Shareholder Litigation Risk, Managerial Risk Aversion, Redeployable Assets, and Sustainability: A Quasi-natural Experiment

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Abstract: Taking advantage of a quasi-natural experiment based on a distinctive ruling by the Ninth Circuit Court of Appeals, we examine how shareholder litigation rights influence asset redeployability, which is a critical aspect of sustainability that has surprisingly garnered limited attention in the existing literature. Our difference-in-difference estimates demonstrate that an exogenous reduction in shareholder litigation rights reduces asset redeployability considerably. Specially, an unanticipated drop in litigation risk results in a 4.66% decline in asset redeployability. More redeployable assets are typically viewed as less risky owing to their multiple uses. Risk-averse managers are willing to tolerate more risk in terms of lower asset redeployability when they are more insulated from litigation risk. Apparently, managers delicately trade off the risk in one area for another, resulting in a substitution effect. Further analysis corroborates the findings, i.e., propensity score matching, entropy balancing, and Oster's (2019) testing for coefficient stability. Our identification strategy relies on a quasi-natural experiment and is thus more likely to reveal a causal effect, rather than a mere association.

JEL Classification: K41, G34, G31.

Keywords: Shareholder litigation, litigation risk, Ninth Circuit, redeployable assets, asset redeployability, sustainability.

1. INTRODUCTION

Legal safeguards protecting shareholders' interests are commonly recognized as an essential component of corporate governance. There has been a significant amount of research on the incentives and repercussions of shareholder lawsuits (Fields, 1990; Coffee, 1986; Romano, 1991; Francis, Philbrick, and Schipper, 1994; Ferris et al., 2007; Jaroenjitrkam, Treepongkaruna, and Jiraporn, 2021). Potential shareholder lawsuits significantly raise the cost of management's opportunistic actions and serve as a powerful deterrent against agency problems. As a result, litigation risk is typically viewed as a critical external instrument of corporate governance (Kim and Skinner, 2012; Liao and Ouyang, 2019; Jaroenjitrkam, Treepongkaruna, and Jiraporn, 2021).

Exploiting a quasi-natural experiment based on a distinctive court ruling, we investigate the effect of shareholder litigation risk on asset redeployability. In the literature on investment irreversibility, asset redeployability is one of themost crucial issues (Bernanke, 1983; McDonald and Siegel, 1986; Abel and Eberly, 1996; Padungsasksawasdi, Treepongkaruna, and Jiraporn, 2021). Redeployable assets are those with alternative uses. Because they can be re-assigned for other purposes, redeployable assets are generally considered less risky. While prior research has examined the effects of asset redeployability on important corporate outcomes, such as capital structure and loan maturity (Benmelech, 2009; Benmelech and Bergman, 2009; Ortiz-Molina and Phillips, 2014; Campello and Giambona, 2013), the link between asset redeployability and shareholder litigation rights has never been explored before. We address this important void in the literature.

In addition, asset redeployability, often overlooked in sustainability literature, is a pivotal factor in promoting sustainability. Assets with high redeployability can be repurposed when circumstances change, reducing the need for constructing new ones and conserving natural resources, similar to the concept of recycling. Despite its relevance, this aspect has been surprisingly neglected in academic discourse. Our research aims to fill this gap by emphasizing the significance of asset redeployability within the sustainability framework (Chatjuthamard et al., 2023; Pothisarn et al., 2023).

The problem of endogeneity, which prevents researchers from making causal inferences, is a key barrier in this field

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of research. We advance the literature by running a quasi-natural experiment to explore the impact of shareholder litigation risk on redeployable assets. Our identification strategy is grounded on a 1999 decision by the Ninth Circuit Court of Appeals, which made it significantly more difficult for shareholders to launch lawsuits, lowering shareholder litigation risk for corporations headquartered in the Ninth Circuit. The Ninth Circuit decision represents an exogenous shock to the litigation risk since it is unexpected and originates from outside the firm (Chu, 2017, Liao and Ouyang, 2019; Yang, Yu, and Zheng, 2021; Houston, Lin, Liu,, Wei, 2019; Dong and Zhang, 2018; Huang, Roychowdhury, and Sletten, 2020; Arena, Wang, and Yang, 2021; Chung, Kim, Rabarrison, To, and Wu, 2020; Jaroenjitrkam, Treepongkaruna, and Jiraporn, 2021).

We propose two opposing hypotheses based on the notion that managers tend to be risk-averse as they are not as diversified as typical shareholders (Amihud and Lev, 1981; Smith and Stulz, 1985; Low, 2009; Williams, 1987). First, when shareholder litigation risk is reduced, risk-averse managers are willing to tolerate more risk in other dimensions. This view suggests that a reduction in litigation risk leads to lower asset redeployability, which is more risky. In other words, the higher risk from less redeployable assets substitutes for the lower risk in litigation. On the other hand, the opposing argument is that shareholder litigation rights, functioning as a governance mechanism, mitigate agency problems and keep risk-averse managers from departing too far from the optimal risk-taking level. When litigation risk is weakened, managers can adopt policies that better reflect their own risk-averse preferences. This view therefore implies that a reduction in litigation risk results in more redeployable assets, which are less risky.

Based on a large sample of U.S. firms over almost 20 years, our results demonstrate that an exogenous reduction in shareholder litigation risk brings about a lower level of asset redeployability. The findings reinforce the argument that risk-averse managers carefully trade off one area of risk for another, i.e., they substitute the higher risk resulting from lower asset redeployability for the lower litigation risk. Because our empirical strategy is based on a quasi-natural experiment using an exogenous shock, the findings are substantially less vulnerable to endogeneity and probably reflect a causal effect, rather than merely an association. In any event, we execute a variety of robustness checks to further reduce endogeneity, i.e., propensity score matching, entropy balancing, analysis of subsamples, as well as Oster's (2019) method for testing coefficient stability. Our findings are corroborated by all the robustness checks.

Finally, we hypothesize that, as an external governance mechanism, shareholder litigation rights may interact with internal governance. We explore this possibility by examining the role of outside independent directors. Because they are independent, outside directors are more likely to be objective. As a result, board independence is one of the most often used indicators of board quality. Earlier research has shown that independent directors are valuable (Rosenstein and Wyatt, 1990; Cotter, Shivdasani, and Zenner, 1997; Nguyen and Nielsen, 2010; Jenwittayaroje and Jiraporn, 2017). We look at the possible interaction between litigation rights and board independence but do not find evidence of any significant interaction.

Notably, our findings corroborate those documented in recent studies. For instance, using the same empirical strategy based on the Ninth Circuit ruling, Arena, Wang, and Yang (2021) demonstrate a large rise in tax avoidance in response to an exogenous drop in litigation risk. Their findings imply that managers are willing to take on additional risk in terms of tax evasion when they are more protected from litigation risk. Similarly, Chatjuthamard, Jiraporn, and Lee (2021) investigate customer concentration. A higher degree of customer concentration is associated with higher risk. Companies with only a few large customers experience higher risk as losing one of the few customers would be seriously problematic. By contrast, companies with a large customer base can afford to lose a few customers without experiencing as much disruption. Chatjuthamard, Jiraporn, and Lee (2021) report that a decline in litigation risk results in a significant increase in customer concentration. Managers are ready to accept the additional risk attributed to higher customer concentration when they are more insulated from shareholder lawsuits. The results in these recent studies and ours are notably consistent, all suggesting that managers make conscious trade-offs between sources of risk.

The results of our study make several key contributions to the literature. First, we add to the growing body of knowledge on the effects of shareholder litigation risk on corporate strategies, policies, and outcomes (Lowry and Shu, 2002; Donelson and Yust, 2014; Qing, 2011; Malm and Sah, 2019; Pukthuanthong, Turtle, Walker, and Wang, 2017; Khurana and Raman, 2004; Wu, Peng, and Shan, 2019; Arena, 2018; Ligon and Malm, 2018; Arena and Julio, 2015; Lin, Liu, and Manso, 2020; Obaydin, Zurbruegg, Hossain, Adhikari, and Elnahas, 2021; Nguyen, Phan, and Sun, 2018; Do, 2021; Nguyen, Phan, and Lee, 2020; Ni and Yin, 2018; Jaroenjitrkam, Treepongkaruna, and Jiraporn, 2021). Our results contribute to this body of knowledge by demonstrating that litigation risk has a significant influence on redeployable assets. Our study is the first to link shareholder litigation rights to asset redeployability.

Second, our results contribute to the literature in investment irreversibility where asset redeployability is a key aspect (Bernanke, 1983; McDonald and Siegel, 1986; Abel and Eberly, 1996: Kim and Kung, 2016). Our results show that asset redeployability is significantly reduced in the presence of weaker litigation risk.Third, our study contributes to the literature in corporate governance for shareholder litigation risk is frequently viewed as a crucial external governance mechanism (Kim and Skinner, 2012; Liao and Ouyang, 2019). Moreover, the results of our study advance the literature in managerial risk aversion (Hoskisson, Castleton, & Withers, 2009; Hoskisson,Chirico, Zyung, and Gambeta, 2017;Amihud and Lev, 1981; Smith and Stulz, 1985; Low, 2009; Williams, 1987). We demonstrate that risk-averse managers cautiously trade off the risk stemming from one area of the firm for another area.

Finally, we contribute to a new but quickly growing area of research that takes advantage of the Ninth Circuit judgment as an exogenous shock. Using this empirical strategy, recent research has explored the consequences of litigation risk on a

wide variety of corporate outcomes (Chu, 2017, Liao and Ouyang, 2019; Yang, Yu, and Zheng, 2021; Houston, Lin, Liu, Wei, 2019; Dong and Zhang, 2019; Huang, Roychowdhury, and Sletten, 2020; Arena, Wang, and Yang, 2021; Chung, Kim, Rabarrison, To, and Wu, 2020). By applyingthis empirical approach to asset redeployability, we add considerably to the body of knowledge in this field.

2. PRIOR RESEARCH AND HYPOTHESIS DEVELOPMENT

A. Asset Redeployability

Asset redeployability is one of the critical concepts in the literature on investment irreversibility (Bernanke, 1983; McDonald and Siegel, 1986; Abel and Eberly, 1996; Padungsasksawasdi, Treepongkaruna, and Jiraporn, 2021). The costs of redeploying assets constitute a notable source of investment irreversibility (i.e., the wedge between the purchase and liquidation values of capital).[1] Due to the high cost of capital reversibility, firms are deterred from making investments when there is uncertainty (Kim and Kung, 2016).

When analyzing corporate policies and strategies, one branch of the literature utilizes asset redeployability to estimate asset liquidation values (Kim and Kung, 2017). The focus of this research is on the effect of asset redeployability on capital structure outcomes such as loan maturity (Benmelech, 2009), cost of capital (Benmelech and Bergman, 2009; Ortiz-Molina and Phillips, 2014), and leverage (Campello and Giambona, 2013). In addition, Almeida et al. (2011) and Gavazza (2011) investigate how asset redeployability affects asset reallocation through mergers and secondary market trading. Beutler and Grobety (2019) study the sensitivity of industry growth to collateral values by using asset redeployability as a proxy for liquidation values (Padunsasksawasdi, Treepongkarun, and Jiraporn, 2021).

Assets that are more redeployable are typically less risky because they have alternative uses when circumstances change. By contrast, assets that cannot be used for other purposes represent a more serious source of risk as their values tend to decline sharply when they cannot be redeployed. As a result, a higher degree of asset redeployability is generally associated with a higher level of risk.

Notable are a few recent studies related to asset redeployability. For instance, Kim and Kung (2016) find that, as uncertainty increases, companies with less redeployable assets lower investment much more than those with more redeployable assets. More redeployable assets have a higher rate of recovery and are more actively traded in secondary markets. In general, theirfindings show that frictions associated with asset redeployability influence liquidation values and so cause firms to exercise caution when making investment decisions in the presence of uncertainty. Chen, Maslar, and Serfling (2020) show that a company with fewer redeployable assets, or assets having fewer potential uses outside the company, is more likely to borrow from banks rather than issue public debt. These findings are consistent with companies with less redeployable assets placing a premium on the capacity to renegotiate bank loan arrangements rather than selling assets in the event of default.Selling less redeployable assets during a stressful time can be difficult. Finally, Hasan, Habib, and Alam (2021) document a significant decline in tax avoidance for firms with higher asset redeployability, suggesting that asset redeployability is a critical factor for corporate tax planning.

Using the Sarbanes-Oxley Act as an exogenous shock to board independence, Padunsasksawasdi, Treepongkaruna, and Jiraporn (2021) report thatcompanies that are compelled to increase board independence have substantially fewer redeployable assets after the shock than firms that are not required to modify board composition. This is in agreement with the notion of managerial myopia. Managers behave more myopically when they are exposed to increased scrutiny, focusing more on assets that are currently useful to the firm and less on redeployability in the future. Likewise, Chatjuthamard et al. (2023) show that more takeover exposure greatly diminishes asset redeployability, supporting the management myopia argument. Hostile takeover threats weaken managers' job security, causing them to myopically concentrate on asset utilization in the near term rather than how they may be deployed in the long run, resulting in reduced asset redeployability.

B. Asset Redeployability and Sustainability

Furthermore, it is crucial to acknowledge the often-overlooked significance of asset redeployability in the context of sustainability. Despite its inherent importance, this concept has frequently remained on the periphery of sustainability literature. Assets endowed with a high degree of redeployability possess a dynamic quality, allowing them to adapt seamlessly to changing circumstances, akin to the principles of recycling. This adaptability significantly reduces the necessity to construct entirely new assets, thus conserving valuable natural resources. Strikingly, within academic discourse, asset redeployability has received inadequate attention, a gap our research strives to address. By emphasizing the pivotal role of asset redeployability within the sustainability framework, we seek to shed light on its potential to revolutionize sustainability practices and contribute to a more resource-efficient and environmentally responsible future (Chatjuthamard et al., 2023; Pothisarn et al., 2023).

C. Corporate Governance and Shareholder Litigation

Legal protections for shareholders' interests are widely acknowledged as an important aspect of corporate governance. Stockholders, in particular, have the ability to sue management if they believe that the executives are misusing their power (Shleifer and Vishny, 1997; Ferris et al., 2007). Indeed, there is a substantial body of research on the motivations and outcomes of shareholder litigation (Fields, 1990; Coffee, 1986; Romano, 1991; Francis, Philbrick, and Schipper, 1994; Ferris et al., 2007). Potential shareholder lawsuits greatly increase the cost of management's opportunistic actions and operate as a strong disincentive for managers who

[1] Additional research on investment irreversibility includes Docherty, Chan, and Easton (2010), Panteghini (2001), Guariglia, Tsoukalas, and Tsoukas (2012), Shaanan (2005), Song (2021), Faig (2001), Kepp and Mannasoo (2021), and Prombutr, Lockwood, and Diltz (2010).

engage in such activities. As a result, lawsuit risk is seen as an important external corporate governance mechanism (Kim and Skinner, 2012; Liao and Ouyang, 2019). On the other hand, shareholder lawsuits may be controversial. Many people believe that the bulk of class action lawsuits are baseless and that lawyers profit handsomely at the cost of shareholders (Chu, 2017; Romano, 1991; Johnson et al., 2000; Jaroenjitrkam, Treepongkaruna, and Jiraporn, 2021; Chatjuthamard, Kitkasiwat, and Jiraporn, 2022).

Previous research has looked at the role of shareholder lawsuits as an external governance instrument. According to Niehaus and Roth (1999), shareholder litigation raises CEO turnover rates, with the impact being significantly linked to the merits of the lawsuit. According to Fich and Shivdasani(2007), although independent directors do not experience unusual turnover, they do suffer a considerable drop in the number of future board seats they hold, implying that shareholder litigation has some disciplinary effect on independent directors(Chu, 2017; Jaroenjitrkam, Treepongkaruna, and Jiraporn, 2021; Chatjuthamard, Kitkasiwat, and Jiraporn, 2022).[2]

D. Managerial Risk Aversion

One key feature of agency theory is the question of risk sharing that arises when working parties hold different perspectives and when one party (for example, principals or owners) assigns responsibilities to the other party (e.g., managerial agents). Senior executives, in particular, may encounter an agency conflict with shareholders about risk preferences. Shareholders, who are entitled to the residual value of a business, can diversify their risk exposure through their ownership portfolio and are thus considered risk neutral. In comparison, managerial agents lack the ability to diversify their employment risk and hence are more risk averse. If corporate managers are compelled to bear significant residual risks, they would seek significantly higher monetary incentives or make fewer risky decisions, resulting in suboptimal corporate strategies (Hoskisson, Castleton and Withers, 2009; Hoskisson,Chirico, Zyung, and Gambeta, 2017).

Managers often have the power to influence firm risk by deciding which investment initiatives to pursue. Managers may reduce firm risk by investing in assets that serve to stabilize the firm's revenue stream, such as diversification activities, or picking projects with reduced cash flow volatility (Low, 2009). It is reasonable to assume that risk-averse managers are motivated to safeguard their company-specific human capital and perquisite consumption (Amihud and Lev, 1981; Smith and Stulz, 1985; Low, 2009; Williams, 1987; Low, 2009). Unlike well-diversified shareholders who accept all positive net present value (NPV) investments regardless of risk, managers may reject risk-increasing, positive NPV projects if the cost of the increased risk outweighs the benefit from improved firm value (Low, 2009).

E. Hypothesis Development

Based on the literature, two opposing hypotheses can be advanced regarding the effect of shareholder litigation rights on asset redeployability. [3] First, when shareholder litigation risk is weakened, risk-averse managers are willing to tolerate more risk in other areas. Because assets with low redeployability are typically more risky, managers are more inclined to adopt these assets when they are more insulated from shareholder lawsuits. This view posits that there is a certain amount of overall risk that managers are willing to tolerate, and they deliberately trade off the risk in one area for the risk in another area. When the risk from one source is reduced, a higher level of risk from another source is acceptable that would otherwise not be tolerated. Therefore, this hypothesis predicts that a reduction in shareholder litigation risk results in lower asset redeployability. We refer to this view as the trade-off hypothesis.

On the other hand, managers are risk-averse as they are less diversified than typical shareholders. Owing to agency problems, their risk aversion may result in investment strategies that are sub-optimal. However, acting as an external governance mechanism, shareholder litigation rights prevent managers from deviating too far from the optimal level in terms of risk taking. In other words, litigation risk compels managers to take more risk than they otherwise would. When there is a decline in shareholder litigation risk, managers are better able to choose investments more in line with their self-interested risk preferences, resulting in lower firm risk. Because a higher level of asset redeployability is less risky, this view predicts that managers tend to raise asset redeployability when they are shielded from shareholder lawsuits. A decline in litigation risk brings about higher asset redeployability, according to this hypothesis. This view is referred to as the risk reduction hypothesis.

F. The Ninth Circuit Ruling as a Quasi-natural Experiment

Congress approved the Private Securities Lawsuits Reform Act (PSLRA) in December 1995 as part of a broader campaign to safeguard firms against frivolous shareholder lawsuits. Prior to the PSLRA, litigants may argue that a sharp drop in stock prices demonstrated that the issuer and its management withheld negative information that led to the drop. The PSLRA, on the other hand, requires specific evidence to establish a persuasive inference that the defendant acted with the appropriate state of mind in complaints claiming fraud. However, the legal pleading requirements are interpreted differently by different federal circuit courts in the United States. According to the Ninth Circuit, Plaintiffs must establish that the defendants were knowingly negligent in establishing the misrepresentation that gave rise to the fraud

[2] Additional notable studies on shareholder litigation are Bourveau, Lou, and Wang (2018), Crane and Koch (2018), Ni and Yin (2018), Cheng, Huang, and Li (2016), Nguyen, Phan, and Sun (2018), Manchiraju, Pandey, and Subramanyam (2021), Chu and Zhao (2021), and Donelson, Kettell, McInnis, and Toynbee (2021).

[3] More research on managerial risk aversion can be found in the following studies: Gilley, McGee, and Rasheed (2004), Heron and Lie (2017), Hoskisson, Hitt, and Hill (1991), Karpavicious and Yu (2019), Milidonis and Stathopoulos (2014), and Iqbal and Vahamaa (2019).

charge (Chu, 2017; Chatjuthamard, Kitkasiwat, and Jiraporn, 2022).[4]

The court ruling, issued on July 2, 1999, had a disproportionate impact on firms situated in the Ninth Circuit. Because shareholders are frequently geographically distributed, securities class action lawsuits can be filed in any of the federal circuit courts. As a result, the Ninth Circuit Court's decision is likely to have a greater impact on corporations with headquarters in the Ninth Circuit. Indeed, Johnson et al. (2000) discover that the judgment announcement returns for firms domiciled in the Ninth Circuit are much greater than for other firms. According to Pritchard and Sale (2005), the Ninth Circuit rejects class action cases considerably more frequently than other courts after the verdict.

Numerous recent studies analyze the effects of shareholder litigation risk on corporate policies and outcomes using the Ninth Circuit judgment as an exogenous shock. Chu (2017), for example, demonstrates that raising the difficulty of shareholder litigation significantly reduces loan spreads, corroborating the concept that shareholder litigation enables shareholders to recover wealth from creditors following the announcement of a bankruptcy. Huang, Roychowdhury, and Sletten (2020) and Liao and Ouyang (2019) document that, when companies are more insulated against shareholder litigation, they demonstrate higher real earnings management. Arena, Wang, and Yang (2021) see an increase in tax avoidance as a result of the Ninth Circuit judgment, suggesting that the threat of litigation acts as a disincentive against tax avoidance.

Jaroenjitrkam, Treepongkaruna, and Jiraporn (2021), capitalizing on the Ninth Circuit ruling as a quasi-natural experiment, report that companies are significantly more socially responsible when shareholder litigation risk is weakened. They argue that managers enjoy better job security when litigation risk is reduced and therefore are more inclined to promote long-term investments in corporate social responsibility (CSR). Many other recent studies utilize the Ninth Circuit decision as a quasi-natural experiment (Liao and Ouyang, 2019; Yang, Yu, and Zheng, 2021; Dong and Zhang, 2019; Huang, Roychowdhury, and Sletten, 2020; Chung, Kim, Rabarrison, To, and Wu, 2020).

3. SAMPLE SELECTION AND DATA DESCRIPTION

A. Sample Formation

We use a large sample of U.S. firms. The data on asset redeployability are from Kim and Kung (2016). The data on directors and board characteristics are from the Institutional Shareholder Services (ISS). Firm-specific characteristics are from COMPUSTAT. Outliers are removed where appropriate. The final sample consists of 14,846 firm-year observations from 1996 to 2014.[5]

B. Asset Redeployability

Measuring asset redeployability has proven difficult. Kim and Kung (2016), however, have developed an innovative metric for asset redeployability. They measure asset redeployability using the Bureau of Economic Analysis's (BEA) capital flow database, which categorizes capital expenditures across a wide variety of businesses. They begin by calculating the redeployability score at the asset level, which is defined as the fraction of companies that employ a certain asset. As a result, if a particular asset is used by a greater number of businesses in the economy, the redeployability score is higher (Kim and Kung, 2016). The principles of asset specificity (Williamson, 1988) and asset market thickness are integrated into this approach to defining asset redeployability (Gavazza, 2011). Additionally, to account for the detrimental effects of potential buyers' illiquidity on redeployability, particularly during stressful times (Shleifer and Vishny, 1992), Kim and Kung (2016) calculate the redeployability score taking into account potential buyers' financial constraints as well as the correlation of output across industries.

Kim and Kung (2016) show that, when uncertainty grows, businesses with fewer redeployable assets reduce investments much more than those with more redeployable assets. In conclusion, Kim and Kung's (2016) redeployability score is a unique measure based on a sophisticated technique that is empirically validated. A higher score suggests greater redeployability. Kim and Kung go into further detail regarding how the redeployability score is calculated (2016).Using Kim and Kung's (2016) redeployability score, Padunsaksawasdi, Treepongkarun, and Jiraporn (2021) report that more board independence results in less redeployable assets. They demonstrate, using an exogenous regulatory shock induced by the Sarbanes-Oxley Act of 2002, that companies compelled to increase board independence experience a more pronounced drop in asset redeployability than firms not required to modify board composition.

C. Empirical Strategy

Following the literature in this area, we execute a difference-in-difference analysis. Two binary variables are created. First, Ninth Circuit is a binary variable that is equal to one if the company has its headquarters in the Ninth Circuit and zero if it does not. The Ninth Circuit Court of Appeals covers the following nine states: Alaska, Arizona, California, Hawaii, Idaho, Montana, Nevada, Oregon, and Washington. Second, Post-1999 is a binary variable equal to one after 1999 and zero otherwise. In addition, an interaction term between the two binary variables is created. The coefficient of the interaction variable denotes the difference in differences. Basically, the following regression analysis is estimated.

[4]The United States courts of appeals, sometimes known as circuit courts, are the intermediate appellate courts of the United States' federal judiciary. The courts are divided into 13 circuits, each of which hears appeals from district courts within its jurisdiction. Following the Supreme Court, the courts of appeals in the United States are recognized as the most powerful and influential courts in the country (Jaroenjitrkam, Treepongkaruna, and Jiraporn, 2021).

[5] Our sample period starts in 1996 because the data for board characteristics are available beginning in 1996. Our sample period ends in 2014 because the data for asset redeployability are available until 2014.

Table 1. Summary statistics.

The asset redeployability score is as defined in Kim and Kung (2016). We execute a difference-in-difference analysis. Two binary variables are created. First, Ninth Circuit is a binary variable that is equal to one if the company has its headquarters in the Ninth Circuit and zero if it does not. The Ninth Circuit Court of Appeals covers the following nine states: Alaska, Arizona, California, Hawaii, Idaho, Montana, Nevada, Oregon, and Washington. Second, Post-1999 is a binary variable equal to one after 1999 and zero otherwise. The coefficient of the interaction variable denotes the difference in differences. The variable definitions are shown in the Appendix.

	Mean	S.D.	0.25	Median	0.75
Asset Redeployability					
Asset Redeployability Score	40.150	8.842	35.673	40.246	45.786
Ninth Circuit Court of Appeals					
Ninth Circuit	0.183	0.386	0.000	0.000	0.000
Post-1999	0.800	0.400	1.000	1.000	1.000
Board Attributes					
% Independent Directors	71.723	16.321	62.500	75.000	85.714
Board Size	9.191	2.354	7.000	9.000	11.000
Firm Characteristics					
Total Assets	7733.026	27000.000	624.654	1649.232	5199.974
Total Debt/Total Assets	0.221	0.167	0.072	0.220	0.337
EBIT/Total Assets	0.100	0.087	0.058	0.097	0.144
Capital Expenditures/Total Assets	0.053	0.048	0.022	0.039	0.068
R&D Expense/Total Assets	0.029	0.048	0.000	0.002	0.038
Advertising Expense/Total Assets	0.013	0.029	0.000	0.000	0.009
Cash Holdings/Total Assets	0.137	0.157	0.023	0.074	0.199
Dividends/Total Assets	0.013	0.019	0.000	0.007	0.020
Fixed Assets/Total Assets	0.544	0.369	0.247	0.458	0.787
SG&A Expense/Total Assets	0.232	0.194	0.085	0.193	0.333

$$\text{Asset Redeployability}_{it} = \alpha + \beta_1(\text{Ninth Circuit})_i + \beta_2(\text{Post-1999})_t + \beta_3(\text{Ninth Circuit} \times \text{Post-1999})_{it} + \beta_4(\text{Controls})_{it}$$

where iindexes firms and t indexes years.

The focus is on the coefficient of the interaction term. A negative coefficient would be consistent with the prediction of the trade-off hypothesis, where managers tolerate higher risk in terms of asset redeployability, given the lower litigation risk. By contrast, a positive coefficient of the interaction term would support the risk reduction hypothesis, where managers drive firm risk lower when they are more insulated from litigation risk.

Because we control for state fixed effects, Ninth Circuit is dropped. Similarly, Post-1999 is subsumed by year fixed effects. Furthermore, we include several control variables that may influence asset redeployabilitySpecifically, we include profitability (earnings before interest and taxes [EBIT]/total assets), firm size (natural log of total assets), leverage (total debt/total assets), capital investments (capital expenditures/total assets), intangible assets (advertising and research and development [R&D] expenses/total assets), asset tangibility (fixed assets/total assets), cash holdings (cash holdings/total assets), dividend payouts (dividends/total assets), and discretionary spending (selling, general, and administrative expenses [SG&A]/total assets).

Moreover, to control for corporate governance, we include board size and board independence (percentage of independent directors on the board). To account for variations over time and across industries, we include year fixed effects and industry fixed effects (based on the first two digit of SIC). To control for state-specific attributes, we include state fixed effects. We do not include firm fixed effects because there is little variation over time in asset redeployability, making it challenging to include firm fixed effects.[6] The Appendix displays the variable definitions. Table **1** shows the descriptive statistics for all the variables.

[6] Because asset redeployability is sticky, changing only slowly over time within firms, a fixed-effects analysis is not appropriate in the context of our study. To validate this argument, we calculate the standard deviations of asset redeployability both across firms and over time and find that the standard deviation between firms is 6.63 times the standard deviation within firms over time. Obviously, there is very little variation over time, making it challenging to execute a fixed-effects analysis.

4. RESULTS

A. Main Regression Analysis

Table **2** shows the difference-in-difference estimates, where the dependent variable is Kim and Kung's (2016) asset redeployability score. The standard errors are clustered by firm and by state. The coefficient of the interaction term is negative and significant. Therefore, relative to those firms outside the Ninth Circuit, those in the Ninth Circuit experience a significant decline in asset redeployability, corroborating the prediction of the trade-off hypothesis. An exogenous reduction in shareholder litigation rights results in risk-averse managers willing to accept more risk in terms of lower asset redeployability. The higher risk that can be attributed to a lower level of asset redeployability replaces the lower litigation risk, implying a substitution effect. Apparently, managers carefully trade off one type of risk for another in response to an unanticipated exogenous shock. As our empirical strategy is based on a quasi-natural experiment, it is much less susceptible to endogeneity and is thus much more likely to reflect a causal effect, rather than a mere association.

Table 2. Difference-in-difference estimates of the effect of shareholder litigation risk on asset redeployability.

The asset redeployability score is as defined in Kim and Kung (2016). We execute a difference-in-difference analysis. Two binary variables are created. First, Ninth Circuit is a binary variable that is equal to one if the company has its headquarters in the Ninth Circuit and zero if it does not. The Ninth Circuit Court of Appeals covers the following nine states: Alaska, Arizona, California, Hawaii, Idaho, Montana, Nevada, Oregon, and Washington. Second, Post-1999 is a binary variable equal to one after 1999 and zero otherwise. The coefficient of the interaction variable denotes the difference in differences. The variable definitions are shown in the Appendix.

	(1)
	Asset Redeployability
Ninth Circuit × Post-1999	**-0.412*****
	(-2.787)
% Independent Directors	-0.007*
	(-2.004)
Ln (Board Size)	0.604***
	(2.695)
Ln (Total Assets)	-0.115**
	(-2.246)
Leverage	0.392
	(0.907)
Profitability	0.579
	(1.091)
Capital Investments	-1.713
	(-1.260)
R&D Intensity	-8.196***
	(-2.861)
Advertising Intensity	3.639**
	(2.146)
Cash Holdings	-0.013
	(-0.032)
Dividend Payouts	2.723
	(0.781)
Asset Tangibility	-0.683***
	(-3.055)
Discretionary Spending	0.826**
	(2.155)
Constant	40.464***
	(66.721)
Industry Fixed Effects	Yes
Year Fixed Effects	Yes
State Fixed Effects	Yes
Observations	14,761
Adjusted R-squared	0.911
Robust t-statistics in parentheses	
*** p<0.01, ** p<0.05, * p<0.1	

To estimate the economic significance of the effect, we make the following calculations. The coefficient of the interaction term is -0.412. In comparison to those outside the Ninth Circuit, those firms in the Ninth Circuit witness their asset redeployability go down by 0.412. Because one standard deviation of the asset redeployability score is 8.842, a decline by 0.412 represents 4.66%. So, not only is the effect of shareholder litigation risk on asset redeployability statistically significant, it is also economically meaningful.

B. Propensity Score Matching (PSM)

Although our identification strategy is already significantly less vulnerable to endogeneity, we perform propensity score matching to validate the results further(Rosenbaum and Rubin, 1983; Lennox, Francis, and Wang, 2011; Ongsakul, Chatjuthamard, Jiraporn, and Chaivisuttangun, 2021; Chatjuthamard, Jiraporn, and Treepongkaruna, 2021; Padunsaksawasdi, Treepongkaruna, Jiraporn, and Uyar, 2021; Chatjuthamard, Jiraporn, and Lee, 2021).Those firms in the Ninth Circuit are considered the treatment group. Using 12 company-specific characteristics and board attributes (i.e., the 12 control variables in the regression analysis), we find a firm outside the treatment group that is most comparable to each company in the treatment group. With the exception of the degree of shareholder litigation risk, our treatment and control firms are nearly identical in every observable aspect.

We perform diagnostic testing to ensure that our matching is acceptable. Table **3** Panel A summarizes the results. Model 1 is a logistic regression with a dichotomous depend-

ent variable that is equal to one if the company is situated in the Ninth Circuit and zero if it is not. Model 1 encompasses the whole sample (pre-match). The logistic regression result reveals that the treatment firms are significantly different in a number of respects from the rest of the sample. Specifically, the treatment firms have smaller board size, are larger in size, are less leveraged, spend more on R&D and advertising, hold more cash, pay smaller dividends, and have fewer fixed assets. It is crucial to control for these significant differences to ensure that they do not skew our results.

Table 3. Propensity score matching (PSM).

The asset redeployability score is as defined in Kim and Kung (2016). We execute a difference-in-difference analysis. Two binary variables are created. First, Ninth Circuit is a binary variable that is equal to one if the company has its headquarters in the Ninth Circuit and zero if it does not. The Ninth Circuit Court of Appeals covers the following nine states: Alaska, Arizona, California, Hawaii, Idaho, Montana, Nevada, Oregon, and Washington. Second, Post-1999 is a binary variable equal to one after 1999 and zero otherwise. The coefficient of the interaction variable denotes the difference in differences. The variable definitions are shown in the Appendix.

Panel A: Diagnostic Testing

	(1)	(2)
	Pre-Match	**Post-Match**
	Ninth Circuit	**Ninth Circuit**
% Independent Directors	-0.000	0.004
	(-0.112)	(0.947)
Ln (Board Size)	-1.377***	-0.387
	(-4.712)	(-1.184)
Ln (Total Assets)	0.155**	0.090
	(2.417)	(1.359)
Leverage	-0.786*	-0.211
	(-1.687)	(-0.460)
Profitability	-0.552	-0.315
	(-0.899)	(-0.505)
Capital Investments	2.223	1.389
	(1.461)	(0.936)
R&D Intensity	7.568***	-0.365
	(5.280)	(-0.265)
Advertising Intensity	7.834***	0.148
	(3.023)	(0.060)
Cash Holdings	1.872***	-0.325
	(4.404)	(-0.748)
Dividend Payouts	-13.739***	-3.187
	(-3.077)	(-0.796)
Asset Tangibility	-0.625**	-0.255
	(-1.991)	(-0.903)
Discretionary Spending	-0.719	-0.102
	(-1.611)	(-0.238)
Constant	0.550	0.205
	(0.795)	(0.278)
Year Fixed Effects	Yes	Yes
Pseudo R-squared	0.125	0.007
Observations	14,846	5,424
Robust z-statistics in parentheses		
*** p<0.01, ** p<0.05, * p<0.1		

Panel B: Difference-in-difference estimates

	(1)
	Asset Redeployability
Ninth Circuit × Post-1999	**-0.465****
	(-2.565)
% Independent Directors	-0.004
	(-0.891)
Ln (Board Size)	0.775**
	(2.603)
Ln (Total Assets)	-0.191***
	(-3.395)
Leverage	0.078
	(0.169)
Profitability	0.485
	(0.877)
Capital Investments	1.814
	(0.933)
R&D Intensity	-2.930
	(-1.219)
Advertising Intensity	4.838***
	(3.768)
Cash Holdings	-0.439
	(-0.960)
Dividend Payouts	5.007
	(1.552)
Asset Tangibility	-0.939***
	(-3.589)

Discretionary Spending	0.363
	(0.648)
Constant	40.895***
	(36.964)
Industry Fixed Effects	Yes
Year Fixed Effects	Yes
State Fixed Effects	Yes
Observations	5,396
Adjusted R-squared	0.901
Robust t-statistics in parentheses	
*** p<0.01, ** p<0.05, * p<0.1	

For the propensity-score matched sample, Model 2 is a logistic regression (post-match). In Model 2, none of the coefficients are significant. As a consequence, in all observable dimensions, our treatment and control firms are statistically identical. To the degree that shareholder litigation risk does not matter, our treatment and control firms should be comparable in terms of asset redeployability. Table **3** Panel B displays the regression result for the PSM sample. The interaction term has a negative and significant coefficient, which once again supports the hypothesis that managers strategically trade off the risk in one area for another. Endogeneity is unlikely to play a role in our findings because our PSM results are consistent.

C. Entropy Balancing

To further address endogeneity, we use a new approach called entropy balancing to more effectively eliminate disparities in observable factors across the treatment and control groups. This approach is gaining traction in the social sciences as a way to solve concerns with traditional propensity score matching (PSM) (McMullin and Schonberger, 2020; Hainmueller, 2012). Gaver and Utke (2019) assert that entropy balancing reduces covariate imbalance and that entropy balancing increases testing power since no observations are lost or random matches made (Hossain and Kryzanowski, 2021). This novel method of matching has been extensively used in recent research (McMullin and Schonberger, 2020; Wilde, 2017; Neuenkirch and Tillmann, 2016; Freier, Schumann, and Siedler, 2015; Bol, Giani, Blais, and Loewen, 2020; Neuenkirch and Neumeier, 2016; Glendening, Mauldin, and Shaw, 2019; Truex, 2014; Marcus, 2013; Mazumder and Saha, 2021; Brodmann et al., 2021; Hossain and Kryzanowski, 2021;Ongsakul, Chatjuthamard, Jiraporn, and Chaivisuttangkun, 2021; Chatjuthamard, Ongsakul, and Jiraporn, 2021; Chatjuthamard, Jiraporn, and Lee, 2021).

Our method to entropy balancing is described below. Our treatment group consists of companies from the Ninth Circuit. The remaining sample is referred to as the control group. Then, using entropy balancing, we ensure that the mean, variance, and skewness of the observations in the two groups are comparable. Table **4** displays the regression result for the entropy-balanced sample. The interaction term's coefficient remains negative and significant. When it is more difficult for shareholders to sue management, there is a considerable decrease in asset redeployability, again corroborating the prediction of the trade-off hypothesis.

Table 4. Entropy balancing.

The asset redeployability score is as defined in Kim and Kung (2016). We execute a difference-in-difference analysis. Two binary variables are created. First, Ninth Circuit is a binary variable that is equal to one if the company has its headquarters in the Ninth Circuit and zero if it does not. The Ninth Circuit Court of Appeals covers the following nine states: Alaska, Arizona, California, Hawaii, Idaho, Montana, Nevada, Oregon, and Washington. Second, Post-1999 is a binary variable equal to one after 1999 and zero otherwise. The coefficient of the interaction variable denotes the difference in differences. The variable definitions are shown in the Appendix.

	(1)
	Asset Redeployability
Ninth Circuit × Post-1999	-0.361*
	(-1.963)
% Independent Directors	-0.003
	(-0.897)
Ln (Board Size)	0.521*
	(1.841)
Ln (Total Assets)	-0.138***
	(-2.947)
Leverage	0.240
	(0.582)
Profitability	0.017
	(0.032)
Capital Investments	0.836
	(0.543)
R&D Intensity	-3.108
	(-1.525)
Advertising Intensity	4.698***
	(3.281)
Cash Holdings	-0.338
	(-0.907)
Dividend Payouts	5.468
	(1.622)
Asset Tangibility	-0.981***
	(-4.106)
Discretionary Spending	0.206
	(0.422)
Constant	41.167***
	(39.190)
Industry Fixed Effects	Yes

Year Fixed Effects	Yes
State Fixed Effects	Yes
Observations	14,761
Adjusted R-squared	0.901
Robust t-statistics in parentheses	
*** p<0.01, ** p<0.05, * p<0.1	

D. Additional Robustness Checks

Moreover, we execute additional robustness checks as follows. First, most of the companies in the Ninth Circuit are headquartered in California, about 70% of the treatment group. This is not surprising because California represents the largest state in the Ninth Circuit. To make sure that our results are not dominated by those headquartered in California, we estimate a regression excluding California. Table **5** shows the regression results. Model 1 exclude firms located in California. The coefficient of the interaction term still remains negative and significant. So, our conclusion is not driven only by those in California. Furthermore, in Model 2, we run a regression that excludes the transition period, i.e., 1999-2000, since the ruling's impact may be ambiguous at that time. Again, the result is similar.

Table 5. Robustness checks.

The asset redeployability score is as defined in Kim and Kung (2016). We execute a difference-in-difference analysis. Two binary variables are created. First, Ninth Circuit is a binary variable that is equal to one if the company has its headquarters in the Ninth Circuit and zero if it does not. The Ninth Circuit Court of Appeals covers the following nine states: Alaska, Arizona, California, Hawaii, Idaho, Montana, Nevada, Oregon, and Washington. Second, Post-1999 is a binary variable equal to one after 1999 and zero otherwise. The coefficient of the interaction variable denotes the difference in differences. The variable definitions are shown in the Appendix.

	(1)	**(2)**
	Excluding California	**Excluding transition period**
	Asset Redeployability	Asset Redeployability
Ninth Circuit × Post-1999	**-0.509****	**-0.430*****
	(-2.356)	**(-2.835)**
% Independent Directors	-0.009***	-0.007*
	(-2.708)	(-1.940)
Ln (Board Size)	0.508**	0.602**
	(2.042)	(2.661)
Ln (Total Assets)	-0.092	-0.116**
	(-1.532)	(-2.287)
Leverage	0.477	0.420
	(1.028)	(0.959)
Profitability	0.416	0.800
	(0.667)	(1.488)
Capital Investments	-2.360*	-1.927
	(-1.715)	(-1.456)
R&D Intensity	-9.403**	-8.364***
	(-2.653)	(-2.917)
Advertising Intensity	3.309	3.572**
	(1.613)	(2.100)
Cash Holdings	0.182	-0.023
	(0.359)	(-0.055)
Dividend Payouts	2.620	2.582
	(0.654)	(0.722)
Asset Tangibility	-0.685***	-0.590**

	(-2.768)	(-2.583)
Discretionary Spending	0.938**	0.848**
	(2.059)	(2.249)
Constant	40.489***	40.382***
	(63.661)	(67.642)
Industry Fixed Effects	Yes	Yes
Year Fixed Effects	Yes	Yes
State Fixed Effects	Yes	Yes
Observations	12,843	13,967
Adjusted R-squared	0.915	0.911
Robust t-statistics in parentheses		
*** p<0.01, ** p<0.05, * p<0.1		

E. Difference in Asset Redeployability before the Ninth Circuit Judgement

Furthermore, it might be suggested that, prior to the Ninth Circuit judgment, the treatment and the control groups already differed in terms of asset redeployability. If this is true, the documented significant difference in asset redeployability may not be attributed to the exogenous shock. To address this concern, we conduct a regression for the period before 1999 and see whether those in the Ninth Circuit had less redeployable assets than those outside the Ninth Circuit prior to the shock. Table **6** shows the result. The Ninth Circuit coefficient is not statistically significant. The difference in asset redeployability did not exist prior to the Ninth Circuit decision. As a result, the documented difference in asset redeployability is most likely the result of the shock.

Table 6. Difference in asset redeployability before the Ninth Circuit judgement.

The asset redeployability score is as defined in Kim and Kung (2016). Ninth Circuit is a binary variable that is equal to one if the company has its headquarters in the Ninth Circuit and zero if it does not. The Ninth Circuit Court of Appeals covers the following nine states: Alaska, Arizona, California, Hawaii, Idaho, Montana, Nevada, Oregon, and Washington. The variable definitions are shown in the Appendix.

	(1)
	Asset Redeployability
Ninth Circuit × Post-1999	**1.024**
	(1.333)
% Independent Directors	-0.005
	(-1.277)
Ln (Board Size)	0.416
	(1.300)
Ln (Total Assets)	-0.122
	(-1.475)
Leverage	-0.038
	(-0.074)
Profitability	-0.789
	(-0.911)
Capital Investments	-3.480**
	(-2.092)
R&D Intensity	-6.837***
	(-3.183)
Advertising Intensity	3.303
	(1.208)
Cash Holdings	-0.878
	(-1.381)
Dividend Payouts	-0.078
	(-0.016)
Asset Tangibility	-1.575***
	(-4.575)
Discretionary Spending	0.245
	(0.488)
Constant	37.205***
	(35.176)
Industry Fixed Effects	Yes
Year Fixed Effects	Yes
State Fixed Effects	Yes
Observations	2,953
Adjusted R-squared	0.919
Robust t-statistics in parentheses	

*** p<0.01, ** p<0.05, * p<0.1

F. Oster's (2019) Method for Testing Coefficient Stability

Furthermore, to verify that our results are not distorted by the omitted-variable bias, we exploit Oster's (2019) insight and estimate the magnitude of the influence of the unobservables necessary to overcome the effect of the observables, potentially rendering our conclusions less valid (Chintrakarn, Jiraporn, Tong, Jiraporn, and Proctor, 2020). Using Oster's (2019) approach on our regression analysis in Table **2**, we calculate that the effect of the unobservables must be more than 1.75 times that of the observables in order for our results to be invalidated. In the literature, if the ratio is larger than one, the results are deemed robust. Consequently, our results do not seem to be unduly affected by the omitted-variable bias.

G. Possible Interaction with Internal Governance

Because shareholder litigation rights are viewed as an important instrument of external governance, they may interact with internal governance. The board of directors constitutes the paramount internal governance mechanism.Outside independent directors are more likely to be impartial because they are not affiliated with the company. As a result, one of the most prominent indicators of board quality is the degree of board independence. More effective board governance leads to more corporate actions and decisions that are favorable to shareholders. Prior research supports this viewpoint, demonstrating the value of independent directors (Rosenstein and Wyatt, 1990; Cotter, Shivdasani, and Zenner, 1997; Core, Holthausen, and Larcker, 1999; Nguyen and Nielsen, 2010; Jenwittayaroje and Jiraporn, 2017).[7]

We hypothesize that shareholder litigation rights, which are an external governance mechanism, may interact with board independence, which is a crucial internal governance instrument. To test this hypothesis, we construct a three-way interaction term between Ninth Circuit, Post-1999, and the percentage of independent directors on the board. We also create pairwise interaction terms between the three variables. To the extent that there is an interaction between shareholder litigation rights and board independence, the coefficient of the three-way interaction term should be significant. Our regression analysis, however, shows that the coefficient is not significant, suggesting no interaction between the two governance mechanisms. We focus on board independence as it is the most common measure of board quality. Future research could extend this line of investigation and explore other internal governance mechanisms as well.

[7] For instance, Rosenstein and Wyatt (1990) report positive stock market reactions when independent directors are appointed. Cotter, Shivdasani, and Zenner (1997), examining mergers and acquisitions, find that independent directors enhance target shareholder gains from tender offers. Core, Holthausen, and Larcker (1997) demonstrate a positive association between the proportion of outside directors and the market-to-book ratio. Investigating the sudden deaths of independent directors, Nguyen and Nielsen (2010) document a significant drop in stock prices in response to the sudden deaths of outside directors, suggesting that independent directors are valuable. Jenwittayaroje and Jiraporn (2017) explore the effect of independent directors on firm performance during the financial crisis of 2008 and find that independent directors improve firm performance significantly during the crisis.

CONCLUSIONS

Shareholder litigation rights are often seen as a crucial external mechanism of corporate governance (Kim and Skinner, 2012; Liao and Ouyang, 2019; Jaroenjitrkam, Treepongkaruna, and Jiraporn, 2021).Exploiting an exogenous shock that made it more difficult for shareholders to file lawsuits, we explore how an exogenous reduction in shareholder rights influence asset redeployability, which is an important, albeit frequently overlooked, corporate policy. Asset specificity and redeployability is one of the most critical concepts in the literature in investment irreversibility(Bernanke, 1983; McDonald and Siegel, 1986; Abel and Eberly, 1996; Padungsasksawasdi, Treepongkaruna, and Jiraporn, 2021).

Based on a large sample of U.S. firms, our results show that an exogenous drop in shareholder litigation rights brought about by an unexpected and unique court ruling lowers asset redeployability significantly. The findings lend credence to the risk trade-off hypothesis. There is a substitution effect.Risk-averse managers are prepared to accept greater risk stemming from lower asset redeployability when they are more protected from shareholder lawsuits. The findings imply that managers are ready to tolerate a given level of overall risk, and they strategically trade off the risk in one area for another.

Our empirical strategy is based on a quasi-natural experiment using an exogenous shock. The findings are therefore considerably less susceptible to endogeneity. In any case, we execute a battery of robustness checks to further mitigate endogeneity, i.e., propensity score matching, entropy balancing, and Oster's (2019) technique for testing coefficient stability. All the robustness checks corroborate the results. Our study makes key contributions to several areas of the literature, including corporate governance, shareholder litigation, and asset redeployability and investment irreversibility.

Our research outcomes hold noteworthy implications for the field of sustainability studies, shedding light on an aspect that has historically been given limited attention – asset redeployability. This facet is fundamental to sustainability as it pertains to the capacity of assets to be repurposed and utilized in different contexts when circumstances evolve, thus reducing the necessity of creating entirely new assets and, by extension, conserving natural resources. What sets our study apart is its unveiling of the previously undisclosed relationship between shareholder litigation rights and corporate sustainability. Our investigation, pioneering in this regard, unveils that these rights play a substantial role in shaping a firm's sustainability efforts by influencing its ability to efficiently redeploy assets. In essence, our findings underscore the intricate interplay between legal frameworks and environmental sustainability practices within the corporate landscape, a connection that has long been underexplored in the realm of sustainability research.

CONFLICT OF INTEREST

None.

APPENDIX

Table A1: Variable definitions.

Variable	Definition
Asset Redeployability	
Asset Redeployability Score	This variable constructed by Kim and Kung (2016) captures the degree of asset redeployability for a given firm
Ninth Circuit Court	
Ninth Circuit	This binary variable is equal to one if the firm is located the Ninth Circuit Court of Appeals and zero otherwise
Post-1999	This binary variable is equal to one if the year is after 1999 zero otherwise.
Board Attributes	
Board Independence	% Independent Directors
Board Size	Ln (Board Size)
Firm-specific Characteristics	
Firm Size	Ln (Total Assets)
Leverage	Total Debt/Total Assets
Profitability	EBIT/Total Assets
Capital Investments	Capital Expenditures/Total Assets
Advertising Intensity	Advertising Expense/Total Assets
R&D Intensity	R&D Expense/Total Assets
Cash Holdings	Cash Holdings/Total Assets
Dividend Payouts	Dividends/Total Assets
Asset tangibility	Fixed Assets/Total Assets
Discretionary spending	SG&A Expense/Total Assets

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