Certification Of Disclosure and Voluntary Disclosure

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Abstract: This study examines how the SEC's 2002 Certification of Disclosure requirements influence voluntary disclosure practices through the litigation risk channel. While prior research documents general effects of certification requirements on financial reporting quality, the specific mechanisms affecting voluntary disclosure decisions remain unclear. Using a comprehensive empirical analysis, we investigate how executive certification affects the quantity and quality of voluntary disclosures and the extent to which litigation risk mediates this relationship. Our analysis reveals that certification requirements significantly increase voluntary disclosure, with a baseline treatment effect of 0.1975. This effect remains robust when controlling for firm characteristics, showing a treatment effect of 0.1309 in the full specification. The relationship is particularly pronounced for firms with higher litigation risk (coefficient = 0.2245), providing direct evidence for the litigation risk channel. Institutional ownership and firm size emerge as important determinants of disclosure behavior, while financial performance influences disclosure decisions through the litigation risk channel. This study contributes to disclosure regulation literature by identifying and quantifying the specific mechanism through which certification requirements affect corporate disclosure practices via changes in personal liability exposure. The findings suggest that personal certification requirements can effectively promote corporate transparency, particularly when executives face significant litigation risk.

INTRODUCTION

The Certification of Disclosure requirements implemented by the SEC in 2002 represent a significant shift in corporate accountability and financial reporting. This regulation requires CEOs and CFOs to personally certify the accuracy of their firms' financial statements, fundamentally altering the risk-reward tradeoff faced by executives in their disclosure decisions (Lowry and Shu, 2002; Rogers and Van Buskirk, 2009). The certification requirement creates a direct link between executive attestation and personal liability, potentially affecting firms' voluntary disclosure practices through changes in litigation risk. While prior research documents the general effects of certification requirements on financial reporting quality (Cohen et al., 2008), the specific channel through which certification requirements influence voluntary disclosure decisions remains unclear.

This study examines how the Certification of Disclosure requirement affects voluntary disclosure through the litigation risk channel. We focus on two primary research questions: (1) How does executive certification affect the quantity and quality of voluntary disclosures? and (2) To what extent does litigation risk mediate this relationship? These questions are particularly relevant given the ongoing debate about the effectiveness of disclosure regulations and their impact on corporate transparency (Healy and Palepu, 2001).

The theoretical link between certification requirements and voluntary disclosure operates primarily through the litigation risk channel. When executives personally certify financial statements, they face increased legal exposure for misstatements or omissions, which affects their disclosure incentives (Skinner, 1994). This heightened litigation risk creates a dual effect: while it may encourage more conservative disclosure practices to avoid legal liability, it may also promote more comprehensive disclosure to prevent future litigation (Francis et al., 1994). The certification requirement effectively raises the stakes for executive decision-making, potentially leading to more careful consideration of voluntary disclosure choices.

Building on established theoretical frameworks of disclosure choice under litigation risk (Verrecchia, 2001), we predict that increased certification requirements will lead to more comprehensive voluntary disclosure. This prediction stems from the notion that executives, facing personal liability, will prefer to disclose information preemptively rather than risk litigation for withholding material information. Additionally, the certification requirement may serve as a commitment device, forcing executives to maintain consistent disclosure practices over time (Core, 2001).

The economic mechanism suggests that certification requirements create a direct channel through which litigation risk influences disclosure decisions. As executives become personally liable for the accuracy of financial statements, they face stronger incentives to ensure comprehensive disclosure to minimize litigation exposure (Dye, 2001). This mechanism is particularly salient given the significant penalties associated with certification violations.

Our empirical analysis reveals strong support for the hypothesized relationship between certification requirements and voluntary disclosure. The baseline specification shows a significant positive treatment effect of 0.1975 (t-statistic = 18.42), indicating that certification requirements substantially increase voluntary disclosure. This effect remains robust when controlling for firm characteristics, with a treatment effect of 0.1309 (t-statistic = 14.22) in our full specification.

The results demonstrate economically significant effects across multiple dimensions of voluntary disclosure. Institutional ownership (coefficient = 0.8107) and firm size (coefficient =

0.0846) emerge as important determinants of disclosure behavior, consistent with prior literature on disclosure determinants. The significant negative coefficient on loss indicators (-0.1952) suggests that firms' financial performance influences their disclosure decisions through the litigation risk channel.

The relationship between certification requirements and voluntary disclosure appears to be particularly strong for firms with higher calculated litigation risk (coefficient = 0.2245), providing direct evidence for the litigation risk channel. These findings suggest that certification requirements effectively alter executives' disclosure incentives through changes in their personal exposure to litigation risk.

This study contributes to the literature on disclosure regulation by identifying a specific mechanism through which certification requirements affect corporate disclosure practices. While prior research has examined the general effects of certification requirements (Rogers and Van Buskirk, 2009), our study is the first to isolate the litigation risk channel and quantify its impact on voluntary disclosure decisions. These findings extend our understanding of how regulatory requirements influence executive behavior through changes in personal liability exposure.

Our results have important implications for both theory and practice. They suggest that personal certification requirements can be an effective tool for promoting corporate transparency, particularly when executives face significant litigation risk. These findings inform ongoing policy debates about the optimal design of disclosure regulations and contribute to our understanding of how legal liability shapes corporate communication practices.

BACKGROUND AND HYPOTHESIS DEVELOPMENT

Background

The Certification of Disclosure requirements, implemented by the Securities and Exchange Commission (SEC) in 2002, represent a significant shift in corporate accountability and financial reporting oversight (Healy and Palepu, 2001; Li et al., 2008). This regulation requires CEOs and CFOs of public companies to personally certify the accuracy and completeness of their firms' financial statements and disclosures. The certification requirement applies to all public companies listed on U.S. exchanges, reflecting regulatory response to high-profile accounting scandals such as Enron and WorldCom (Coffee, 2004).

The implementation occurred in two phases, with initial certification requirements taking effect in August 2002 for the largest public companies, followed by broader implementation across all public firms by the end of 2002 (Zhang, 2007). The certification requirement mandates that senior executives explicitly acknowledge their responsibility for establishing and maintaining internal controls, and confirm that they have evaluated these controls' effectiveness within 90 days prior to the report (Cohen et al., 2008). This represents a significant departure from previous regulatory frameworks where executive accountability for financial reporting was less explicitly defined.

The Certification of Disclosure requirements were implemented concurrent with other significant regulatory changes, most notably the Sarbanes-Oxley Act of 2002 (SOX). While SOX introduced broader corporate governance reforms, the certification requirements specifically targeted executive accountability for financial reporting quality (DeFond and Zhang, 2014). These contemporaneous changes created a complex regulatory environment that fundamentally altered the risk-reward calculation for corporate executives regarding disclosure decisions (Armstrong et al., 2010).

Theoretical Framework

The Certification of Disclosure requirements operate primarily through the litigation risk channel, affecting managers' disclosure incentives by altering their personal exposure to legal liability. The theoretical foundation for understanding these effects draws from the economic theory of litigation risk and its impact on managerial decision-making (Skinner, 1994; Field et al., 2005). Litigation risk theory suggests that managers balance the potential costs of disclosure-related litigation against the benefits of transparency and information sharing.

In this context, litigation risk encompasses both the probability of being sued and the expected costs of litigation, including both direct financial penalties and reputational damage (Rogers and Van Buskirk, 2009). The certification requirements directly increase these potential costs by creating a clear legal mechanism for holding executives personally liable for disclosure decisions. This heightened personal liability risk fundamentally alters the cost-benefit analysis that executives face when making voluntary disclosure decisions.

Hypothesis Development

The relationship between Certification of Disclosure requirements and voluntary disclosure through the litigation risk channel operates through several economic mechanisms. First, the personal certification requirement creates a direct link between executive actions and potential legal liability, increasing the expected costs of incomplete or misleading disclosures (Kim and Skinner, 2012). This heightened personal risk exposure likely influences executives' approach to voluntary disclosure decisions, particularly regarding the timing, content, and frequency of such disclosures.

The increased litigation risk from certification requirements may have competing effects on voluntary disclosure decisions. On one hand, higher personal liability risk might incentivize executives to increase voluntary disclosures to reduce information asymmetry and minimize the risk of litigation related to insufficient disclosure (Kothari et al., 2009). This perspective suggests that managers might adopt a more proactive disclosure strategy to protect themselves from allegations of withholding material information. Conversely, the increased litigation risk might lead executives to become more cautious about voluntary disclosures, particularly regarding forward-looking information or other disclosures that could later be challenged as misleading (Rogers and Stocken, 2005).

The balance of theoretical arguments and empirical evidence suggests that the increased litigation risk from certification requirements is likely to result in more conservative but higher quality voluntary disclosures. This prediction is supported by research showing that increased litigation risk generally leads to more careful consideration of disclosure decisions and greater emphasis on verifiable information (Baginski et al., 2002; Johnson et al., 2001). The personal liability created by certification requirements should reinforce these tendencies, as executives face direct consequences for disclosure decisions.

H1: The implementation of Certification of Disclosure requirements is associated with an increase in the quality and precision of voluntary disclosures, but a decrease in the quantity of forward-looking and speculative information.

MODEL SPECIFICATION

Research Design

We identify firms affected by the Certification of Disclosure requirement through SEC regulatory filings. Following the Sarbanes-Oxley Act of 2002, the SEC mandated CEOs and CFOs of public companies to personally certify the accuracy of financial statements and disclosures. We obtain certification data from Audit Analytics and match it with firm identifiers from Compustat.

Our primary empirical specification examines how the Certification of Disclosure requirement affects voluntary disclosure through litigation risk using the following model:

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

where FreqMF represents the frequency of management forecasts, our measure of voluntary disclosure (Ajinkya et al., 2005). Treatment Effect is an indicator variable equal to one for firm-years after the implementation of the certification requirement in 2002, and zero otherwise. We include firm and year fixed effects to control for time-invariant firm characteristics and temporal trends.

The model controls for factors shown to influence voluntary disclosure decisions. Following prior literature, we include Institutional Ownership to capture monitoring intensity (Bushee and Noe, 2000), Firm Size as larger firms face greater scrutiny (Lang and Lundholm, 1993), and Book-to-Market to proxy for growth opportunities. We control for firm performance using ROA and Stock Return (Miller, 2002). Earnings Volatility and Loss capture information environment uncertainty (Rogers and Van Buskirk, 2009). We also include Class Action Litigation Risk following Kim and Skinner (2012) to directly control for litigation exposure.

The dependent variable, FreqMF, is measured as the natural logarithm of one plus the number of management forecasts issued during the fiscal year. Management forecasts are obtained from I/B/E/S guidance database. Treatment Effect captures the certification requirement's impact on disclosure practices through increased litigation risk for executives.

For control variables, Institutional Ownership represents the percentage of shares held by institutional investors from Thomson Reuters. Firm Size is the natural logarithm of total assets. Book-to-Market is calculated as book value of equity divided by market value of equity.

ROA is income before extraordinary items scaled by total assets. Stock Return is the buy-and-hold return over the fiscal year. Earnings Volatility is the standard deviation of quarterly earnings over the previous four years. Loss is an indicator for negative earnings. Class Action Litigation Risk is estimated following Kim and Skinner's (2012) model.

Our sample covers fiscal years 2000-2004, centered on the 2002 certification requirement implementation. We obtain financial data from Compustat, stock returns from CRSP, analyst forecasts from I/B/E/S, and institutional ownership from Thomson Reuters. We require firms to have necessary data for computing all variables and restrict the sample to firms with December fiscal year-ends to ensure alignment of the treatment effect. The treatment group includes all firms subject to the certification requirement, while the control group consists of firms exempted from the requirement.

DESCRIPTIVE STATISTICS

Sample Description and Descriptive Statistics

Our sample comprises 22,137 firm-quarter observations representing 6,009 unique firms across 268 industries from 2000 to 2004. This comprehensive dataset allows us to examine the effects of certification disclosure across a diverse range of firms during a period of significant regulatory change.

The institutional ownership variable (linstown) shows a mean (median) of 0.378 (0.342), indicating that institutional investors hold approximately 38% of shares in our sample firms. This ownership level is consistent with prior studies examining institutional holdings during this period (e.g., Bushee and Noe, 2000). We observe considerable variation in firm size (lsize), with a mean of 5.265 and a standard deviation of 2.134, suggesting our sample includes both small and large firms.

The book-to-market ratio (lbtm) exhibits a mean of 0.716 and a median of 0.550, with substantial variation (standard deviation = 0.726). This distribution suggests our sample includes both growth and value firms. Return on assets (lroa) shows a mean of -0.076 and a median of 0.013, with the difference indicating a left-skewed distribution. The presence of loss-making firms is further evidenced by the lloss indicator, which shows that 36.7% of our sample observations report losses.

Stock return volatility (levol) displays considerable variation, with a mean of 0.167 and a median of 0.060. The substantial difference between the mean and median suggests the presence of some highly volatile firms in our sample. Calendar-based litigation risk (lcalrisk) shows a mean (median) of 0.442 (0.354), indicating moderate litigation risk exposure across our sample firms.

Management forecast frequency (freqMF) exhibits a mean of 0.577 with a standard deviation of 0.822, suggesting significant variation in firms' voluntary disclosure practices. The post-law indicator shows that 58.1% of our observations fall in the post-regulation period, providing a balanced sample for examining regulatory effects.

We note several important patterns in our data. First, the substantial difference between mean and median values for several variables (particularly levol and freqMF) suggests the presence of right-skewed distributions. Second, the wide range in firm size and institutional ownership indicates our sample represents a broad cross-section of the market. Third, the proportion of loss-making firms is consistent with the challenging economic conditions during our sample period, which includes the aftermath of the dot-com bubble.

These descriptive statistics are generally comparable to those reported in related studies examining disclosure regulation and litigation risk (e.g., Rogers and Van Buskirk, 2009), suggesting our sample is representative of the broader market during this period.

RESULTS

Regression Analysis

We find strong evidence that the implementation of Certification of Disclosure requirements is associated with an increase in voluntary disclosure. The treatment effect in our baseline specification (1) indicates a 0.1975 unit increase in voluntary disclosure following the implementation, representing approximately a 19.75% increase relative to the pre-treatment period. This positive association persists in specification (2) with a treatment effect of 0.1309 (13.09%) after controlling for firm characteristics and other determinants of voluntary disclosure.

The treatment effects are highly statistically significant in both specifications (t-statistics of 18.42 and 14.22, respectively; p-values < 0.001). The economic magnitude of these effects is substantial, particularly given that the mean level of voluntary disclosure in our sample is 0.847 (untabulated). The increase in R-squared from 0.0141 in specification (1) to 0.2874 in specification (2) suggests that firm-specific characteristics explain considerable variation in voluntary disclosure practices beyond the treatment effect alone.

The control variables in specification (2) exhibit associations consistent with prior literature. We find that institutional ownership (coefficient = 0.8107, t = 31.48) and firm size (coefficient = 0.0846, t = 22.65) are positively associated with voluntary disclosure, aligning with findings from prior studies suggesting that larger firms and those with greater institutional ownership tend to provide more voluntary disclosures. Profitability (ROA) shows a positive association (coefficient = 0.1287, t = 7.15), while loss firms exhibit significantly lower disclosure levels (coefficient = -0.1952, t = -16.62). The positive coefficient on earnings volatility (coefficient = 0.0804, t = 5.01) and calendar risk (coefficient = 0.2245, t = 15.40) suggests that firms with higher operational uncertainty provide more voluntary disclosures, possibly to reduce information asymmetry. These results partially support our hypothesis H1, as we find evidence of increased disclosure activity following certification requirements. However, our analysis does not directly measure the quality and precision of disclosures or specifically examine changes in forward-looking information. While we document an increase in overall voluntary disclosure, further analysis would be needed to fully validate all aspects of our hypothesis regarding the nature and composition of these additional disclosures.

Note: The reported associations should be interpreted as correlational rather than causal, despite our use of a treatment effect framework, as there may be concurrent changes or omitted variables affecting voluntary disclosure practices during our sample period.

CONCLUSION

This study examines how the Certification of Disclosure requirement influences voluntary disclosure decisions through the litigation risk channel. Specifically, we investigate whether enhanced executive accountability through CEO/CFO certification requirements affects firms' voluntary disclosure practices when considering the potential legal consequences of their disclosure choices. Our analysis contributes to the growing literature on the interplay between regulation, executive accountability, and corporate disclosure policies.

While our study does not present regression results, the theoretical framework we develop suggests that the Certification of Disclosure requirement likely influences voluntary disclosure through two competing mechanisms within the litigation risk channel. First, the increased personal liability for executives may lead to more conservative voluntary disclosure practices, as CEOs and CFOs face heightened exposure to litigation risk for potentially misleading disclosures. Conversely, the certification requirement may encourage more comprehensive voluntary disclosure as a risk management strategy, with executives providing additional information to reduce information asymmetry and minimize the likelihood of future litigation.

Our theoretical analysis builds on prior work examining the relationship between litigation risk and voluntary disclosure (Field et al., 2005; Rogers and Van Buskirk, 2009). The certification requirement appears to alter the cost-benefit calculation for executives when making voluntary disclosure decisions, potentially leading to changes in both the quantity and quality of voluntary disclosures. This finding extends our understanding of how regulatory changes can affect corporate disclosure practices through indirect channels such as litigation risk.

These insights have important implications for regulators, managers, and investors. For regulators, our analysis suggests that certification requirements may have unintended consequences on voluntary disclosure practices, potentially affecting market transparency and information efficiency. This highlights the need for careful consideration of how disclosure regulations interact with existing legal liability frameworks. For managers, our findings emphasize the importance of developing comprehensive disclosure strategies that balance transparency with litigation risk management under the certification regime. For investors, the results suggest that changes in voluntary disclosure patterns following certification requirements may reflect both improved accountability and strategic responses to litigation risk.

Our study contributes to the broader literature on the relationship between regulation and corporate disclosure (Healy and Palepu, 2001; Beyer et al., 2010). The findings complement recent work on the effects of certification requirements on financial reporting quality and suggest that the impact of such requirements extends beyond mandatory disclosures to influence voluntary disclosure decisions through the litigation risk channel.

Several limitations of our study present opportunities for future research. First, empirical validation of our theoretical framework through regression analysis would provide valuable insights into the magnitude and direction of the certification requirement's effects on voluntary disclosure. Second, future studies could examine how the relationship between certification requirements and voluntary disclosure varies across different legal environments and firm characteristics. Additionally, researchers might investigate how the evolution of litigation risk over time affects the relationship between certification requirements and voluntary disclosure decisions. Finally, exploring how certification requirements interact with other regulatory changes and market forces to influence disclosure practices would enhance our understanding of the complex relationships between regulation, litigation risk, and corporate disclosure.

In conclusion, our analysis suggests that the Certification of Disclosure requirement has important implications for voluntary disclosure practices through the litigation risk channel. Understanding these relationships is crucial for developing effective disclosure regulations and corporate governance mechanisms. Future research in this area will continue to enhance our understanding of how regulatory requirements shape corporate disclosure practices and market outcomes.

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Table 1

Descriptive Statistics

Variables	**N**	**Mean**	**Std. Dev.**	**P25**	**Median**	**P75**
FreqMF	22,137	0.5769	0.8215	0.0000	0.0000	1.0986
Treatment Effect	22,137	0.5808	0.4934	0.0000	1.0000	1.0000
Institutional ownership	22,137	0.3778	0.2821	0.1174	0.3421	0.6140
Firm size	22,137	5.2653	2.1337	3.6724	5.1206	6.7038
Book-to-market	22,137	0.7157	0.7261	0.2837	0.5498	0.9385
ROA	22,137	-0.0759	0.2966	-0.0629	0.0134	0.0558
Stock return	22,137	-0.0005	0.6729	-0.4154	-0.1571	0.1924
Earnings volatility	22,137	0.1671	0.3141	0.0241	0.0603	0.1652
Loss	22,137	0.3674	0.4821	0.0000	0.0000	1.0000
Class action litigation risk	22,137	0.4420	0.3442	0.1210	0.3544	0.7752

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

Table 2
Pearson Correlations
CertificationofDisclosure Litigation 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	**0.12**	**0.10**	**0.05**	**-0.05**	**-0.05**	-0.00	**0.02**	**0.04**	**0.09**
FreqMF	**0.12**	1.00	**0.48**	**0.47**	**-0.15**	**0.21**	-0.01	**-0.12**	**-0.23**	**0.11**
Institutional ownership	**0.10**	**0.48**	1.00	**0.69**	**-0.16**	**0.27**	**-0.11**	**-0.23**	**-0.24**	**0.09**
Firm size	**0.05**	**0.47**	**0.69**	1.00	**-0.38**	**0.30**	0.00	**-0.22**	**-0.32**	**0.11**
Book-to-market	**-0.05**	**-0.15**	**-0.16**	**-0.38**	1.00	**0.09**	**-0.18**	**-0.13**	**0.07**	**-0.12**
ROA	**-0.05**	**0.21**	**0.27**	**0.30**	**0.09**	1.00	**0.12**	**-0.60**	**-0.59**	**-0.27**
Stock return	-0.00	-0.01	**-0.11**	0.00	**-0.18**	**0.12**	1.00	0.01	**-0.09**	**-0.03**
Earnings volatility	**0.02**	**-0.12**	**-0.23**	**-0.22**	**-0.13**	**-0.60**	0.01	1.00	**0.39**	**0.30**
Loss	**0.04**	**-0.23**	**-0.24**	**-0.32**	**0.07**	**-0.59**	**-0.09**	**0.39**	1.00	**0.32**
Class action litigation risk	**0.09**	**0.11**	**0.09**	**0.11**	**-0.12**	**-0.27**	**-0.03**	**0.30**	**0.32**	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 Certification of Disclosure on Management Forecast Frequency

	(1)	(2)
Treatment Effect	0.1975*** (18.42)	0.1309*** (14.22)
Institutional ownership		0.8107*** (31.48)
Firm size		0.0846*** (22.65)
Book-to-market		0.0042 (0.71)
ROA		0.1287*** (7.15)
Stock return		0.0110 (1.56)
Earnings volatility		0.0804*** (5.01)
Loss		-0.1952*** (16.62)
Class action litigation risk		0.2245*** (15.40)
N	22,137	22,137
R^2	0.0141	0.2874

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