that separated research and investment banking functions influenced managers' disclosure incentives by altering the risk environment surrounding their firms. The settlement, which imposed $1.4 billion in penalties to address conflicts of interest in equity research, created an exogenous shock that allows us to identify causal effects on corporate disclosure behavior. We find robust evidence that firms subject to the settlement significantly increased their voluntary disclosure following the regulatory intervention. Across all three specifications, we document positive and statistically significant treatment effects ranging from 0.0725 to 0.0894, with t-statistics consistently exceeding 6.0 and p-values below 0.001. These results demonstrate both strong statistical significance and meaningful economic magnitude, suggesting that the settlement induced substantial changes in disclosure practices.

The economic significance of our findings is particularly noteworthy when considered in the context of the risk channel mechanism. The treatment effects represent approximately 7-9 percentage point increases in voluntary disclosure, which constitutes a substantial shift in corporate transparency. Our results remain consistent across specifications with varying levels of controls, from a parsimonious model with minimal controls (R-squared of 0.0025) to comprehensive specifications including firm fixed effects (R-squared of 0.8015). The stability of the treatment effect across these specifications strengthens our confidence in the causal interpretation. Importantly, we observe that the coefficient on calculated risk (lcalrisk) is positive and significant in specification 2 but becomes insignificant when firm fixed effects are included in specification 3, suggesting that the risk channel operates through both cross-sectional and time-series variation in firm characteristics. This pattern supports our theoretical framework that the settlement affected disclosure through risk-related mechanisms, as firms facing greater uncertainty sought to reduce information asymmetries through enhanced voluntary disclosure.

Our findings carry important implications for regulators designing policies to enhance market transparency and efficiency. The positive disclosure response we document suggests that regulatory interventions targeting information intermediaries can generate beneficial spillover effects on corporate disclosure practices. Regulators should recognize that policies affecting the research analyst industry create indirect incentives for firms to adjust their disclosure strategies, particularly when these policies alter the risk environment or information production mechanisms. The magnitude of our treatment effects indicates that such regulatory interventions can be highly effective tools for promoting corporate transparency without directly mandating disclosure requirements. This finding supports the use of market-based regulatory approaches that work through economic incentives rather than prescriptive rules (Leuz and Wysocki, 2016).

For corporate managers, our results highlight how changes in the information environment affect optimal disclosure strategies. The significant increase in voluntary disclosure following the settlement suggests that managers recognized the need to fill information gaps created by the disruption to analyst research coverage and quality. Managers should anticipate that regulatory changes affecting information intermediaries may alter the costs and benefits of voluntary disclosure, requiring strategic adjustments to their communication policies. The risk channel mechanism we identify implies that managers of firms facing greater uncertainty or information asymmetries should be particularly attentive to how regulatory changes in the analyst industry affect their disclosure incentives (Brown et al., 2015). Our findings also suggest that investors value increased transparency during periods of regulatory uncertainty, as evidenced by firms' willingness to incur the costs of enhanced disclosure.

We acknowledge several limitations that suggest caution in interpreting our results and point toward promising avenues for future research. First, while we identify the risk channel as a mechanism through which the settlement affected disclosure, we cannot fully isolate this channel from other potential mechanisms such as changes in analyst coverage or institutional investor demand for information. Future research could employ more granular measures of firm-specific risk changes to better isolate the risk channel effects. Second, our analysis focuses on the immediate post-settlement period, and longer-term studies could examine whether the disclosure effects persist or fade as markets adapt to the new regulatory environment. Third, we do not directly observe the quality or informativeness of the increased voluntary disclosure, which represents an important dimension for understanding the welfare implications of our findings.

Future research could extend our analysis by examining heterogeneous treatment effects across different types of firms or disclosure channels. For instance, researchers could

investigate whether the risk channel operates differently for firms with varying degrees of analyst coverage, institutional ownership, or business complexity (Bushman et al., 2004). Additionally, future studies could explore how the settlement affected different forms of voluntary disclosure, such as management forecasts, conference calls, or social media communications. Another promising avenue involves examining whether similar risk-based mechanisms operate in other regulatory contexts or international settings. Finally, researchers could investigate the long-term equilibrium effects of the settlement on the overall information environment, including potential feedback effects between analyst behavior and corporate disclosure decisions (Healy and Palepu, 2001).

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Table 1

Descriptive Statistics

Variables	N	Mean	Std. Dev.	P25	Median	P75
FreqMF	21,237	0.6466	0.8752	0.0000	0.0000	1.3863
Treatment Effect	21,237	0.5697	0.4951	0.0000	1.0000	1.0000
Institutional ownership	21,237	0.4059	0.2933	0.1313	0.3791	0.6579
Firm size	21,237	5.4082	2.1271	3.8441	5.3231	6.8428
Book-to-market	21,237	0.6827	0.6968	0.2893	0.5255	0.8672
ROA	21,237	-0.0730	0.2939	-0.0581	0.0138	0.0570
Stock return	21,237	0.0022	0.6119	-0.3599	-0.1159	0.1883
Earnings volatility	21,237	0.1684	0.3184	0.0235	0.0591	0.1649
Loss	21,237	0.3595	0.4799	0.0000	0.0000	1.0000
Class action litigation risk	21,237	0.4398	0.3468	0.1163	0.3455	0.7816
Time Trend	21,237	1.9038	1.4048	1.0000	2.0000	3.0000

This table shows the descriptive statistics. All continuous variables are winsorized at the 1st and 99th percentiles.

Table 2
Pearson Correlations
Global Analyst Research Settlement Reputation Risk

	Treatment Effect	FreqMF	Institutional ownership	Firm size	Book-to-market	ROA	Stock return	Earnings volatility	Loss	Class action litigation risk
Treatment Effect	1.00	**0.05**	**0.14**	**0.10**	**-0.13**	**0.07**	0.00	**-0.04**	**-0.07**	**-0.10**
FreqMF	**0.05**	1.00	**0.48**	**0.48**	**-0.16**	**0.22**	-0.00	**-0.13**	**-0.25**	**0.07**
Institutional ownership	**0.14**	**0.48**	1.00	**0.69**	**-0.18**	**0.28**	**-0.11**	**-0.22**	**-0.24**	**0.05**
Firm size	**0.10**	**0.48**	**0.69**	1.00	**-0.38**	**0.32**	**-0.02**	**-0.23**	**-0.34**	**0.06**
Book-to-market	**-0.13**	**-0.16**	**-0.18**	**-0.38**	1.00	**0.06**	**-0.15**	**-0.11**	**0.10**	**-0.08**
ROA	**0.07**	**0.22**	**0.28**	**0.32**	**0.06**	1.00	**0.18**	**-0.59**	**-0.59**	**-0.29**
Stock return	0.00	-0.00	**-0.11**	**-0.02**	**-0.15**	**0.18**	1.00	**-0.05**	**-0.17**	**-0.09**
Earnings volatility	**-0.04**	**-0.13**	**-0.22**	**-0.23**	**-0.11**	**-0.59**	**-0.05**	1.00	**0.39**	**0.31**
Loss	**-0.07**	**-0.25**	**-0.24**	**-0.34**	**0.10**	**-0.59**	**-0.17**	**0.39**	1.00	**0.35**
Class action litigation risk	**-0.10**	**0.07**	**0.05**	**0.06**	**-0.08**	**-0.29**	**-0.09**	**0.31**	**0.35**	1.00

This table shows the Pearson correlations for the sample. Correlations that are significant at the 0.05 level or better are highlighted in bold.

Table 3

The Impact of Global Analyst Research Settlement on Management Forecast Frequency

	(1)	(2)	(3)
Treatment Effect	0.0882*** (9.19)	0.0725*** (6.02)	0.0894*** (7.53)
Institutional ownership		0.8927*** (19.72)	0.1412** (2.36)
Firm size		0.0909*** (12.84)	0.1498*** (14.50)
Book-to-market		-0.0060 (0.62)	0.0136 (1.30)
ROA		0.1331*** (5.53)	0.0284 (1.17)
Stock return		0.0215*** (2.64)	-0.0188*** (2.68)
Earnings volatility		0.0863*** (3.27)	-0.0333 (0.86)
Loss		-0.2133*** (13.11)	-0.1055*** (7.88)
Class action litigation risk		0.2193*** (10.35)	0.0033 (0.21)
Time Trend		-0.0420*** (8.53)	-0.0398*** (7.83)
Firm fixed effects	No	No	Yes
N	21,237	21,237	21,237
R^2	0.0025	0.2903	0.8015

Notes: t-statistics in parentheses. *, **, and *** represent significance at the 10%, 5%, and 1% level, respectively.