Shareholder Litigation Rights and Financial Fraud Risk: New Evidence from Exclusive Forum Provisions

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Abstract - This paper examines the effect of shareholder litigation rights on the firm's exposure to financial fraud risk. We define fraud risk as the likelihood that a firm may experience financial statement manipulations at the organizational level. We look at fraud risk as it helps us go beyond the level of fraud detected at the firm level, which has been the focus of a large stream of prior research. Following the Business Judgement Rule, we argue firms that fall short of shareholder expectations experience a higher risk of shareholder litigation. Thus, managers will generally attempt to demonstrate superior performance to the shareholders in the presence of excessive litigation pressure, increasing the risk of financial statement fraud for these firms. Consistent with our presumption, we observe a reduction in multi-forum litigation followed by EFP adoption to curtail the financial fraud risks among these firms. Our results remain consistent when fraud risk is measured using Benford's Score and the discretionary accruals, consistent with the earnings management literature. Although shareholder litigation is expected to lower the risk of financial risk of fraud, our findings suggest that increasing litigation threats may worsen financial fraud risks among firms. Overall, the findings of this paper contribute to the existing literature by showing that it is not the quantity but the quality of litigation that matters in enhancing organizational outcomes.

Keywords: Exclusive Forum Provisions, Fraud, Multi-Forum Litigation, Shareholder Litigation

I. INTRODUCTION

Financial statement fraud has received increasing attention in academic literature due to its significant loss value (Davis & Pesch, 2013). According to the Association of Certified Fraud Examiners, losses due to misconduct were measured as US\$2.9 trillion worldwide in 2010. Examining fraudulent activities in financial statement reporting is an essential question for many stakeholders, including investors, analysts, and regulators (Amiram et al., 2015). Evidence from research on financial statement fraud has identified managerial and board characteristics (Gu, 2022; Xu et al., 2018), manager's promotional incentives (Ha et al., 2015; Zhong et al., 2021), and different corporate governance variables (Jones et al., 2008; Liu et al., 2023; Wu et al., 2016) as key determinants in determining financial statement fraud in organizations. These studies use enforcement releases and earnings restatements as evidence of financial statement misconduct in organizations. Although they expect these variables to fully account for financial statement fraud at firm level, whether these proxies measure the actual level of fraud is questionable, because the proxies only include misconduct that has been detected.

The incidence of financial statement fraud is different from the identification of fraud cases. As such, not all fraud that happens is identified at the organizational level. For instance, Dyck et al. (2023) claims that only one-third of fraud that happens at organizational levels is identified, and the remaining two-thirds often go unnoticed. In this environment, we argue that measuring organizations' fraud risk is a better strategy to measure the effect of the probable future financial misconduct activities at the firm level. Thus, examining the risk of financial fraud will help us address the existing shortcomings

in the literature by going beyond the fraud that is detected at the firm level. We define fraud risk as the risk the firms may encounter misconduct prosecution following manipulated, altered, and fabricated financial statements. Fraud risk differs from financial statement misconduct, because fraud risk covers probable financial statement irregularities within organizations, irrespective of whether they will lead to an enforcement notification or restatement.

Considering the increasing financial risks of fraud, shareholder litigation takes prominence in preventing fraud. These threats are realistic, as the Securities Class Actions Clearing House suggests that most securities class action lawsuits filed each year correspond to breaches of financial reporting or misrepresentation of financial information (Stanford University Securities Class Actions Clearing House, 2023). Although these trends tempt us to believe that shareholder litigation is essential in mitigating fraud risk, whether shareholder litigation curbs fraud risk at the firm level is still an open question. The proponents argue that shareholder litigation rights improve corporate disclosures in organizations. For instance, Skinner (1994) and Billings and Cedergren (2015) show that managers prefer to disclose bad information quickly and in a timely manner to prevent unnecessary shareholder lawsuits. These results suggest that in the presence of strong shareholder litigation, managers try to take preventive measures to avoid potential litigation due to increased fraud risks. However, the view of the opponents suggests the opposite. According to them, the increased litigation risk makes managers more myopic and risk-averse (Chu & Zhao, 2021; Hassan et al., 2021; Nguyen et al., 2018). This will cut down the levels and the quality of financial disclosures (Bourveau et al., 2018) eventually resulting in increased fraud risk. This study analyses these contradicting views in the literature by examining how shareholder litigation rights affect the risk of financial statement fraud in organizations.

According to the US business Judgement rule, shareholders cannot merely file lawsuits against managers for poor business decisions (Beha et al., 2014). Managers and directors are appointed to make business decisions under the assumption that such decisions are made in the best interest of the shareholders. Although this rule is expected to insulate the managers and directors from frivolous lawsuits of the shareholders, its efficiency during periods of poor performance is questionable. For instance, shareholders may file lawsuits against the managers if they believe the inefficiencies and incapabilities of the appointed managers have resulted in poor decision-making. Such lawsuits will be most likely if such decisions are followed with inferior firm performance. On the other hand, if the firms demonstrate superior performance compared to shareholder expectations, the poor decisions of the managers will most likely be un-noticed by the shareholders. Thus, in the presence of excessive litigation pressure, managers will always try to demonstrate superior performance to the shareholders. As such these managers will have more motives to engage in preventive financial statement manipulations to insulate themselves against costly and unwanted litigation owing to poor business decisions. This suggests increased fraud risk among these firms that are exposed to greater scales of shareholder litigation rights.

We look at one aspect of shareholder litigation that prior literature has largely overlooked. Namely, the shareholders' ability to engage in multi-forum litigation. Mirvis et al. (2014) define multi-forum litigation as a situation where shareholders file multiple lawsuits for the exact cause against the same firm in multiple forums across the U.S. This increases the litigation costs the firms have to bear and worsens managerial incentives. Unlike the prior literature, we rely on the firm-level adoption of Exclusive Form

Provisions (EFP) as a proxy for shareholder litigation. Upon adopting these provisions, a firm can require its shareholders to file lawsuits only in one court of its choice (Romano & Sanga, 2017; Wilson, 2020). This restricts the shareholders' multi-forum litigation and attorney's forum shopping activities while addressing the frivolousness of both derivative claims and the securities class actions. Therefore, using EFP as a proxy for shareholder litigation helps us differentiate our work from the existing studies. To the best of our knowledge, this paper serves as the first study to examine the effect of shareholder litigation rights on firms' exposure to financial fraud risk.

Our sample period starts two years before the Boilermaker's decision and ends in 2021 when the financial data ends in the CompStat database. The sample of firms concentrates mainly on the state of Delaware because this is the first state to adopt the exclusive forum provisions (Romano & Sanga, 2017), and Delaware has no other antishareholder laws implemented. This helps us isolate the impacts of EFP adoption on firm-level fraud risk. Furthermore, the reliance on the state of Delaware does not shrink our sample size as Delaware accounts for nearly 63% of the firms incorporated in the US. To improve the generalizability of our results, we also include several other states in our sample. However, we are mindful to exclude all states from other anti-shareholder laws to avoid any possible alternative explanations under the robustness tests. Concentrating our sample on the state of Delaware presents another distinction to our work compared to prior literature. The literature that has used UD laws and PSLRA as proxies for shareholder litigation has failed to use the state of Delaware in their samples, causing them to miss a significant number of firms incorporated in the US (Donnelson, 2021).

To measure the firm-level financial fraud risk, we follow the work of Amiram et al. (2015), who uses the Benford Score, consistent with the early scholarly work of Frank Benford, who believed the figures reported in the financial statements to follow a sequence of numbers where more numbers are expected to start from number 1 than number 2 and so on (Amiram et al., 2015; De Silva & Carreira, 2013). Following the earnings management literature, we use Discretionary accruals as a secondary proxy for fraud risk. Accordingly, we measure firm-level discretionary accruals using the financial statement figures reported in the CompStat database following the work of Dechow et al. (1995). To measure the effect of EFP adoption on fraud risk, we initially use an ordinary least squares (OLS) regression following multiple linear regression. We use an indicator variable as our main independent variable that identifies the firms that have adopted the exclusive forum provisions. The variable takes value 1 for all subsequent years after a particular firm adopts the exclusive forum provisions. The data on the firms that have adopted these provisions are hand-collected using the Factiva database. All other financial statement data used in our regressions are extracted from the CompStat database.

We begin our analysis in this paper by examining the differences between the EFP-adopting and non-EFP-adopting groups. Our findings are consistent with the prior literature and suggest that EFP-adopting firms are larger in size, have higher Tobin Q value, and have higher financial leverage than non-adopters. The median comparison further shows that the EFP-adopting firms experience lower financial fraud risk than non-EFP-adopting firms, and the difference is statistically significant for both the proxies used to measure fraud risk. The results of the median tests show that the differences among the medians of the key variables are statistically significant. The Correlation coefficients validate our presumptions and suggest that the firm-level EFP adoption has a negative correlation with the level of financial fraud risk measured using the Benford Score as well as the Discretionary Accruals. We commence our baseline analysis by regressing our

measures of fraud risk on the EFPA variable and the other control variables consistent with the literature. The findings show that the coefficient on EFPA is negative and statistically significant for using both proxies. This is consistent with our presumption that adopting exclusive forum provisions helps firms achieve lower levels of financial fraud risk.

We use propensity score matching to address the sample selection bias attached to our research setting because the adoption of EFP happens at the firm level, unlike both UD laws and the PSLRA. Accordingly, we use all the control variables to create propensity scores for all the firm years, which we then use to match treated firms to two control firms in each firm year. Then, we repeat our baseline OLS estimation for the treated control firms with the matched control group. The results of the estimation are consistent with our baseline findings and show that the coefficient on EFPA is negative when using both the proxies for financial fraud risk. We also undertake several measures to ensure the robustness of our findings. First, we control our findings to the inclusion of states that adopt UD laws and PSLRA. This will help us rule out the alternative explanations that our results may be driven by the inclusion of other states that have adopted the UD laws and the PSLRA. To see if our results are generalizable to the firms incorporated in other states apart from Delaware, we re-estimate our baseline findings by excluding Delaware-incorporated firms as the second robustness test. Under the third robustness test, we repeat our baseline findings using only the Delaware-incorporated firms. As a final test of robustness, we repeat our baseline findings and control for firmlevel and industry-fixed effects.

We undertake causal analyses using both proxies for financial fraud risk. As the distribution of the EFPA variable is non-normal, we use a two-stage least square (2SLS) regression using instrumental variable analysis as the first causal analysis. Following the work of Wilson (2020), we use Delaware incorporation as a valid instrument for the endogenous EFPA variable. The findings of our instrumental variable analysis complement our baseline findings and suggest that EFP adoption lowers fraud risk among adopting firms measured using Benford's Score and Discretionary Accruals. As a second causal analysis, we perform a difference in difference (DiD) analysis using the Boilermaker's decision as an exogenous shock to the firm-level EFP adoption. Accordingly, we use the PSM-matched control group and find that the treated firms experience lower financial fraud risk post-adoption, compared to control firms.

This study makes several contributions to literature. First, it contributes to the shareholder litigation literature and highlights the detrimental effects of multi-forum litigation that weaken the efficiency of the shareholder litigation system. Although we believe shareholder litigation improves firm performance, our findings show the dark side of shareholder litigation when the pressure arising from multi-forum litigation increases the financial fraud risk among the firms. Our findings show that it is not essentially the quantity but the quality of litigation that matters in enhancing corporate outcomes. We contribute to the growing debate on a required venue for litigation and promote the adoption of exclusive forum provisions at the firm level. Secondly, we contribute to the growing literature on financial statement fraud. Prior literature has examined the interpersonal characteristics of managers and social and economic factors that influence the manager's engagement in financial statement misconduct activities. Consistent with the fraud triangle (Schafer, 1973) and fraud diamond model (Wolfe & Hermanson, 2004), our work stands out as the first paper to examine the effect of shareholder litigation risk on financial fraud risks in US firms. Although shareholder litigation is perceived as an

essential tool of corporate governance, our findings indicate that the pressure of litigation can rather be disruptive enough to influence the manager's best practices in financial reporting.

II. RESEARCH HYPOTHESIS

Shareholder interest theory contends that the restriction of excessive litigation rights is in the best interest of the shareholders as such, it results in improved organizational outcomes (Friedman, 1970). According to this theory, reducing excessive shareholder litigation rights will lower the fraud risks in organizations by reducing the litigation threats on the managers. Prior literature has considered shareholder litigation rights as an essential part of corporate governance (Appel, 2019; Houston et al., 2019). Consistent with these findings, the theorists believe that the presence of shareholder litigation rights will enhance shareholder value (Chung et al., 2020) and result in better corporate governance in organizations (Agnes et al., 2010; Ferris et al., 2007).

Although the existing literature has argued shareholder litigation rights as a value enhancer in organizations, it also has a dark side. For instance, Francis et al. (1994) find that the level of voluntary disclosures is positively correlated with the level of shareholder litigation. Rogers and Van Buskirk (2009) show that when managers get sued for financial disclosures made in good faith, they revise their thinking that pre-emptive disclosures reduce shareholder litigation. As a result, these managers tend to curtail the level of disclosures in the presence of higher litigation threats. Consistent with this view, Johnson et al. (2000) show that a reduction in shareholder litigation induces managers to improve the level of disclosures, while Bourveau et al. (2018) find the adoption of UD laws to increase the length of management discussion analysis information in their 10K filings, improve the level of voluntary 8K filings and issue more earnings forecasts. These findings are consistent with the pressure hypothesis of the fraud triangle and suggest that the presence of excessive litigation reduces the managers' preference to disclose information due to the potential risk of future lawsuits. Thereby increasing the financial fraud risk via omitted financial reporting.

In addition to material omissions, financial statement misconduct can also happen by other means, such as financial misrepresentation and misreporting (Amiram et al., 2015). For instance, under the pressure hypothesis (Schafer, 1973), the increasing pressure of shareholder litigation rights will induce fraud risks in firms as managers may tend to engage in preventive financial statement manipulations to keep away costly and unwanted litigation that results from poor business decisions. Multi-forum litigation distorts the purpose of the shareholder litigation process and worsens managerial entrenchment (Wilson, 2020). Multi-forum litigation is often involved with heightened levels of lawsuit frivolousness, which is mainly driven by the fee-earning motivations of opportunistic attorneys (Nguyen et al., 2018). Such increases in lawsuit frivolousness dampen the efficiency of shareholder litigation and gives more room for managerial opportunism. For instance, Nguyen et al. (2018) claims that the frivolous lawsuits often involve meritless claims, which the opportunistic managers can settle with only by paying the attorney's fees. This relates to the opportunity hypothesis in the fraud triangle as such, the opportunistic behavior of the attorneys allows the opportunistic managers to engage in preventive financial misconduct, while settling the frivolous lawsuits at a minimum cost, increasing the fraud risk in these firms.

Myers (2014) claims that the costs of litigation are not limited to the monetary costs but also the loss of organizational as well as managerial reputational wealth. As a

result, reputed managers and directors are often reluctant to assume positions in firms with high litigation threats (Black et al., 2006). Because these managers place more value on reputational wealth, which might be at risk owing to higher litigation threats. As reputed managers step back in assuming positions in these organizations, such positions will eventually become vacant for less reputed managers more prone to be opportunistic than their reputed counterparts. Such opportunistic managers may increase the risk of self-dealing behavior that contrasts with the shareholders' best interests. For instance, Di Meo et al. (2017) show that increasing managerial opportunism causes more managerial entrenchment measured through more earnings management activities. Similarly, Silverstein et al. (2020) finds that opportunistic managers tend to engage in more valuedestroying investments that result in empire-building activities. Thus, they have more things to hide from the stakeholders. This is consistent with the capability hypothesis in the fraud diamond framework suggested by Wolfe and Hermanson (2004). As the adoption of exclusive forum provisions is expected to mitigate excessive litigation threats, we presume it will mitigate the fraud risk among the adopting firms by lowering lawsuit frivolousness and managerial opportunism.

H1A: Adoption of exclusive forum provisions mitigates the fraud risk in adopting firms

III. METHODOLOGY

A. Using Benford's Score

Following the work of Amiram et al. (2015), we use the Benford score as our first measure of fraud risk at the firm level. This was first introduced by Frank Benford, who observed the scientists refer to the first few pages of the logbook rather than the last pages. As the Benford law suggests, the data that is free from manipulation should follow a distribution that has more numbers starting with number 1 than number 2, more figures starting from number 2 than number 3, and so on (Amiram et al., 2015; De Silva & Carreira, 2013). Durtschi et al. (2004) claim that unaltered financial data confirms Benford law, and such an approach is helpful in forensic accounting. According to Amiram et al. (2015), Benford's score used in forensic accounting helps us measure the degree to which the figures in a financial statement of a firm deviate from its theoretical distribution under Benford's law. Thus, we demand the deviations of figures in the financial statements from Benford's law to represent greater fraud risks for the firms. Compared to the prior proxies used to detect financial statement fraud, the Benford score has several advantages (Amiram et al., 2015 Liu et al., 2023). The Benford score can be computed even with incomplete cross-sectional or time series data, and more importantly, it shows no correlation with any firm-specific characteristic (Liu et al., 2023). As the Benford score has a better power to predict potential financial statement fraud with fewer errors, we use Benford's law as our primary proxy of fraud risk in organizations.

Consistent with the literature, we use equation 1 to predict the probabilities of the first digits of financial statement figures assuming different values. The equation assumes the probabilities of a leading digit taking the value from 1-9 by using the log base 10. According to the theory, the probability of the first digit being 1 is 30%, while the other larger digits have a lower probability. According to Benford's law, the size of the first digit negatively correlates with the probability of being the leading digit.

$$P(first \ digit \ is \ d) = Log_{10}(d-1) - Log_{10}(d)$$
 (1)

Following the literature, we use data from the CompStat database from 2010-2021. As we concentrate on the fraud risk due to financial statement manipulations in the main three financial statements, we drop all variables that include information that is not reported in the statement of financial position, statement of financial performance, and statement of cash flows. To calculate the Benford score, we filter the dataset consistent with the work of Golden (2021) and Liu et al. (2023). For all the variables that have a positive first digit that is larger than 1, we can directly employ the above equation. However, for the variables that have an absolute value less than 1, we look at their first non-zero number. We set all missing values equal to zero, and drop all observations that offer less than hundred line items and offer negative asset balances. After this data cleaning process, we use Amiram et al. (2015) to calculate the deviation between the distribution of our data and its theoretical distribution using Equation 2 as Benford's score.

$$Benford\ Score = \left(\frac{\sum_{i=1}^{K}(|AD-ED|i)}{K}\right) \tag{2}$$

In equation 2, AD refers to the actual distribution of the first digits in the financial statement figures based on our empirical data. ED is the benchmark distribution that follows Benford's law. K equates to the largest number of first digits in the financial statements, equal to 9. This equation helps us measure the difference between the theoretical distribution and the actual distribution of the first digits of financial statement figures for every year observation, which we then scale by the relevant maximum number of 9.

B. Using the Discretionary Accruals

Following the work of Dechow et al. (1995), we calculate the firm-level discretionary accruals across firms as an alternative proxy for financial fraud risk at the firm level. Accordingly, we use the following equations. First, we use equation 3 to estimate the level of total accruals of firm i, at year t. In equation 3, $\Delta CA_{i,t}$, $\Delta CL_{i,t}$, $\Delta Cash_{i,t}$, $\Delta STD_{i,t}$ denotes the change of current assets, current liabilities, cash holdings, and short-term debt in current liabilities from year t-1 to t. Similarly, DEP_{i,t} represents the depreciation and amortization expenses of firm i in year t.

$$TA_{i,t} = \frac{\Delta CA_{i,t} - \Delta CL_{i,t} - \Delta Cash_{i,t} + \Delta STD_{i,t} - DEP_{i,t}}{Assets_{i,t-1}}$$
(3)

$$TA_{i,t} = \frac{\Delta CA_{i,t} - \Delta CL_{i,t} - \Delta Cash_{i,t} + \Delta STD_{i,t} - DEP_{i,t}}{Assets_{i,t-1}}$$

$$\frac{TA_{it}}{Assets_{i,t-1}} = \alpha_1 \frac{1}{Assets_{i,t-1}} + \alpha_2 \frac{\Delta Sales_{i,t}}{Assets_{i,t-1}} + \alpha_3 \frac{PPE_{i,t}}{Assets_{i,t-1}} + \varepsilon_{i,t}$$
(4)

Then in equation 4, we scale the total accruals value estimated from equation 3 by $Assets_{i,t-1}$ and use this as the dependent variable in equation 4. $Assets_{i,t-1}$ denotes the total value of assets of firm i, in year t-1. $\Delta Sales_{i,t}$ denotes the growth of sales revenue from period t-1 to t, and $PPE_{i,t}$ is the value of property plant and equipment for firm i in year t. Then finally, we take the difference between the total accruals and the normal accruals from the above-fitted model and define it as the discretionary accruals. Accordingly, we use equation 6 to estimate the level of discretionary accruals.

$$NA_{i,t} = \widehat{\alpha_1} \frac{1}{Assets_{i,t-1}} + \widehat{\alpha_2} \frac{\Delta Sales_{i,t}}{Assets_{i,t-1}} + \widehat{\alpha_3} \frac{PPE_{i,t}}{Assets_{i,t-1}} + \varepsilon_{i,t}$$
 (5)

$$DA_{i,t} = \frac{TA_{i,t}}{Assets_{i,t-1}} - NA_{i,t} \tag{6}$$

We follow the earnings management literature and take the absolute value of the discretionary accruals because we understand the fact that managers tend to manipulate earnings both upward and downward. Therefore, higher values of discretionary accruals imply higher risk of earnings manipulation by the managers.

C. Identifying EFP Adopting Firms

To measure the firm-level adoption of Exclusive Forum Provisions, we use an indicator variable. This variable assumes value 1 for all the subsequent firm years after a firm adopts the exclusive forum provisions and zero in prior years. To identify the firms that have adopted the provisions, we manually collect data from the 8K filings of firms listed in the New York Stock Exchange. We use the Factiva database to retrieve these filings and use the keywords 'Exclusive Forum' and the 'Current Report'. Altogether, we find data relating to 624 firms that have adopted the exclusive forum provisions into their charter or bylaws. These adopters belong to the post-boilermaker period (i.e., after the Boilermaker's ruling in June of 2023) until 2021. We limit our sample period to 2021 as the last group of EFP adopters adopted the provisions in 2018. As the EFP adoption at the IPO stage has accelerated after 2020, this will also help us to isolate the effect of midstream EFP adoption on the fraud risks within organizations.

D. Measuring the Impact of EFP Adoption

To estimate the association between EFP adoption and fraud risks, we use an OLS estimation using equation 7. The dependent variable FraudRisk represents the dependent variable of our model and is proxied using the variables defined above. The main variable of interest is EFPA, which is an indicator variable that takes value 1 for all subsequent years after a firm has adopted the exclusive forum provisions. Consistent with our hypothesis H1, we expect the coefficient on EFPA variable to be negative and statistically significant. Suggesting that the firm-level adoption of exclusive forum provisions mitigates fraud risks post-adoption.

$$FinMisc_{i,t} = \beta_0 + \beta_1 EFPA_{i,t} + \beta_2 Size_{i,t-1} + \beta_3 ROA_{i,t-1} + \beta_4 MB_{i,t-1} + \beta_6 Sgrowth_{i,t-1} + \beta_7 Leverage_{i,t-1} + \beta_8 Inventory_{i,t-1} + \beta_9 Receivables_{i,t-1} + \beta_{10} Return_{i,t-1} + Industry FE + Year FE + \varepsilon$$

$$(7)$$

Consistent with the literature, we also use a set of control variables. We control organizational size measured as the log of the market capitalization. We use the market to book value (MB) as a proxy for growth opportunities and measure it as a ratio of market value of securities to its book value. ROA is calculated as the ratio of net income to lagged total assets, while sales growth is calculated as the percentage change in sales over the period t-2 to t-1. We use financial leverage as another control variable, which is measured as the sum of both short- and long-term debt scaled by lagged total assets. Inventory and Receivables are both calculated by dividing the total inventory and receivables balance from the total assets value in each firm year. Return is measured as the one-year change in firm's common stock price measured at time t-1. All the control variables are selected following the pioneering work of Amiram et al. (2015). The variables are explained in detail in appendix A. Consistent with the literature, we also include industry and year fixed in our regressions.

IV. FINDINGS

Under the findings, we first present the univariate comparisons of the characteristics among the EFP adopting and non-EFP adopting firms. The descriptive statistics for both the samples are presented in Table 1, where the first four columns present the figures relating to Benford's Score and the last four columns reporting figures relating to Discretionary Accruals. When using Benford's score to measure fraud risk, our sample size is 50,357 firm year observations. The total number of firms adopting EFP during our sample period is 390 and accounts for 2,330 post EFP firm years.

Table 1. Descriptive Statistics

Stats	N	Mean	Median	SD	N	Mean	Median	SD
Accruals					19,098	0.5352	0.5059	0.5149
Benford	50,357	0.0387	0.0369	0.0127				
EFPA	50,357	0.0463	0.0000	0.2101	19,098	0.0637	0.0000	0.2442
ROA	50,357	6.3916	6.4445	2.4079	19,098	0.0221	0.0526	0.2770
MTB	50,357	3.6185	1.7358	7.3171	19,098	4.8957	2.3476	10.3145
Leverage	50,357	0.0056	0.0385	0.2269	19,098	0.2281	0.2038	0.1984
Sgrowth	50,357	0.2522	0.1950	0.2427	19,098	0.1901	0.0579	0.8145
Size	50,357	0.1526	0.0527	0.6394	19,098	6.4166	6.5578	2.3678
Return	50,357	0.1720	0.0311	0.8876	19,098	0.2458	0.0466	1.1402
STDSALES	50,357	0.2435	0.1262	0.4001				
STDCFO	50,357	0.1059	0.0549	0.1896				
$Inventory_{i,t}$					19,098	0.1009	0.0563	0.1231
$Receivables_{i,t}$					19,098	0.1268	0.1032	0.1085

Source: Author's compilation.

Overall, our sample of EFP adopters account for nearly 5% of our whole sample of firms. Similarly, our sample size equates with 19,098 firm-year observations when we use discretionary accruals to measure fraud risk at the firm level. In this sample, 300 firms have adopted the exclusive forum provisions and account for 1,833 post-EFP firm-years. Overall, when using discretionary accruals, the number of EFP adopters account for 6.4% of our total sample size. We present the correlation coefficients of the key variables in our regression in Table 2. As expected, the proxies for financial fraud risk assume negative correlation coefficients with the EFPA variable.

A. Trends of EPF Adaptations

We present the data relating to the distribution of EFP adopters in Table 3 and 4. Table 3 shows the distribution of EFP adopters based on the year of adoption. Consistent with prior literature, we observe the most significant number of firms to adopt the provisions in 2014, following the Boilermaker's decision in June 2013. As firms start to adopt the EFP at the IPO stage, we observe a decline in mid-stream EFP adoptions from 2019 onwards, with the lowest of 4 adopters in 2018. Table 4 presents the geographical distribution of EFP-adopting firms in our sample. The results suggest that EFP adopters have more chances to be incorporated in the state of Delaware compared to other states.

Table 2. Correlation Coefficient

	[DA]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]
Benford		-0.051	-0.342	0.083	-0.284	-0.129	0.050	0.027	0.077	0.263
EFPA	-0.030	1	0.107	0.023	0.032	0.043	-0.009	-0.003	-0.006	-0.030
Size	-0.066	0.117	1	0.077	0.323	0.215	-0.028	-0.021	-0.197	-0.280
MTB	0.036	0.005	0.097	1	-0.137	0.105	0.052	0.067	0.175	0.211
ROA	-0.117	0.043	0.402	-0.179	1	0.097	-0.091	-0.053	-0.044	-0.330
Leverage	0.049	0.042	0.264	0.139	0.121	1	0.039	-0.006	-0.098	-0.143
Sgrowth	0.145	-0.016	-0.023	0.080	-0.102	-0.022	1	0.089	0.022	0.051
Return	0.038	-0.011	-0.025	0.114	-0.031	-0.046	0.083	1	0.051	0.048
$STDSALES_{i,t}$	-0.034	-0.037	-0.226	0.068	-0.098	-0.144	0.034	0.079	1	0.511
STDCFO	0.068	-0.051	-0.299	0.179	-0.482	-0.184	0.091	0.098	0.519	1
Inventory	-0.113	-0.014	-0.144	-0.020	0.170	-0.122	-0.064	0.003	0.219	-0.042
Receivables	-0.202	-0.031	-0.186	-0.076	0.117	-0.087	-0.081	-0.026	0.136	-0.046

Source: Author's compilation.

Table 3. Year Distribution of EFP Adopters

Year	2013	2014	2015	2016	2017	2018
Benford Score	87	124	63	81	33	2
%	22%	32%	16%	21%	9%	.3%
Accruals	73	99	41	62	23	2
%	24%	33%	10%	21%	8%	1%

Source: Author's compilation.

B. Baseline Findings

We begin our analysis by measuring the firm-level fraud risk using the two proxies of Benford's Score and Discretionary Accruals. After we quantify fraud risk, we regress it on the main independent variable EFPA and the other control variables using ordinary least squares (OLS) regression. The results of this estimate are presented in Table 5. The first column presents the results when we use Benford's Score, while the second column presents the results when we use Discretionary Accruals as the proxy for financial fraud risk at the firm level. The coefficient on the EFPA variable is negative in both columns. A negative coefficient in Benford's score indicates that the EFP-adopting firms experience lower Benford scores compared to non-EFP-adopting firms. Lower Benford's scores imply that the EFP-adopting firms experience a lower risk of financial statement fraud due to less deviation of financial statement figures from Benford's distribution. Thus, exposing them to lower fraud risk compared to non-adopters. Consistent with Cheng et al. (2023) we observe size, ROA, Leverage and sales volatility to have negative coefficients, while the market to book value, sales growth, stock return and cash flow volatility to assume positive coefficients when regressed on EFPA with other control variables.

Table 4. Geographical Distribution of Adopters

	Benfo	Benford Score		ary Accruals
	Count	%	Count	%
Delaware	299	76.67%	253	84.33%
Maryland	26	6.67%	3	1.00%
Oregon	5	1.28%	4	1.33%
Pennsylvania	6	1.54%	5	1.67%
New York	6	1.54%	5	1.67%
North Carolina	6	1.54%	3	1.00%
Florida	6	1.54%	1	0.33%
Others	36	9.23%	26	8.67%

Source: Author's compilation.

Table 5. Baseline Results

	[1]	[2]
$EFPA_{i,t}$	-0.001***	-0.030**
	(0.002)	(0.033)
$Size_{i,t-1}$	-0.001***	-0.023***
	(0.000)	(0.000)
$MTB_{i,t-1}$	0.000***	0.001***
	(0.000)	(0.000)
$ROA_{i,t-1}$	-0.008***	-0.093***
	(0.000)	(0.000)
$leverage_{i,t-1}$	-0.004***	0.096***
	(0.000)	(0.000)
$Sgrowth_{i,t-1}$	0.000*	0.086***
	(0.075)	(0.000)
$Return_{i,t-1}$	0.000***	0.013***
	(0.010)	(0.000)
$STDSALES_{i,t-1}$	-0.001***	
	(0.000)	
$STDCFO_{i,t-1}$	0.006***	
	(0.000)	
$Receivables_{i,t-1}$		-0.277***
		(0.000)
$Inventory_{i,t-1}$		-0.488***
		(0.000)
Constant	Yes	Yes
Year FE	Yes	Yes
Industry FE	Yes	Yes
Observations	50,357	19,098
Adj R-squared	0.259	0.186

Notes: Values in the parentheses reflect the p-values of the corresponding coefficients, and the stars at the end denote statistical significance, *=0.10, **=0.05, ***=0.01. Source: Author's compilation.

Similarly, a negative coefficient on the discretionary accruals variable imply that EFP adopting firms on average experience lower accruals compared to non-adopters. Suggesting that these firms have lower risk of earnings management activities by managers compared to non-adopters. Thus, demonstrating lower fraud risk. These coefficients are economically significant, as such the fraud risk in these firms reduces by nearly 0.08% - 3% when a firm adopts the exclusive forum provisions. Furthermore, consistent with Cheng et al. (2023) we observe size, ROA, Leverage and sales volatility to have negative coefficients, while the market to book value, sales growth, stock return and cash flow volatility to assume positive coefficients when regressed on EFPA with other control variables.

C. Sample Selection Bias

As we rely on the firm-level adoption of Exclusive Forum Provisions to proxy for shareholder litigation, the normality of the distribution of this variable can be questionable. Furthermore, one may question whether the control group of firms that we use in our baseline regressions is not comparable to the treatment group of firms that have adopted the exclusive forum provisions over our sample period. Thus, to address these concerns, we undertake a propensity score matching-based analysis to examine if our baseline results persist when the regressions are run on a comparable control group based on the matched propensity scores.

Table 6. Parallel Trends Assumption

Variable	[1]	[2]	[1]-[2]	[4]	[5]	[4]-[5]
[1]				0.491	0.471	0.02
[2]						
[3]	0.036	0.035	0.001			
[4]	0.050	0.053	-0.003	0.044	0.041	0.004
[5]	7.462	7.358	0.104	7.353	7.390	-0.037
[6]	3.780	3.753	0.028	4.290	4.110	0.181
[7]	0.283	0.271	0.012	0.238	0.230	0.008
[8]	0.129	0.145	-0.016	0.126	0.068	0.058*
[9]	0.145	0.172	-0.027	0.183	0.219	-0.035
[10]	0.258	0.278	-0.020	0.333	0.309	0.024
[11]	0.085	0.094	-0.008	0.104	0.105	-0.001

Source: Author's compilation.

Thus, to address these concerns, we undertake a propensity score matching-based analysis to examine if our baseline results persist when the regressions are run on a comparable control group based on the matched propensity scores. Accordingly, we first create propensity scores for all the firm years in our sample. Essentially, we use all the control variables that we have in our regressions to compute these propensity scores. After

generating the propensity scores, we match each treated firm to two control firms based on their closest propensity scores. We create six separate control groups for the six groups of treatment firms that adopt exclusive forum provisions over the six years. The differences between the treatment and control firms in our treatment and control groups are presented in Table 6. The first three columns present the results relating to the Benford Score, while the last three columns present the results relating to Discretionary Accruals. The differences between these two proxies are presented in Columns 3 and 6, respectively. As expected, the differences in the mean values are non-significant for all the variables that we include in our PSM analysis. Thus, validating the assumption that both the treatment and control firms are similar in the absence of the treatment. Next, we present the results of the PSM analysis using both Benford's Score and the Discretionary accruals in Columns 1 and 2 of Table 7. Consistent with our baseline findings, we observe the coefficient on EFPA to be negative when regressed on our fraud risk variables using the Benford Score and the discretionary accruals.

Table 7. Results of the PSM Analysis

	[1]	[2]
$EFPA_{i,t}$	-0.001**	-0.030**
	(0.024)	(0.011)
$ROA_{i,t-1}$	-0.008***	-0.016
	(0.000)	(0.116)
$MTB_{i,t-1}$	0.000***	-0.000
	(0.000)	(0.818)
$leverage_{i,t-1}$	-0.002***	0.021
	(0.000)	(0.466)
$Sgrowth_{i,t-1}$	0.001***	0.043***
	(0.000)	(0.000)
$Size_{i,t-1}$	-0.001***	-0.021***
	(0.000)	(0.000)
$Return_{i,t-1}$	-0.000	-0.006
	(0.543)	(0.328)
$STDSALES_{i,t-1}$	001	-0.037**
	(0.000)	(0.010)
$STDCFO_{i,t-1}$	-0.010	-0.111**
	(0.000)	(0.013)
$Inventory_{i,t-1}$		-0.775***
		(0.000)
$Receivables_{i,t-1}$		-0.365***
		(0.000)
Constant	Yes	Yes
Year Fixed effects	Yes	Yes
Observations	9,303	5,131
Adj R-squared	0.103	0.019

Source: Author's compilation.

D. Robustness Analyses

We conduct a series of robust tests to validate the soundness of our findings in various circumstances. A first concern that may affect the robustness of our findings is the inclusion of states that adopt the UD laws and PSLRA in our sample. As a result, it is arguable whether the relationship between EFP adoption and fraud risk is driven by the effect of UD laws and the PSLRA in our sample. To rule out this alternative explanation, we include a control variable that assumes value 1 if a firm belongs to a state that has adopted the UD laws or PSLRA. Alternatively, we will repeat our baseline findings by completely excluding the firms that belong to the states that adopt UD laws or PSLRA. The results of the robustness tests are presented in Table 8. Consistent with our baseline findings, the results in the first two columns suggest that the effect of EFP on financial fraud risk is not driven by the effect of UD laws or the PSLRA. As a second robustness test, we look for the generalizability of our findings to other states away from the state of Delaware. Accordingly, we repeat our baseline analysis by excluding all the firms that are incorporated in the state of Delaware. The results of this analysis are presented in the third column of Table 8. Consistently, we continue to report a negative coefficient on the EFPA variable, suggesting that our results are generalizable to other states.

Table 8. Robustness Test

	[1]	[2]	[3]
$\overline{EFPA_{i,t}}$	-0.001***	-0.001**	-0.032**
	(0.002)	(0.011)	(0.020)
$Size_{i,t-1}$	-0.001***	-0.001***	-0.019***
	(0.000)	(0.000)	(0.000)
$MTB_{i,t-1}$	0.000***	0.000***	-0.000**
,	(0.000)	(0.000)	(0.043)
$ROA_{i,t-1}$	-0.008***	-0.007***	0.000
•	(0.000)	(0.000)	(0.982)
$leverage_{i,t-1}$	-0.004***	-0.005***	0.084***
	(0.000)	(0.000)	(0.000)
$Sgrowth_{i,t-1}$	0.000*	0.000	0.086***
,	(0.075)	(0.183)	(0.000)
$Return_{i,t-1}$	0.000***	0.000*	0.001***
	(0.000)	(0.061)	(0.000)
$STDSALES_{i,t-1}$	-0.000***	-0.000**	-0.020*
	(0.000)	(0.034)	(0.094)
$STDCFO_{i,t-1}$	0.006***	0.007***	0.075**
	(0.000)	(0.000)	(0.019)
UDPSLRA	6.000		
	(0.678)		
Constant	Yes	Yes	Yes
Year FE	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes
•		No	No

Observations	50,357	30,369	12,367
Adj R-squared	0.2590	0.2681	0.1985

Source: Author's compilation.

In 2020, the institutional shareholder services updated its stance on exclusive forum provisions by advising its members to accept EFP adoptions only if the state of Delaware is chosen as the exclusive forum to execute lawsuits against the firm. Because they believed the adoption of EFP by firms in other states apart from Delaware to be involved with other motives than achieving litigation efficiency. Thus, including these states in our sample may propose alternative explanations for the findings of this paper. To rule out this argument, we repeat our baseline regression by restricting our sample only to the firms that are incorporated in the state of Delaware. The results presented in the fourth column of Table 8 show that the effect of EFP adoption on fraud risk is not driven by the inclusion of other non-Delaware states in our sample.

E. Casual Analysis

Table 9. 2SLS Analysis for Financial Statement Misconduct

	Benfor	d Score	Discretionary Accruals		
	[1]	[2]	[3]	[4]	
Delaware	0.072***		0.049***		
	(0.000)		(0.000)		
P(EFPA)		-0.005***		-0.523***	
		(0.002)		(0.001)	
$Size_{i,t-1}$	0.007***	-0.001***	0.010***	-0.017***	
.,.	(0.000)	(0.000)	(0.000)	(0.000)	
$MTB_{i,t-1}$	1.000	0.000***	-0.000	0.001***	
,	(0.886)	(0.000)	(0.787)	(0.001)	
$ROA_{i,t-1}$	0.025***	0.007***	0.016**	-0.064***	
•	(0.000)	(0.000)	(0.017)	(0.001)	
leverage _{i,t-1}	-0.006	-0.004***	-0.009	0.093***	
.,,	(0.167)	(0.000)	(0.264)	(0.000)	
$Sgrowth_{i,t-1}$	-0.003**	9.000	-0.005***	0.084***	
, -	(0.047)	(0.220)	(0.003)	(0.000)	
$Return_{i,t-1}$	-0.002**	0.000**	-0.002*	0.011***	
-,,	(0.045)	(0.0017)	(0.091)	(0.000)	
$STDSALES_{i,t-1}$	0.001	-0.000***	0.0012	-0.049***	
.,.	(0.852)	(0.002)	(0.648)	(0.000)	
$STDCFO_{i,t-1}$	-0.010	0.006***	-0.023**	0.123***	
-,,	(0.123)	(0.000)	(0.029)	(0.000)	
$Inventory_{i,t-1}$	-0.047***	-0.009***	-0.044**	-0.498***	
,	(0.000)	(0.000)	(0.013)	(0.000)	
Receivables _{i,t-1}	0.006	0.002***	-0.043**	-0.231***	
-,	(0.454)	(0.001)	(0.012)	(0.000)	
Constant	Yes	Yes	Yes	Yes	
Industry FE	Yes	Yes	Yes	Yes	
Year FE	Yes	Yes	Yes	Yes	

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Observations	49,343	49,343	28,788	19,098
Adj R-squared	0.097		0.107	

Note: Values in parentheses reflect the corresponding p-values of the coefficients and, stars at the end denote statistical significance, *=0.10, **=0.05, ***=0.01.

Source: Author's compilation.

As our proxy for shareholder litigation is a firm-level variable, using an OLS regression might induce concerns of endogeneity. Further, one may question the randomness of the distribution of the EFP variable. Therefore, we propose a two-stage least squares regression with instrumental variable analysis to estimate the effect of shareholder litigation threat on a firm's financial fraud risk. An essential step in the instrumental variable analysis is identifying a valid instrument that satisfies the two conditions of exclusion restriction and relevance condition. Closely following the work of Wilson (2020), we observe that firms incorporated in the state of Delaware have a higher propensity to adopt the exclusive forum provisions. Thus, satisfying the relevance condition. As a firm's decision of the state of incorporation is made particularly in the early stages of a firm's life, it is unlikely to have any explanations for the fraud risks that the firms may encounter at present. Thus, satisfying the exclusion restriction.

$$EFPA = \beta_0 + \beta_1 Delaware_{i,t} + \beta_2 Size_{i,t-1} + \beta_3 ROA_{i,t-1} + \beta_4 MB_{i,t-1} + \beta_6 Sgrowth_{i,t-1} + \beta_7 Leverage_{i,t-1} + \beta_8 Inventory_{i,t-1} + \beta_9 Receivables_{i,t-1} + \beta_{10} Return_{i,t-1} + Industry FE + Year FE + \varepsilon$$

$$(8)$$

Accordingly, we use an indicator variable that equals 1 if the firm's state of incorporation is Delaware. This will act as our instrument for the endogenous EFPA variable and will be used in our first-stage regression. We use equation 8 for the first stage of the 2SLS where the endogenous EFPA variable is regressed on our instrument and all other control variables that we use in our baseline equation. Next, we will predict the probabilities of firms adopting exclusive forum provision adoptions. These predicted probabilities would be used as the independent variable in our second stage regression, which is equation 9. In the second stage regression, the variable P(EFPA) represents the predicted values of EFPA from the first stage regression.

$$\begin{aligned} &FinMisc = \beta_0 + \beta_1 P(EFPA)_{i,t} + \beta_2 Size_{i,t-1} + \beta_3 ROA_{i,t-1} + \beta_4 MB_{i,t-1} + \\ &\beta_6 Sgrowth_{i,t-1} + \beta_7 Leverage_{i,t-1} + \beta_8 Inventory_{i,t-1} + \beta_9 Receivables_{i,t-1} + \\ &\beta_{10} Return_{i,t-1} + Industry FE + Year FE + \varepsilon \end{aligned} \tag{9}$$

The results of the IV regression are presented in Table 9. The first two columns report the results relating to using Benford's Score as a proxy for fraud risk. Similarly, the last two columns present the results of the IV regression when we use Discretionary Accruals to measure fraud risk at the firm level. As expected, the coefficient on the instrumental variable 'Delaware incorporation' is positive and is statistically significant when regressed on the EFPA variable. Suggesting that Delaware incorporation is a strong determinant of firm-level EFP adoption. When we regress the predicted value of EFPA using the P(EFPA) variable on the firm's financial fraud risk, we observe the coefficient to be negative and statistically significant in both samples. suggesting that the adoption of exclusive forum provisions continues to reduce the risk of financial statement fraud among the adopting firms.

V. CONCLUSION

Shareholder litigation is an important aspect of corporate governance, that helps shareholders to ensure that managers make decisions that minimize the conflicts of interests between managers and the shareholders (Shleifer & Vishny, 1997). Although the wide beliefs of the proponents assume increasing litigation pressure to enhance corporate governance in firms, the opponents increasingly highlight the detrimental effects of shareholder litigation when frivolous lawsuits impede their efficiency. The recent surge in Multi-Forum Litigation has worsened the litigation infrastructure in the US, by allowing shareholders to file duplicative lawsuits in multiple forums at a given time (Wilson, 2020).

Following Romano and Sanga (2017), Grundfest (2012), and Wilson (2020), we examine the effect of multi-forum litigation on firms' likelihood of experiencing financial fraud (i.e., financial fraud risk). Using firm-level adoption of exclusive forum provisions to proxy for the level of multi-forum litigation, we find evidence consistent with the shareholder interest theory (Friedman, 1970). Consistent with the financial misconduct literature, we use two proxies, namely the Benford's Score and the Discretionary Accruals, to proxy for firm-level fraud risk. Our findings provide strong evidence suggesting that the firm level adoption of EFP improves the efficiency of shareholder litigation and mitigates the fraud risks for the adopting firms. As the EFP-adopting firms in our sample are incomparable to the control firms, we use a propensity score matched control group to see if our results are subject to sample selection bias. The results continue to indicate that the EFP adoption mitigates fraud risks among the EFP adopters. We find our results to be robust for a battery of robustness tests and causal analyses.

This paper makes several contributions to the literature. First, we contribute to the shareholder litigation literature by examining the effects of multi-forum litigation, which the prior literature has largely overlooked. We find evidence in support of the dark side of shareholder litigation and show the efficiency of exclusive forum provisions, compared to UD laws and PSLRA, in achieving lower financial fraud risk in the adopting organizations. Secondly, we contribute to the growing literature on financial misconduct, where we find litigation pressure as a key driver that induces the risk of financial statement fraud in organizations. This complements the pressure hypothesis in the fraud triangle model (Schafer, 1973). Finally, we contribute to the growing debate on a required venue for litigation and promote its adoption at the firm level.

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