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## **UNCERTAINTY, ACCESS TO DEBT, AND FIRM PRECAUTIONARY BEHAVIOR**

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## Abstract

Little is known on whether financial factors influence firms' vulnerability to uncertainty shocks. We show that access to debt markets mitigates the effects of uncertainty on corporate policies. We use the staggered introduction of anti-recharacterization laws in U.S. states—which strengthened creditors' rights to repossess collateral pledged through SPVs—to identify firms' improved access to debt markets. After the passage of the laws, firms that face more uncertainty hoard less cash, and increase leverage and intangible investment. Firms' vulnerability to uncertainty shocks is reduced by the enhanced ability to issue debt through SPVs.

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Keywords: SPVs, Financial Frictions, Hedging, anti-recharacterization laws, Creditor rights, cash, intangible assets

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# Uncertainty, Access to Debt, and Firm Precautionary Behavior\*

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## Abstract

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The economic literature has long debated the role of uncertainty on firms' decisions (see, for example, Bernanke 1983; Abel 1983; McDonald and Siegel 1986; Dixit and Pindyck 1994; Bloom 2009), and documented that a rise in uncertainty delays new investment (Bloom, 2009; Bloom Bond and Van Reenen, 2007) and fosters corporate savings (Opler et al, 1999; Bates, Kahle, and Stulz, 2009; Riddick and Whited, 2009). Firms' investment and savings, in turn, have important implications for the aggregate economy.

While there is agreement that uncertainty affects the real economy, the literature has not yet reached a consensus on the mechanisms through which uncertainty influences corporate investment and saving decisions. Uncertainty may affect firms' decisions because it increases the option value of delaying irreversible investments but also because it affects the ability of firms to borrow (Christiano, Motto, and Rostagno, 2014; Gilchrist, Sim, and Zakrajsek, 2014; Alfaro, Bloom, and Lin, 2018). Different mechanisms have different implications on the factors that make firms more or less vulnerable to uncertainty shocks. Surprisingly, such discussion is scant in both the macro and corporate finance literature.

This paper takes up the challenge of exploring whether better access to debt financing mitigates or exacerbates firms' response to uncertainty shocks. This allows us to shed new light on the mechanisms through which uncertainty affects economic decisions.

In standard real option models (e.g., Bernanke, 1983 or McDonald and Siegel, 1986), firms' reluctance to invest is exclusively driven by uncertainty related to investment opportunities and is unaffected by firms' ability to tap credit markets. Other theories suggest, however, that access to debt markets may mitigate or exacerbate firms' vulnerability to uncertainty shocks. In

leverage cycles models (Geanakoplos, 2010 and Brunnermeier and Pedersen, 2009), an increase in the value of pledgeable collateral relaxes financial constraints, but may also lead to excess borrowing *ex ante* and deleveraging *ex post* when bad news arrives and higher volatility tightens collateral constraints. According to these theories, better access to debt markets may lead firms to over borrow, increasing firms' vulnerability to uncertainty shocks.

However, improved access to external finance may also mitigate the negative effect of uncertainty on firms' investment. If firms are able to tap financial markets whenever they need to weather negative shocks (Riddick and Whited, 2009), firms may be willing to take on more risk and reduce precautionary savings. Evidence in favor of this mechanism would support theories in which uncertainty shocks operate through firms' precautionary behavior and risk premia rather than through financial constraints (e.g., Caballero and Krishnamurty, 2008).<sup>1</sup>

We evaluate the relevance of these alternative mechanisms by studying whether improved access to debt markets insulates firms' financial and operating policies from uncertainty shocks. To do so, we exploit a natural experiment in which firms' ability to borrow improves for reasons independent of their growth opportunities. Specifically, we use the staggered introduction of anti-recharacterization laws across U.S. states in the late 1990s and early 2000s, which strengthened lenders' ability to repossess collateral in bankruptcy.

According to Chapter 11 of the US Bankruptcy Code, the collateral underlying secured lending is subject to automatic stay. This means that secured lenders can only repossess the

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<sup>1</sup> See Krishnamurty (2009) for a review of amplification mechanisms.

collateral with a significant delay or not at all. Automatic stay, however, does not apply to assets owned by a firm's special purpose vehicles (SPVs), unless judges recharacterize assets transferred to an SPV as a loan instead of a true sale. To reduce the likelihood that secured lending through SPVs can be recharacterized, and thus collateral is subject to automatic stay, a number of U.S. states introduced anti-recharacterization laws. These laws preserve the bankruptcy remote nature of SPVs, and thus contribute to improve firms' access to secured lending by giving firms the option to increase the value of pledged collateral to lenders through an SPV.

The staggered introduction of anti-recharacterization laws provides an ideal setting to study how uncertainty shocks affect corporate policies using a difference-in-difference analysis. Our first set of results suggests that firms incorporated in states adopting anti-recharacterization laws reduced cash and real estate holdings, and increased leverage and investment in intangible assets. Specifically, the average treated firm lowered cash holding and real estate holdings by 5% and 3%, respectively, and increased leverage by 5% and the stock of intangible assets by 10%, relative to a control group of firms incorporated in states without anti-recharacterization laws.

Our second and main set of results is that anti-recharacterization laws affected to a larger extent firms in highly uncertain industries. We measure industry uncertainty by either the industry's cash flow volatility, the industry's stock price volatility, or the industry's exposure to the financial uncertainty indicator of Ludvigson, Ma, and Ng (2018). We find that after the passage of the laws, the average firm in an industry at the top quartile of the distribution of cash flow volatility reduces cash holdings by 14%, real estate holdings by 7%, and increases leverage and the stock of intangible capital by 16% and 20%, respectively. Moreover, and arguably as result of

the changes in corporate policies driven by anti-recharacterization laws, the profitability of treated firms in highly uncertain industries increases by 2 percentage points, relative to an average firm profitability in the sample of -3%.

Using hand-collected data, we also show that the use of SPVs increases for firms that face a more uncertain environment after the adoption of the laws; and firms that increase the use of SPVs are precisely those whose capital structure and investment policies become less sensitive to uncertainty shocks.

The results that firms increased leverage and intangible investment in states adopting anti-recharacterization laws are consistent with either leverage cycle models or theories suggesting that stronger creditor rights mitigate firms' responses to uncertainty shocks. However, the result that firms also decrease their holdings of cash and real estate assets, suggests that the passage of the laws reduces firms' concerns about the risk of facing financial constraints in the future.

To further discern between alternative theories, we study how firms incorporated in states with anti-recharacterization laws responded to the dramatic increase in aggregate uncertainty and deterioration of financial conditions associated with the collapse of Lehman Brothers. In the spirit of the analysis performed by Chodorow-Reich (2014), we study how the exogenous increase in aggregate uncertainty and financial constraints brought about by the Lehman's bankruptcy affected firms' policies across jurisdictions. We find that after the Lehman's collapse, firms in states that adopted anti-recharacterization laws did not increase cash holdings and did not cut investment in intangible assets as much as firms incorporated in other states. The results also indicate that anti-recharacterization laws did not lead firms to over borrow, suggesting that better access to external



finance decreased treated firms' precautionary behavior and that those firms became more resilient to uncertainty shocks.

In a robustness section, we find that our main results on firms' cash holdings, leverage and investment do not reflect the presence of pre-trends—that is, treated firms reducing precautionary behavior and increasing leverage and investment before the adoption of anti-recharacterization laws. We also show that our results are not driven by firms' desire to reduce their exposure to uncertainty shocks through more risk management; neither are they driven by the fact that for firms close to default, stronger creditor rights tend to exacerbate shareholder-debtholder conflicts leading to more risk taking.

Our paper is related to several strands of literature. First, it adds to a recent literature that studies the role of uncertainty in the presence of firms' financing constraints. Alfaro, Bloom and Lin (2018) argue that financial frictions amplify the impact of uncertainty shocks on corporate policies and show that during the global financial crisis financially constrained firms hoarded cash and cut investments more than unconstrained firms.<sup>2</sup> Our paper shows that easier access to external finance makes firms more resilient to uncertainty shocks in both normal and crisis times. The evidence in our paper also helps distinguish between the predictions of leverage cycles and precautionary behavior models on the role that uncertainty plays for corporate policies in the presence of financial frictions.

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<sup>2</sup> Gilchrist, Sim and Zakrajsek (2014) also study the importance of credit conditions in channeling the impact of uncertainty shocks. Their focus, however, is on the business cycles implications of uncertainty shocks and not on corporate policies.

Second, our paper contributes to the extant literature on corporate cash-holdings. This literature studies separately the role of uncertainty and financial constraints to explain the secular increase in firms' cash-holdings since the 1980s (Opler et al, 1999; Bates, Kahle, and Stulz, 2009; Riddick and Whited, 2009, Denis and Sibilkov, 2009). We show that laws that improve the collateral values of firms' assets are associated with a decrease in firms' cash holdings. To the extent that law changes determine exogenous variation in firms' demand for insurance, our paper presents causal evidence supporting the precautionary motive of cash-holdings. Our results also support the hypothesis of a number of recent theoretical papers that the increasing use of intangible capital explains the increase in firms' cash holdings (Falato, Kadyrzhanova, and Sim, 2013; Begenau and Palazzo, 2016). These papers emphasize the low pledgeability of intangible capital as the mechanism driving firms' precautionary cash-holdings. Our results lend support to the argument that cash holdings and assets pledgeability are related, but it shows that when firms' access to debt financing improves, cash holdings may fall even as investment in intangible asset increases.

To the best of our knowledge, our paper is the first to highlight a channel whereby an improvement in creditor rights mitigates the effects of uncertainty on corporate decisions. In this respect, we also contribute to a large literature exploring how creditor rights affect credit market development and firm behavior. Most of this literature highlights that strong creditor rights increase the supply of credit and facilitate firms' access to credit (Djankov, McLiesh, and Shleifer, 2007). It has also been shown that the strengthening of creditor rights may discourage the use of secured debt due to costly asset liquidation in case of default (Vig, 2013). Instead of focusing on

the ex post costs of asset liquidation, our paper highlights a novel ex ante benefit of stronger creditor rights: Stronger protection of creditor rights enhances firms' debt capacity and helps mitigate the effects of uncertainty on firms' behavior.

In apparent contrast with Vig (2013), we find no evidence that stronger creditor rights discourage the use of secured debt. The reason is that while the laws considered in our analysis strengthen creditor rights for loans obtained through SPVs, firms have the option not to borrow through bankruptcy-remote vehicles, in which case they face a weaker enforcement of debt contracts.

By focusing on the mitigating role of creditor rights for firms' exposure to uncertainty shocks, our paper differs from other studies that also exploit the adoption of anti-recharacterization laws as a natural experiment. For example, Mann (2017) shows that court decisions not to recharacterize assets enhance firms' access to credit and innovation. Li, Whited, and Wu (2016) use the staggered introduction of anti-recharacterization laws to explain the relative importance of financial frictions and the tax benefits of debt for the capital structure of firms.<sup>3</sup>

The rest of the paper proceeds as follows. Section 1 discusses the anti-recharacterization laws and Section 2 describes the data. The empirical methodology is discussed in Section 3, while Section 4 presents our main results. Section 5 and 6 discuss several robustness checks. Section 7 concludes.

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<sup>3</sup> Relatedly, Chu (2016) shows that anti-recharacterization laws affect corporate leasing policies and Ersahin (2017) shows that anti-recharacterization laws increase firms' productivity.

## **1. State-level Anti-Recharacterization Laws and Collateral Pledgeability**

According to the U.S. bankruptcy code, once a firm files for Chapter 11, secured creditors are unable to seize any collateral because all firms' assets, including pledged collateral, are subject to automatic stay. Automatic stay delays secured lenders' ability to seize the pledged collateral and ultimately decreases the value of collateral.

Automatic stay, however, does not apply to assets owned by a firm's special purpose vehicles (SPVs). For this reason, firms may sell collateral to a subsidiary company, the SPV, and obtain financing through the SPV instead of borrowing directly from the lender. Borrowing through an SPV is likely to lower a firm's cost of capital, as the SPV is bankruptcy-remote and therefore expected bankruptcy costs are lower (Gorton and Souleles, 2007).

The extent to which SPVs may shield creditors from bankruptcy costs depends, however, on whether judges recharacterize an asset transferred to the SPV as a loan, instead of a true sale. If this recharacterization takes place, a lender becomes a secured creditor of the firm, instead of the SPV. Therefore, even secured lending through SPVs may be subject to automatic stay. While the automatic stay and the recharacterization of assets transferred to SPVs aim to favor business continuation, this provision hampers firms' access to credit by decreasing the value of pledged collateral to secured lenders.

To enhance creditor protection, a number of states passed, "anti-recharacterization" laws, which limit judges' ability to recharacterize the collateral pledged through SPVs as an asset of the company that files for Chapter 11. These laws reduce the likelihood that automatic stay on assets applies to borrowing through SPVs, contributing to increase the value of pledged collateral and

the pledgeability of a wider range of assets, such as receivables or patents. For these reasons, anti-recharacterization laws improve access to debt financing for all firms, even those that do not currently use SPVs but may do so in the future.

The states that introduced in a staggered manner anti-recharacterization laws are Louisiana and Texas in 1997, Alabama in 2001, Delaware in 2002, South Dakota in 2003, Virginia in 2004, and Nevada in 2005. The introduction of these laws was mostly driven by the lobbying efforts of the banking and especially the securitization industries (Kettering, 2008). They can therefore be considered exogenous to non-financial firms.<sup>4</sup>

In what follows, we use these considerations to study how the passage of anti-recharacterization laws affects corporate behavior and performance.<sup>5</sup>

## **2. Data Sources and Main Variables**

### *2.1 Sample*

We construct our sample as follows. We begin with all publicly traded U.S. firms in CRSP and COMPUSTAT and exclude financial firms (SIC in 6000 through 6999), regulated utilities (SIC in 4900 through 4999), and government entities (SIC over 9000). We also require our sample of firms to have available information on the state of incorporation. We include only firms that are

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<sup>4</sup> To discourage forum shopping, the transfer of assets is typically governed by the state law of the parent company (Kettering, 2008). While in 2003 a court ignored the anti-recharacterization statute of Texas, introducing some uncertainty as to whether state-level anti-recharacterization laws prevail over federal standards (see *Reaves Brokerage Company Inc. v. Sunbelt Fruit & Vegetable Company, Inc.*), anti-recharacterization laws are typically enforced, increasing the likelihood that creditors will be able to repossess assets in bankruptcy.

<sup>5</sup> The bankruptcy reform of 2005 increased protection for derivative counterparties of firms in Chapter 11. Since the reform has nationwide implications, any of its effect will be captured by our control sample. It cannot therefore affect our findings.

incorporated in the 50 U.S. states plus the District of Columbia. Given that anti-recharacterization laws were adopted by different states between 1997 and 2005, we restrict the sample period to 1992-2010 to include five years prior to the first adoption and five years after the last adoption.

## *2.2 Measuring Uncertainty*

We select our proxies for uncertainty keeping in mind that our objective is to investigate whether an improvement in creditor protection matters more to a larger extent for firms operating in a more uncertain environment. We thus privilege comprehensive proxies for uncertainty, without limiting our attention to measures of uncertainty related to regulation, political, or economic policy risk.<sup>6</sup> We also limit our analysis to industry-level measures of uncertainty to mitigate the concerns that the risk faced by an individual firm may depend on its ability to access debt markets.

Our first proxy of uncertainty builds on Bloom (2009), Bates, Kahle, and Stulz (2009) and Jurado, Ludvigson, and Ng (2015), and is based on the dispersion of accounting measures of firm level performance. Specifically, we follow Bates, Kahle, and Stulz (2009) and measure uncertainty with the median cash flow volatility in a firm's industry. For each firm-year, we compute the standard deviation of cash flows to assets for the previous 10 years.<sup>7</sup> We then take the median of the standard deviation of the firms' cash flow volatilities in each year across two-digit SIC codes.

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<sup>6</sup> As it is common in the literature (see e.g Bloom, 2014), our proxies do not distinguish between risk and uncertainty. Risk usually refers to the risk of a known probability distribution, while (Knightian) uncertainty refers to economic agents' inability to forecast the likelihood of future events.

<sup>7</sup> To compute this measure, we require that a firm has at least three years of data.

This cash flow volatility proxy, to which we refer as *CashFlowVol*, captures the fact that firms in industries with highly volatile cash flows are more exposed to the possibility of cash shortfalls. These firms are more likely to hoard cash and collateralizable assets.

Our second proxy of uncertainty follows the standard practice in the literature of measuring uncertainty with stock market volatility (e.g., Leahy and Whited, 1996; Bloom, Bond, and Van Reenen, 2007). We measure stock price volatility at the industry level as the industry yearly average of the standard deviation of firms' monthly returns (*Price Vol*).

Our third proxy of uncertainty uses the industry's exposure to the financial uncertainty indicator of Ludvigson, Ma, and Ng (2018), which is constructed as the common component in the time-varying volatilities of a large number of monthly financial variables (this index is downloaded from Sydney Ludvigson's website.) In particular, we construct a *Financial Uncertainty* proxy as the industry-level average exposure of a firm's monthly stock returns to the aggregate financial uncertainty indicator of Ludvigson, Ma, and Ng (2018), controlling for the three Fama-French asset pricing factors, using a rolling window of the past 60 months.<sup>8</sup>

### 2.3 Main Outcome Variables

We focus on several outcome variables. First, if the adoption of anti-recharacterization laws mitigates firms' concerns about future financial constraints, firms' precautionary savings

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<sup>8</sup> Ludvigson, Ma, and Ng (2018) provide evidence that financial uncertainty is an important source of business cycles fluctuations, while macro and real uncertainty typically respond to business cycles suggesting that they are not exogenous shocks. Interestingly, our tests are inconclusive if we use Jurado, Ludvigson and Ng (2015)'s macro uncertainty indicator instead of the financial uncertainty indicator of Ludvigson, Ma, and Ng (2018).

should decrease. We proxy for firms' precautionary savings with firms' cash holdings (*Cash*), defined as cash and cash equivalent securities over lagged total assets. Second, if anti-recharacterization laws mitigate firms' financial constraints, we expect, ceteris paribus, an increase in payouts to shareholders. We measure payouts (*Payout*) as the sum of cash dividends and repurchases, scaled by total assets.

We also study the effects of anti-recharacterization laws on firms' leverage. Firms' leverage may decrease, increase or remain unchanged if firms can borrow more off-balance sheet or anticipate easier access to off-balance sheet borrowing in the future. We consider two alternative definitions of leverage: the first one is calculated as the ratio of total long-term and short-term debt over total assets (*Leverage*); the second one is the difference between debt and cash over total assets (*Net Leverage*).

Since anti-recharacterization laws improve lenders' ability to repossess collateral, we also expect that firms' holdings of easy-to-pledge assets fall, as the laws increase the expected value of collateral that creditors are able to repossess. Our proxy for easy-to-pledge assets is real estate holdings, which is measured by the book value of real estate assets, scaled by the lagged total level of property, plant, and equipment (*RE-Holdings*).

The ability to pledge intangible assets associated with the laws may also strengthen firms' incentives to invest in innovation. Therefore, we also look at firms' investment in intangible capital. Following Eisfeldt and Papanikolaou (2013) and Falato et al. (2013), we focus on three



broad categories of intangible capital.<sup>9</sup> First, we consider the stock of organization capital relative to the firm's total assets (*SG&A (stock)*).<sup>10</sup> Second, we compute the stock of R&D expenses relative to total assets (*RD (stock)*), by cumulating annual R&D expenses with a depreciation rate of 15%. Finally, we construct the stock of computerized information and software by applying the perpetual inventory method with a depreciation rate of 31% as in the BEA data.<sup>11</sup> Besides considering *SG&A (stock)* and *RD (stock)* separately, we compute an industry-level measure of asset intangibility (*Intangibles (stock)*) by adding up *R&D stock*, *SG&A stock*, and the stock of computerized information.

To evaluate firm performance following the adoption of anti-recharacterization laws, we use the firm's return on assets (*ROA*) and return on investment (*ROI*).

In the empirical analysis, we control for a number of firm characteristics which we summarize in Table 1. We winsorize all continuous variables at the 1<sup>st</sup> and 99<sup>th</sup> percentiles and restrict leverage between 0 and 1. Detailed variable definitions are provided in the Data Appendix.

We also use data on firms' SPV origination and hedging practices from firms' 10-K filings. We parse 10-K filings, available from the SEC Electronic Data Gathering, Analysis, and Retrieval

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<sup>9</sup> Although investments in intangible assets are expensed in the year in which they are incurred, they have a long-term effect on the intangible capital accumulated inside the organization. We thus cumulate annual expenses on intangible expenses as in Falato et al (2013).

<sup>10</sup> The stock of organization capital at the numerator is obtained by cumulating firms' selling, general, and administrative (SG&A) expenses using the perpetual inventory method with a depreciation rate of 20%, as in Falato et al. (2013).

<sup>11</sup> Since these expenses are not reported at the firm level, we use the annual Fixed Reproducible Tangible Wealth (FRTW) data from Bureau of Economic Analysis (BEA) at the industry level. We construct a multiple as the ratio of the stock of computerized information and software and the industry's tangible capital stock and apply this multiple to each firm's tangible capital stock (PPE) to derive a firm-level stock of computerized information and software. We scale the latter by total assets, as we do for the other measures of intangible capital.

system (EDGAR), for keywords that indicate the presence of borrowing through special purpose entities or the use of non-speculative derivatives and hedging instruments. This procedure results in a firm-year panel providing information on the use of SPVs and hedging through financial derivatives.

### **3. Empirical Strategy**

#### *3.1 Theoretical Predictions*

Theories have different predictions regarding the effects of uncertainty on firms' policies when firms differ in their abilities to access debt markets. If uncertainty is purely a real shock that increases the option value of delaying investment, the adoption of anti-recharacterization laws should not affect the way corporate policies respond to uncertainty shocks. Better creditor rights would increase the debt capacity of all firms without affecting the option value to delay investment decisions.

In contrast, when uncertainty tightens borrowing constraints, anti-recharacterization laws may influence the way uncertainty influences corporate policies. The reason is that by increasing the value of pledgeable collateral, anti-recharacterizations laws relax financial constraints for all firms, and more so for high-volatility firms, which are typically subject to tighter borrowing constraints. Unconditionally, the relaxation of financial constraints is expected to lead to an increase in the firms' leverage and investment. However, if negative shocks tighten financial constraints, high leveraged firms may need to deleverage and decrease investment ex post (as in Geanakoplos, 2010 and Brunnermeier and Peddersen, 2009).

Alternatively, anti-recharacterization laws may reduce the severity of future financial constraints, which in turn may foster firms' ex ante incentives to take on additional risk. In this case, leverage, payouts, and investment would increase. However, cash-holdings and easy-to-pledge assets would likely fall for firms that operate in a more uncertain environments, as the ex ante desire of these firms to insure against uncertainty shocks is offset by the enhanced ability of these firms to tap financial markets ex post, should the need arises.

### 3.2 Methodology

We start by studying the response of firms' financial and operating policies to the passage of anti-recharacterization laws by estimating a difference-in-difference regression:

$$y_{i,s,t} = \alpha_1 \times D_{i,s,t} + f_i + \gamma_{j,t} + \mathbf{B}x_{i,t} + \epsilon_t,$$

where  $y_{i,s,t}$  is a corporate policy or an outcome of firm  $i$  incorporated in state  $s$  during year  $t$ . Our variable of interest is  $D_{i,s,t}$ , which is defined as a dummy variable that takes value one if firm  $i$  is incorporated in state  $s$  with an anti-recharacterization law introduced at  $t$  or earlier, and zero otherwise. Specifically,  $D_{i,s,t}$  equals one for firms incorporated in Texas or Louisiana after 1997, in Alabama after 2001, in Delaware after 2002, in South Dakota after 2003, in Virginia after 2004, and in Nevada after 2005. The vectors  $f_i$  and  $\gamma_{j,t}$  are firm and industry-year fixed effects, respectively. The firm fixed effects subsume the state of incorporation. We define industries at the

one-digit SIC code level to maintain degrees of freedom.<sup>12</sup> The vector  $\mathbf{x}_{i,t}$  includes firm-level controls.

Given the staggered introduction of the laws, the control sample includes not only firms incorporated in states that did not introduce the laws, but also firms in states that will eventually pass the laws before the laws are actually passed.

Our main tests explore how the effect of the laws varies between firms in industries with different uncertainty levels with the following model:

$$y_{i,s,t} = \alpha_1 \times D_{i,s,t} + \alpha_2 \times uncertainty_{i,s,t-1} \times D_{i,s,t} + f_i + \gamma_{j,t} + \mathbf{B}\mathbf{x}_{i,t} + \epsilon_t,$$

where  $uncertainty_{i,s,t-1}$  is either the median cash flow volatility of firm  $i$ 's industry prior to year  $t$  or any of the other proxies discussed in Subsection 2.2. The interaction terms allow us to capture how firms' response to uncertainty varies after the passage of the laws.

Since our variable of interest,  $\alpha_2 \times uncertainty_{i,s,t-1} \times D_{i,s,t}$ , varies across two-digit SIC codes and years, we cluster standard errors at the two-digit SIC code and year level throughout the analysis.

## 4. Results

### 4.1 Preliminary Evidence

Table 2 reports the unconditional effects of anti-recharacterization laws on financial and operating policies. Panel A of Table 2 shows that after the passage of the laws the average treated

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<sup>12</sup> Our results are qualitatively similar if we use two-digit SIC codes.

firms reduce cash holdings (column 1) by 5% ( $=0.01/0.22$ ) and increases total payouts to shareholders (column 2) by 28%. Interestingly, firms that expect to borrow more off-balance sheet also increase leverage (column 3) by roughly 5%. These effects are consistent with the conjecture that anti-recharacterization laws mitigate the risk that firms face financial constraints in the future, which reduce their desire to hold additional cash as buffer and increase their desire to be more leveraged.

Besides affecting firms' financial policies, the passage of the laws may also lead firms to change the composition of their asset holdings. Thanks to the anti-recharacterization laws, firms need to post less real estate as collateral; moreover a wider range of assets, including patents and receivables, are accepted as collateral. Thus, firms' desire to hold easy-to-collateralize assets may decrease, while their desire to invest in intangible assets may increase.

Panel B of Table 2 explores whether changes in assets composition are consistent with these conjectures. Column 1 shows that treated firms increase their stock of R&D and intangible capital following the passage of the laws. The effects are economically important. For instance, in column 1, the stock of R&D increases by 30% ( $=0.07/0.26$ ) in the years following the passage of the laws for the average treated firm in comparison to firms in the control group. Average treated firms also appear to decrease by roughly 4% the holdings of real estate assets. The effect of the laws on investment in tangible assets is statistically significant, albeit small from an economic point of view with an increase of only 2.3% for the average firm. Overall, it appears that after the passage of the laws, firms tend to change asset composition towards less tangible assets.

#### *4.2 Effect of Anti-Recharacterization Laws and Uncertainty*

The main objective of our analysis is to test whether better access to debt markets increases firms' resilience to uncertainty shocks. To this end, we study how the response of corporate decisions to uncertainty differs between treated and control firms. If the anti-recharacterization laws improve firm's ability to obtain insurance through the debt market and reduce the risk of facing future financial constraints, firms that face high uncertainty should reduce their holdings of cash and real estate, and increase investment (and possibly leverage) after the passage of the laws. In contrast, if the main effect of the laws is to relax only current financial constraints, firms should increase leverage, investment, and payouts, but should not decrease cash and real estate holdings. Finally, if uncertainty is merely a real shock, there should not be any differential response of corporate policies to uncertainty shocks between treated and control firms after the passage of the laws.

Table 3 shows that there are significant changes in financial policies for firms that face relatively high uncertainty. Importantly, the cross-sectional effects of the laws appear to dominate the average effects suggesting that low volatility firms are largely unaffected.

In column 1 of Panel A, firms' cash holdings decline after the passage of the laws, especially if they operate in industries with higher cash flow volatility. The average firm decreases its cash holdings by about 14% ( $=-0.34 \times 0.09 / 0.22$ ) if it operates in industry with uncertainty in the top quartile of the distribution of cash flow volatility.<sup>13</sup> In columns 2, 3 and 4, respectively, we

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<sup>13</sup> The direct effect of uncertainty is not statistically significant. This is due to the fact that we include interactions of one-digit SIC code and year fixed effects. Since the uncertainty proxies only vary across two-digit SIC code industries over time, we do not have enough power to identify its effects.

observe a similar response for payouts, and leverage: Anti-recharacterization laws affect to a larger extent firms in industries with higher uncertainty.

Table 4 focuses on the effect of the laws on asset composition. It shows that firms that face higher uncertainty increase their investment in R&D, organization capital, and intangible assets, while they decrease their real estate holdings. Again, the effects are stronger for firms in high-uncertainty industries. For instance, in column 1, a firm with average R&D stock and uncertainty in the top quartile increases its R&D stock by 31%  $(=(1.11 \times 0.09 - 0.02) / 0.26)$ . We find no effect on the proportion of tangible assets. Thus, it appears that, by allowing firms to pledge a wider range of collateral, the laws stimulate investment in intangible assets, which is typically considered more productive (Eisfeldt and Papanikolaou, 2013).

The result that firms not only increase their leverage and investment, but also decrease cash and real estate holdings suggests that the introduction of anti-recharacterization laws relaxes firms' collateral constraints and reduces the incidence of future financial constraints for high volatility firms.

Table 5 explores the robustness of our results to different proxies for uncertainty. Panel A uses the industry's exposure to the financial uncertainty indicator of Ludvigson, Ma, and Ng (2018); Panel B uses the industry's stock price volatility. As shown, the results are robust, even though in Panel B there is not an economically meaningful effect of the laws on real estate holdings, and the effect on cash is not statistically significant at conventional levels.

Table 6 looks at firms' performance. It shows that changes in corporate policies driven by anti-recharacterization laws are associated with an improvement in the performance of treated

firms in high uncertainty industries. For instance, in column 1, the profitability of a treated firm in an industry with average uncertainty increases by 2 percentage points ( $=0.26 \times 0.07$ ) after the adoption of anti-recharacterization laws—a large increment considering that the average ROA of firms in the sample is -0.03. Similar results emerge when we use other measures of firm profitability.

#### *4.3 Anti-recharacterization Laws and SPVs use*

So far, we have provided evidence that following the passage of anti-recharacterization laws, firms reduce precautionary behavior and, arguably as a consequence of the higher investment in intangible assets, firms appear to perform better, especially if they operate in high uncertainty industries.

Our interpretation of the results is that firms' debt capacity increases after the passage of the laws because it becomes easier for firms to pledge assets as collateral. However, any effect of the laws relies on the fact that firms issue debt through SPVs. Thus, a causal interpretation of our empirical evidence implies that firms incorporated in states passing the laws should increase their usage of SPVs.

Table 7 provides evidence consistent with this interpretation. Column 1 of Panel A shows that the probability that a firm reports at least one SPV in its 10K filings increases by 1% following the passage of anti-recharacterization laws. Column 2 shows that this tendency is driven by firms facing more uncertain environments, which presumably borrow through SPVs to smooth out negative shocks.



Panel B of Table 7 explores whether the changes in firms' response to uncertainty following the adoption of the laws are related to the probability of originating SPVs. Lemmon, Liu, Mao and Nini (2014) argue that not all listed companies make use of SPVs, because creating SPVs is costly. Our interpretation of the empirical evidence implies that the laws matter to a larger extent for firms that are more likely to use SPVs. To test this hypothesis, we predict the probability that a firm originates SPVs based on its characteristics, namely market capitalization, capital expenditures, cash flows, working capital, R&D expenses, a dummy variable that is equal to one if the firm has performed any acquisitions, and a dummy variable that is equal to one if the firm pays any dividends. We then test whether firms with higher probability of originating SPVs are more affected by anti-recharacterization laws. We partition the sample between firms with above-median and below-median probability of using SPVs.

As shown in Panel B, the laws appear to have larger effects for firms that face higher uncertainty and that are more inclined to use SPVs than on firms that face lower uncertainty. While the magnitudes of the coefficients are consistent with our hypothesis that the anti-recharacterization laws, improving access to debt market, reduce firms' precautionary behavior, the differences between subsamples are not statistically significant at conventional levels, possibly because we under-estimate firms' ability to borrow through SPVs.

## **5. Evidence from a large uncertainty shock**

To provide further evidence that better access to debt markets mitigates the negative effects of uncertainty on corporate policies, this section compares the behavior of firms incorporated in

states with and without anti-recharacterization laws around the Lehman Brothers' bankruptcy in 2008.

The Lehman bankruptcy led to a large drop in broad equity markets and a spike in market volatility, which affected firms in all states, with and without anti-recharacterization laws. This provides a natural setting to study whether the Lehman shock affected differently the behavior of firms incorporated in states with and without anti-recharacterization laws. We define firms in states with anti-recharacterization laws as treated. The dummy *Post* takes value equal to one after 2008 for all firms. For this test only, we restrict our sample to the 2006-2010 period.

If uncertainty affects firm behavior because it tightens borrowing constraints, we would expect that firms in states with anti-recharacterization laws, cut leverage and investment once volatility increases and financial constraints become more binding.

However, if the passage of the laws reduces the fear of future financial constraints, firms in states with anti-recharacterization laws should be more inclined to take on additional risk and therefore not to reduce leverage and investment. These firms may also wish not to increase cash and other easy-to-collateralize assets holdings.

In Table 8, the interaction term  $Post \times Law$  indicates that after the Lehman's shock, firms incorporated in states with anti-recharacterization laws maintained higher payouts, leverage, and investment in intangible assets. These firms also increased their cash and real estate holdings to a lower extent.

The evidence suggests that in anti-recharacterization states, firms are more resilient to uncertainty shocks and are more willing to take risks than control firms. This view is the only one

that can explain why cash and real estate holdings increase to a lower extent for firms incorporated in states with anti-recharacterization laws.

Taken together, the evidence in this section and the previous ones suggests that improved access to debt markets helps shield firm's policy and the real economy from the negative effects of uncertainty shocks.

## **6. Robustness**

### *6.1 Anti-recharacterization laws and Hedging*

Anti-recharacterization laws may also reduce firms' demand for insurance because they allow firms to hedge more. Rampini and Viswanathan (2010) and Rampini, Sufi, and Viswanathan (2014) argue that more constrained firms engage less in risk management because of their limited debt capacity. By relaxing financial constraints, anti-recharacterization laws may therefore allow firms to hedge more, thus reducing their exposure to uncertainty shock. This in turn may increase both firms' propensity to take on more risk and reduce their precautionary behavior.

We test this alternative explanation in Table 9. We regress an indicator for whether firms report derivative usage in a given year on the interaction between each of our uncertainty measures and the passage of anti-recharacterization laws. As shown, firms located in states that adopt anti-recharacterization laws are more likely to engage in hedging activities, which supports the argument of Rampini and Viswanathan (2010). However, we do not find evidence that firms facing a more uncertain environment increase hedging to a greater extent than other firms after the passage of the laws. These results suggest that our main findings on firms' cash holdings, leverage

and investment are not driven by firms' desire to hedge following the adoption of anti-recharacterization laws. The reduced impact of uncertainty shocks on corporate policies appears instead to be driven by firms' increased access to debt markets.

### *6.2 Pre-Existing Trends*

The identifying assumption underlying our difference-in-difference analysis is that corporate policies for treated and control firms had common trends before the passage of the anti-recharacterization laws. To test this assumption, we define a dummy variable *PreLaw* that takes value one for firms incorporated in treated states during the three years prior to the adoption of anti-recharacterization laws. We interact this variable with firm uncertainty. We expect the interaction term not to be statistically significant if treated firms—that is, firms in states that adopted anti-recharacterization laws and in industries with high uncertainty—exhibited similar behavior to control firms before the treatment.

As shown in Table 10, we find no evidence that treated firms in high uncertainty industries reduce cash and real estate holdings, or increase leverage and payouts before the passage of the laws. Overall, it does not appear that our findings are driven by a tendency of treated firms to decrease precautionary behavior before the adoption of the laws.

### *6.3 Alternative Mechanisms*

In this section, we consider potential alternative explanations for our findings. First, we examine the possibility that our proxies for industry uncertainty are correlated with firms' distance

to default. One concern is that for firms close to default, stronger creditor rights exacerbate shareholder-debtholder conflicts leading to underinvestment and risk shifting (Favara, Morellec, Schroth, and Valta, 2017). While this mechanism does not exclude the one highlighted in this paper, one concern is that our evidence that firms reduce precautionary behavior after the passage of the anti-recharacterization laws may be entirely driven by the incentives of firms to take on more risk and expropriate debtholders as they approach default.

To address this concern, we estimate firms' probability of default following Bharath and Shumway (2008) and estimate empirical models including the interactions between the firm's default probability and the dummy variable that takes value one for states that have adopted anti-recharacterization laws. If our results were driven by the risk taking of firms close to default, the interactions between the *Law* dummy and the proxies for uncertainty shocks should lose significance.

Panel A of Table 11 shows that this is not the case. Firms with higher default probability appear to hold more cash and real estate assets, and to decrease leverage after the passage of the laws. This implies that our results are largely driven by firms that face high uncertainty and that are less likely to default.

We also revisit the possibility that our proxies for industry level uncertainty simply capture firms' financial constraints. In particular, we control for the interaction of *Law* with the Hadlock and Pierce (2010) index of financial constraints (*HP*). Panel B of Table 11 reports the results. The passage of the anti-recharacterization laws does not seem to affect financially constrained firms to a larger extent once we consider the effect of uncertainty. More importantly, after the inclusion of

these additional controls, the coefficient on the interaction of *Law* and *CashFlowVol* increases in magnitude compared to our baseline specifications. This suggests that our results are not merely driven by the differential responses of constrained and unconstrained firms.

#### 6.4 Further tests

The passage of the anti-recharacterization laws in a given state enhances the pledgeability of assets for firms incorporated in those jurisdictions. One may wonder, however, the extent to which anti-recharacterization laws may have had long lasting effects on corporate behavior, given the 2003, *Reaves Brokerage Company Inc. v. Sunbelt Fruit & Vegetable Company, Inc.* case. In this case, a court ignored the anti-recharacterization statute of Texas and used a federal standard to recharacterize as a loan the transfer of assets to an SPV by a firm incorporated in Texas. This court decision may have introduced some uncertainty as to whether state-level anti-recharacterization laws prevail over federal standards in case of bankruptcy. Our tests rely on the assumption that even if the recharacterization of the assets pledged as collateral may occur with some probability, anti-recharacterization laws increase the probability that creditors will be able to repossess the asset in case of bankruptcy.

In Table 12, we check the validity of this assumption by comparing the effect of the laws on firm policies up to 2003, with those in the full estimation sample. We find no differential effect on the laws up to 2003 on any of the outcome variables. As shown, firms in high uncertainty industries exhibit less pronounced precautionary behavior after the passage of the laws.

Importantly, the increase in leverage and net leverage up to 2003 for firms in high uncertainty industries appear to be smaller than the effect estimated over the full sample period. The gradual effect of the laws on leverage is fully consistent with our finding that the anti-recharacterization laws reduce firms' precautionary behavior. Firms in states that have passed these laws are able to issue new debt when they experience cash shortfalls, which does not necessarily occur in the aftermath of the laws' passage.

Overall, there is no evidence that the effects may be weaker after 2003. This indicates that the anti-recharacterization laws continue to be perceived by creditors as increasing their ability to repossess collateral and validates our empirical strategy.

## **7. Conclusions**

We highlight a novel effect of strong creditor rights for firms that face high uncertainty. As creditors' ability to repossess assets in bankruptcy improves, firms' access to debt financing becomes easier. Consequently, firms engage in less precautionary behavior in the face of higher uncertainty. With stronger creditor rights, firms have weaker incentives to hoard cash, and stronger incentives to invest in intangible capital.

Our results suggest that the negative effects of uncertainty shocks are largely driven by firms' reluctance to take risks in uncertain environments and generate important policy implications. Stronger creditor rights, facilitating firms' access to financial markets, make firms more resilient to uncertainty shocks and spur investment in intangible capital and innovation.

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## Data Appendix Variable Definitions

*Cash*: Cash and cash equivalent securities (CHE) over lagged total assets (AT)

*DP*: Distance to default, defined as in Bharath and Shumway (2008). It is equal to *NormDist*(-*Distance to Default*), where *NormDist*(·) is the normal distribution cumulative probability, and *Distance to Default* =  $\frac{\ln\left(\frac{V}{F}\right) + (\mu - 0.5\sigma_V^2)T}{\sigma_V\sqrt{T}}$ , with *V* being the market value of assets, *F* the total market value of debt,  $\sigma_V$  the volatility of asset value,  $\mu$  the average growth rate of equity, and *T* the bond maturity that we set equal to 1 for one year.

*Payout*: Cash dividends (DVC) + purchase of common and preferred stocks purchased (PRSTKC) – sale of common and preferred stocks (SSTK) over total assets (AT)

*Leverage*: Long-term debt (DLTT) and current portion of long-term debt (DLC) over total assets (AT)

*Net Leverage*: Leverage – Cash

*RD (stock)*: Accumulated R&D expenditure (XRD) over total assets, calculated using a perpetual inventory method with a depreciation rate of 15%. R&D expenditures are deflated to 2000 level (see definitions in Falato et al. (2013))

*SG&A (stock)*: Accumulated SG&A expenditure (XSGA) over total assets, calculated using a perpetual inventory method with a depreciation rate of 20%. SG&A expenditures are deflated to 2000 level (see definitions in Falato et al. (2013))

*Intangibles (stock)*: The sum of R&D stock, SG&A stock, and the stock of computerized information, which is calculated as the cumulative level of fixed reproducible tangible wealth in an industry (source: BEA) using a depreciation rate of 31%

*RE-Holdings*: Real estate holdings scaled by lagged total level of property, plant, and equipment (PPEGT)

*Tangible Assets*: Firms' property, plant, and equipment (PPENT) over total assets (AT)

*ROA1*: Net income (NI)/total assets (AT)

*ROA2*: Income before extraordinary items (IB)/assets

*ROA3*: Income before extraordinary items available for common equity (IBCOM)/assets.

*ROI*: Income before extraordinary items available for common equity (IBCOM)/ invested capital total (ICAPT)

*CashFlowVol*: The median level of cash-flow volatility in an industry. A firm's cash-flow volatility is calculated as the standard deviation of cash flows over the past 10 years. At least three years of observations are required. Industry is defined at the two-digit SIC level. Cash flows are measured in the same way as in Bates et al. (2009)

*Price Volatility*: Industry average levels of the volatility of firms' logarithmic monthly returns during a year

*Financial Uncertainty*: Industry average level of the exposure of a firm's monthly stock returns to the index of aggregate financial uncertainty of Ludvigson, Ma, and Ng (2018). Firm-level exposure is estimated on a 60-month rolling regression of firm returns on the aggregate financial uncertainty index, controlling for the Fama-French three factors

*Dummy (SPV)*: A dummy that equals one if a firm mentions SPVs in its 10K

*SPV*: The number of SPVs as mentioned in a firm's 10K

*Cash Flow*: Operating cash flows (IB + DP) over total assets

*NWC*: Net working capital, net of cash (NWC - CHE), over total assets

*Investment*: Capital expenditure (CAPX) over total assets

*Market Cap*: Market capitalization of equity, calculated as the log level of the product between shares outstanding (CSHO) and year-end share price (PRCC)

*M/B*: Market-to-book ratio of assets,  $(AT - CEQ + CSHO * PRCC) / AT$ , where CEQ is the common-ordinary equity, CSHO is the number of common shares outstanding, and PRCC is the share price.

*Acquisition*: Acquisition value (AQC) over total sales (SALE)

*Dividend Payer*: A dummy variable that equals one if total dividends (DVC+DVP) are positive, and zero otherwise

*R&D (Dummy)*: A dummy variable that equals one if R&D expenditures are positive, and zero otherwise

**Table 1. Summary Statistics**

This table reports the summary statistics of the main variables. The sample includes all Compustat firms that are incorporated in the 50 U.S. states and Washington D.C., excluding those in the financial (SIC 6500–6800) and utility (SIC 4900–4999) industries. The sample period spans 1992–2010. All continuous variables except Leverage are winsorized at the 1st and 99th percentiles. Leverage is restricted to vary between 0 and 1. Variable definitions are in the Appendix.

Variable	Observations	Mean	Std. Dev.	Median	25 Percentile	75 Percentile
Cash	68,215	0.2223	0.3046	0.1016	0.0268	0.3032
Payout	78,028	-0.0702	0.2208	-0.0007	-0.0259	0.0100
Leverage	77,743	0.2246	0.2919	0.1698	0.0177	0.3455
Net Leverage	77,730	0.0257	0.4256	0.0638	-0.2250	0.2870
RD (stock)	78,028	0.2551	0.5356	0.0173	0.0000	0.2743
SG&A (stock)	78,028	1.2121	1.2660	0.8581	0.3626	1.6061
Intangibles (stock)	77,571	1.5170	1.5755	1.0801	0.4978	1.9442
RE-Holdings	67,817	0.2905	0.2921	0.2309	0.0434	0.4304
Tangible Assets	77,915	0.2603	0.2231	0.1907	0.0844	0.3737
ROA1	68,237	-0.0311	0.1974	0.0301	-0.0730	0.0852
ROA2	68,237	-0.0293	0.1933	0.0302	-0.0675	0.0842
ROA3	68,237	-0.0315	0.1966	0.0296	-0.0695	0.0838
ROI	68,201	-0.0391	0.2833	0.0441	-0.0985	0.1255
CashFlowVol	78,020	0.0710	0.0404	0.0625	0.0384	0.0906
Price Volatility	77,149	1.0067	0.1292	0.9913	0.8909	1.1373
Financial Uncertainty	72,450	-0.0062	0.0586	-0.0016	-0.0187	0.0124
Dummy(SPV)	48,054	0.0531	0.2242	0	0	0
SPV	48,054	4.3259	22.9892	0	0	2
Cash Flow	77,792	-0.0346	0.9045	0.0677	-0.0220	0.1190
NWC	75,985	0.0722	0.3548	0.0685	-0.0374	0.2052
Investment	77,239	0.0627	0.0848	0.0390	0.0192	0.0754
Market Cap	77,786	5.1370	2.0895	5.0353	3.6089	6.5564
M/B	77,778	2.1728	1.8811	1.5446	1.1247	2.4161
Acquisition	78,028	0.0238	0.0705	0	0	0.0080
Dividend Payer	78,028	0.3500	0.4770	0	0	1
R&D (Dummy)	78,028	0.4989	0.5000	0	0	1

**Table 2. Creditor Rights and Corporate Policies**

This table describes changes in firm policies around the adoption of anti-recharacterization laws. Dependent variables are indicated on top of each column. Panel A reports results for firms' financial policies, while Panel B reports results for firms' operating policies. Law is a dummy variable that equals one for firms incorporated in Texas or Louisiana after 1997, for firms in Alabama after 2001, for firms in Delaware after 2002, for firms in South Dakota after 2003, for firms in Virginia after 2004, and for firms in Nevada after 2005. All variables are defined in the Appendix. All regressions include firm fixed effects and industry-year fixed effects. T-statistics are presented in parentheses. Standard errors are corrected for heteroscedasticity and clustered at the industry-year level. \*\*\*, \*\*, \* denote significance at 1%, 5%, and 10% levels, respectively.

<i>Panel A. Financial Policies</i>				
Dep. Var.:	(1) Cash	(2) Payout	(3) Leverage	(4) Net Leverage
Law	-0.0137*** (-2.82)	0.0231*** (5.53)	0.0139*** (3.98)	0.0211*** (4.34)
Cash Flow	0.0260** (2.04)	0.0056 (1.62)	-0.0007 (-0.03)	-0.0112 (-0.37)
NWC	-0.0414** (-2.27)	-0.0061 (-1.12)	-0.4130*** (-8.37)	-0.3849*** (-7.24)
Investment	-0.5380*** (-12.19)	0.0316 (1.21)	0.0042 (0.11)	0.3570*** (8.20)
Market Cap	0.0664*** (15.06)	-0.0124*** (-6.07)	-0.0365*** (-13.03)	-0.0542*** (-15.02)
M/B	0.0161*** (8.07)	-0.0289*** (-19.33)	0.0060*** (3.55)	-0.0034* (-1.67)
Acquisition	-0.1828*** (-10.83)	-0.0788*** (-6.71)	0.2079*** (18.33)	0.4415*** (26.80)
Dividend Payer	-0.0026 (-0.71)	-0.0432*** (-8.73)	-0.0056* (-1.72)	-0.0105** (-2.55)
R&D (Dummy)	0.0044 (0.69)	-0.0226*** (-5.20)	-0.0054 (-0.93)	-0.0145* (-1.83)
Firm FE	Yes	Yes	Yes	Yes
Industry-Year FE	Yes	Yes	Yes	Yes
Observations	64,703	74,232	74,036	74,036
R-squared	0.6265	0.5015	0.6995	0.7546

*(Continued)*

**Table 2---Continued**  
*Panel B. Operating policies*

Dep. Var.:	(1) RD (stock)	(2) SG&A (stock)	(3) Intangibles (stock)	(4) RE-Holdings	(5) Tangible Assets
Law	0.0713*** (9.87)	0.0878*** (6.52)	0.1664*** (9.21)	-0.0114*** (-3.17)	0.0063*** (4.18)
Cash Flow	-0.0211 (-1.17)	-0.0410 (-1.02)	-0.0705 (-1.09)	0.0035 (1.16)	0.0014* (1.73)
NWC	-0.0335 (-1.08)	-0.1196 (-1.48)	-0.1582 (-1.23)	-0.0004 (-0.09)	-0.0110* (-1.95)
Investment	0.1544*** (4.82)	0.3773*** (4.86)	0.6136*** (5.74)	0.9755*** (18.36)	0.6123*** (35.10)
Market Cap	-0.1521*** (-15.34)	-0.5000*** (-27.71)	-0.6816*** (-27.27)	0.0330*** (15.19)	-0.0151*** (-20.83)
M/B	0.0514*** (11.84)	0.1376*** (19.64)	0.2055*** (18.69)	-0.0094*** (-9.27)	-0.0006 (-1.43)
Acquisition	0.0625*** (3.82)	-0.5434*** (-12.22)	-0.4552*** (-7.90)	0.3309*** (17.17)	-0.0071 (-1.46)
Dividend Payer	0.0348*** (5.55)	0.0092 (0.86)	0.0506*** (3.18)	0.0005 (0.19)	-0.0000 (-0.02)
R&D (Dummy)	0.0759*** (9.98)	0.0353* (1.78)	0.0979*** (3.81)	-0.0082 (-1.42)	0.0044* (1.89)
Firm FE	Yes	Yes	Yes	Yes	Yes
Industry-Year FE	Yes	Yes	Yes	Yes	Yes
Observations	74,232	74,232	73,894	64,522	74,221
R-squared	0.7861	0.7791	0.7652	0.7150	0.9073

**Table 3. Creditor Rights, Uncertainty, and Financial Policies**

This table describes the effects of uncertainty on changes in firm policies around the adoption of anti-recharacterization laws. Dependent variables are indicated on top of each column. Law is a dummy variable that equals to one for firms incorporated in Texas or Louisiana after 1997, for firms in Alabama after 2001, for firms in Delaware after 2002, for firms in South Dakota after 2003, for firms in Virginia after 2004, and for firms in Nevada after 2005. All remaining variables are defined in the Appendix. All regressions include firm fixed effects and industry-year fixed effects. T-statistics are presented in parentheses. Standard errors are corrected for heteroscedasticity and clustered at the industry-year level. \*\*\*, \*\*, \* denote significance at 1%, 5%, and 10% levels, respectively.

Dep. Var.:	(1) Cash	(2) Payout	(3) Leverage	(4) Net Leverage
Law*CashFlowVol	-0.3414** (-2.17)	0.3214*** (2.80)	0.4008*** (6.02)	0.5293*** (5.43)
Law	0.0143 (1.35)	-0.0041 (-0.55)	-0.0190*** (-3.43)	-0.0225*** (-2.80)
CashFlowVol	-0.0271 (-0.18)	0.3365** (2.54)	-0.0258 (-0.21)	0.0244 (0.14)
Cash Flow	0.0260** (2.04)	0.0055 (1.59)	-0.0007 (-0.03)	-0.0112 (-0.37)
NWC	-0.0417** (-2.29)	-0.0054 (-1.01)	-0.4125*** (-8.37)	-0.3843*** (-7.23)
Investment	-0.5389*** (-12.24)	0.0322 (1.24)	0.0048 (0.13)	0.3579*** (8.23)
Market Cap	0.0666*** (15.04)	-0.0126*** (-6.16)	-0.0366*** (-13.05)	-0.0544*** (-15.00)
M/B	0.0158*** (7.89)	-0.0285*** (-19.18)	0.0062*** (3.67)	-0.0030 (-1.47)
Acquisition	-0.1813*** (-10.79)	-0.0809*** (-6.94)	0.2062*** (18.32)	0.4391*** (26.74)
Dividend Payer	-0.0026 (-0.71)	-0.0432*** (-8.74)	-0.0055* (-1.70)	-0.0104** (-2.53)
R&D (Dummy)	0.0045 (0.71)	-0.0229*** (-5.25)	-0.0056 (-0.98)	-0.0148* (-1.88)
Firm FE	Yes	Yes	Yes	Yes
Industry-Year FE	Yes	Yes	Yes	Yes
Observations	64,700	74,226	74,030	74,030
R-squared	0.6268	0.5026	0.6999	0.7549

**Table 4. Creditor Rights, Uncertainty, and Operating Policies**

This table describes changes in firms' operating policies around the adoption of anti-recharacterization law. Dependent variables are indicated on top of each column. Law is a dummy variable that equals to one for firms incorporated in Texas or Louisiana after 1997, for firms in Alabama after 2001, for firms in Delaware after 2002, for firms in South Dakota after 2003, for firms in Virginia after 2004, and for firms in Nevada after 2005. All remaining variables are defined in the Appendix. All regressions include firm fixed effects and industry-year fixed effects. T-statistics are presented in parentheses. Standard errors are corrected for heteroscedasticity and clustered at the industry-year level. \*\*\*, \*\*, \* denote significance at 1%, 5%, and 10% levels, respectively.

Dep. Var.:	(1)	(2)	(3)	(4)	(5)
	RD (stock)	SG&A (stock)	Intangibles (stock)	RE-Holdings	Tangible Assets
Law*CashFlowVol	1.1065*** (5.81)	0.9632*** (2.94)	2.2364*** (6.25)	-0.2109*** (-2.99)	0.0094 (0.30)
Law	-0.0248* (-1.79)	0.0023 (0.08)	-0.0304 (-0.96)	0.0055 (0.90)	0.0054** (1.97)
CashFlowVol	2.2544*** (8.01)	2.7770*** (3.56)	5.8174*** (7.22)	0.2277 (1.40)	0.0635 (1.44)
Cash Flow	-0.0215 (-1.20)	-0.0415 (-1.03)	-0.0716 (-1.11)	0.0035 (1.15)	0.0014* (1.72)
NWC	-0.0300 (-1.00)	-0.1158 (-1.45)	-0.1501 (-1.19)	-0.0004 (-0.09)	-0.0110* (-1.95)
Investment	0.1568*** (4.97)	0.3794*** (4.92)	0.6182*** (5.84)	0.9751*** (18.32)	0.6123*** (35.07)
Market Cap	-0.1530*** (-15.48)	-0.5010*** (-27.88)	-0.6838*** (-27.54)	0.0330*** (15.15)	-0.0152*** (-20.83)
M/B	0.0529*** (12.31)	0.1392*** (19.95)	0.2089*** (19.34)	-0.0095*** (-9.17)	-0.0006 (-1.35)
Acquisition	0.0539*** (3.37)	-0.5524*** (-12.49)	-0.4748*** (-8.33)	0.3314*** (17.17)	-0.0074 (-1.50)
Dividend Payer	0.0345*** (5.65)	0.0087 (0.82)	0.0497*** (3.18)	0.0005 (0.17)	-0.0000 (-0.03)
R&D (Dummy)	0.0747*** (10.01)	0.0342* (1.73)	0.0954*** (3.74)	-0.0081 (-1.41)	0.0044* (1.88)
Firm FE	Yes	Yes	Yes	Yes	Yes
Industry-Year FE	Yes	Yes	Yes	Yes	Yes
Observations	74,226	74,226	73,888	64,519	74,215
R-squared	0.7904	0.7800	0.7680	0.7151	0.9073



**Table 5. Alternative Measures of Uncertainty**

This table examines the changes in firm policies prior to the adoption of anti-recharacterization laws using alternative measures of uncertainty. Panel A uses *Financial Uncertainty*, the industry-level average of the sensitivity of firms' stock returns to aggregate financial uncertainty. Aggregate financial uncertainty is an index introduced by Ludvigson, Ma, and Ng (2018). A firm's sensitivity to aggregate financial uncertainty is estimated as the coefficient of regressing the firm's monthly stock returns on the uncertainty index during a rolling window of the past 60 months. The regression controls for the Fama-French three factors. Panel B uses total price volatility (*Price Vol*), calculated as the industry average level of the volatility of firms' logarithmic monthly returns in a given year. Law is a dummy variable that equals to one for firms incorporated in Texas or Louisiana after 1997, for firms in Alabama after 2001, for firms in Delaware after 2002, for firms in South Dakota after 2003, for firms in Virginia after 2004, and for firms in Nevada after 2005. All remaining variables are defined in the Appendix. All regressions include firm-fixed effects and industry-year-fixed effects. T-statistics are presented in parentheses. Standard errors are corrected for heteroscedasticity and clustered at the industry-year level. \*\*\*, \*\*, \* denote significance at 1%, 5%, and 10% levels, respectively.

*Panel A. Financial Uncertainty*

Dep. Var.:	(1) Cash	(2) Payout	(3) Leverage	(4) Net Leverage	(5) RD (stock)	(6) SG&A (stock)	(7) Intangibles (stock)	(8) RE-Holdings	(9) Tangible Assets
Law*Financial Uncertainty	-0.1891*** (-3.42)	0.0580 (1.14)	0.1369*** (2.72)	0.2372*** (2.96)	0.3308** (2.26)	0.0376 (0.17)	0.5101 (1.41)	-0.1249** (-2.51)	0.0555** (2.58)
Law	-0.0102** (-2.07)	0.0232*** (5.40)	0.0141*** (4.00)	0.0202*** (4.11)	0.0690*** (9.67)	0.0945*** (7.00)	0.1688*** (9.46)	-0.0095** (-2.58)	0.0058*** (3.66)
Financial Uncertainty	0.0612* (1.86)	0.0419 (0.90)	-0.0909*** (-3.52)	-0.1196*** (-2.94)	0.3080*** (5.22)	0.6635*** (4.57)	0.9832*** (5.39)	0.0456 (1.19)	-0.0434*** (-2.60)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry-Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	59,824	68,765	68,599	68,599	68,765	68,765	68,432	59,656	68,754
R-squared	0.6335	0.5064	0.7120	0.7635	0.7896	0.7851	0.7720	0.7149	0.9083

(Continued)

**Table 5---Continued**  
**Panel B. Price Volatility**

Dep. Var.:	(1) Cash	(2) Payout	(3) Leverage	(4) Net Leverage	(5) RD (stock)	(6) SG&A (stock)	(7) Intangibles (stock)	(8) RE-Holdings	(9) Tangible Assets
Law*Price Vol	-0.0785 (-1.43)	0.1038** (2.53)	0.1203*** (3.09)	0.1710*** (3.09)	0.3822*** (4.29)	0.3568** (2.00)	0.9105*** (3.66)	0.0369 (0.86)	-0.0087 (-0.41)
Law	0.0740 (1.23)	-0.0946** (-2.10)	-0.1223*** (-2.85)	-0.1726*** (-2.81)	-0.3614*** (-3.69)	-0.3150 (-1.57)	-0.8629*** (-3.09)	-0.0530 (-1.10)	0.0159 (0.67)
Price Vol	0.2214*** (4.30)	-0.1433*** (-3.78)	-0.1369*** (-3.79)	-0.2204*** (-4.31)	-0.3420*** (-4.04)	-0.0214 (-0.13)	-0.5203** (-2.46)	-0.0271 (-0.63)	-0.0015 (-0.08)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry-Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	64,658	73,425	73,231	73,231	73,425	73,425	73,087	64,477	73,414
R-squared	0.6247	0.5036	0.7034	0.7570	0.7875	0.7796	0.7662	0.7150	0.9080

**Table 6. Creditor Rights, Uncertainty, and Firm Performance**

This table examines changes in firm performance around the adoption of anti-recharacterization laws. Dependent variables are indicated on top of each column. Law is a dummy variable that equals to one for firms incorporated in Texas or Louisiana after 1997, for firms in Alabama after 2001, for firms in Delaware after 2002, for firms in South Dakota after 2003, for firms in Virginia after 2004, and for firms in Nevada after 2005. All remaining variables are defined in the Appendix. All regressions include firm fixed effects and industry-year fixed effects. T-statistics are presented in parentheses. Standard errors are corrected for heteroscedasticity and clustered at the industry-year level. \*\*\*, \*\*, \* denote significance at 1%, 5%, and 10% levels, respectively.

	(1)	(2)	(3)	(4)
Dep. Var.:	ROA1	ROA2	ROA3	ROI
Law*CashFlowVol	0.2632*** (3.05)	0.2550*** (3.02)	0.2555*** (2.98)	0.3037** (2.50)
Law	-0.0122** (-2.17)	-0.0118** (-2.16)	-0.0120** (-2.17)	-0.0141* (-1.71)
CashFlowVol	0.0574 (0.62)	0.0549 (0.61)	0.0583 (0.63)	-0.0035 (-0.03)
Controls	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes
Industry-Year FE	Yes	Yes	Yes	Yes
Observations	64,700	64,700	64,700	64,669
R-squared	0.6844	0.6954	0.6989	0.6479

**Table 7. Changes in SPV Usage**

This table describes firms' usage of SPVs around the adoption of anti-recharacterization law. Panel A examines the changes in firms' usage of SPVs around the adoption of anti-recharacterization law. The dependent variable is an indicator for whether a firm reports SPV in its SEC documents,  $Dummy(SPV)$ , in a given year. Panel B examines whether firms' usage of SPVs modulates the effect of the anti-recharacterization laws on their financial policies. High SPV indicates the firm-year observations with above-median predicted SPV usage ( $\widehat{Dummy}(SPV)$ ), which is based on its characteristics and previous SPV usage. Low SPV indicates those with below-median predicted SPV usage. Law is a dummy variable that equals to one for firms incorporated in Texas or Louisiana after 1997, for firms in Alabama after 2001, for firms in Delaware after 2002, for firms in South Dakota after 2003, for firms in Virginia after 2004, and for firms in Nevada after 2005. All remaining variables are defined in the Appendix. All regressions include firm-fixed effects and industry-year-fixed effects as well as controls as listed in Table 2 whose coefficients have been omitted. T-statistics are presented in parentheses. Standard errors are corrected for heteroscedasticity and clustered at the industry-year level. \*\*\*, \*\*, \* denote significance at 1%, 5%, and 10% levels, respectively.

<i>Panel A. SPV Usage and Anti-recharacterization Laws</i>		
Dep. Var.: $Dummy(SPV)$	(1)	(2)
Law	0.0095*	-0.0105
	(1.67)	(-1.12)
Law*CashFlowVol		0.2445***
		(2.84)
CashFlowVol		-0.0921
		(-0.59)
Controls	Yes	Yes
Firm FE	Yes	Yes
Industry-Year FE	Yes	Yes
Observations	45,616	45,613
R-squared	0.1029	0.1032

*(Continued)*

**Table 7---Continued**

<i>Panel B. Effects of SPVs on Financial Policies</i>								
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Dep. Var.:	Cash	Cash	Payout	Payout	Leverage	Leverage	Net Leverage	Net Leverage
Sample:	High SPV	Low SPV	High SPV	Low SPV	High SPV	Low SPV	High SPV	Low SPV
Law*CashFlowVol	-0.4134** (-2.05)	-0.2686* (-1.80)	0.2452** (2.29)	0.1308* (1.84)	0.5463*** (4.45)	0.3061*** (2.86)	0.7162*** (4.16)	0.3505** (2.44)
Law	0.0161 (1.30)	0.0058 (0.44)	-0.0187*** (-2.62)	-0.0031 (-0.48)	-0.0319*** (-3.55)	-0.0144 (-1.44)	-0.0386*** (-3.25)	-0.0196 (-1.48)
CashFlowVol	0.5284** (2.41)	0.0483 (0.26)	-0.2098* (-1.82)	-0.0846 (-0.76)	-0.2519 (-1.35)	-0.3570*** (-4.02)	-0.6324*** (-2.74)	-0.4780*** (-2.89)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry-Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	24,735	12,565	24,755	12,590	24,688	12,535	24,688	12,535
R-squared	0.7081	0.7269	0.5721	0.5613	0.8330	0.8179	0.8484	0.8598

**Table 8. Creditor Rights and Firm Policies Following the 2008 Financial Crisis**

This table examines the changes in firms' financial and operating policies around the 2008 financial crisis. Panel A reports the results for firms' financial policies. Panel B reports results for firms' operating policies. Different from the other tables in the paper, the sample spans 2006—2010. Post is a dummy variable indicating years after 2008. Law is a dummy variable that equals to one for firms incorporated in Texas or Louisiana after 1997, for firms in Alabama after 2001, for firms in Delaware after 2002, for firms in South Dakota after 2003, for firms in Virginia after 2004, and for firms in Nevada after 2005. All remaining variables are defined in the Appendix. All regressions include firm fixed effects and industry-year fixed effects. T-statistics are presented in parentheses. Standard errors are corrected for heteroscedasticity and clustered at the industry-year level. \*\*\*, \*\*, \* denote significance at 1%, 5%, and 10% levels, respectively.

<i>Panel A. Financial Policies</i>					
Dep. Var.:	(1)	(2)	(3)	(4)	
	Cash	Payout	Leverage	Net Leverage	
Law*Post	-0.0136** (-2.09)	0.0135** (2.42)	0.0079** (2.21)	0.0122** (2.08)	
Controls	Yes	Yes	Yes	Yes	
Firm FE	Yes	Yes	Yes	Yes	
Industry-Year FE	Yes	Yes	Yes	Yes	
Observations	13,484	14,116	14,049	14,049	
R-squared	0.7629	0.6252	0.9079	0.9141	

  

<i>Panel B. Operating policies</i>					
Dep. Var.:	(1)	(2)	(3)	(4)	(5)
	R&D (Stock)	SG&A (Stock)	Intangibles (Stock)	RE-Holdings	Tangible Assets
Law*Post	0.0355*** (3.27)	0.0261* (1.79)	0.0796*** (3.12)	-0.0074* (-1.84)	0.0019 (1.42)
Controls	Yes	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes	Yes
Industry-Year FE	Yes	Yes	Yes	Yes	Yes
Observations	14,116	14,116	14,041	13,427	14,116
R-squared	0.9222	0.9098	0.9034	0.8697	0.9682

**Table 9. Changes in Hedging**

This table examines firms' hedging behaviors around the adoption of anti-recharacterization law. The dependent variable is an indicator for hedging. We use two measures for hedging activities. Hedging (Raw) is a dummy variable indicating whether a firm reports derivatives usage in their SEC filings. Hedging (Carry Forward) indicates whether a firm reports derivatives usage in a given year or the previous year. In Columns (1) and (2), uncertainty is measured by industry cash flow volatility; Columns (3) and (4) measure uncertainty using an industry's exposure to financial uncertainty; and Columns (5) and (6) measure uncertainty using an industry's total price volatility. All remaining variables are defined in the Appendix. All regressions include firm-fixed effects and industry-year-fixed effects as well as controls as listed in Table 2. T-statistics are presented in parentheses. Standard errors are corrected for heteroscedasticity and clustered at the industry-year level. \*\*\*, \*\*, \* denote significance at 1%, 5%, and 10% levels, respectively.

	(1)	(2)	(3)	(4)	(5)	(6)
Uncertainty Measured by: Dep. Var.:	CashFlowVol Hedging (Raw)	CashFlowVol Hedging (Carry Forward)	Financial Uncertainty Hedging (Raw)	Financial Uncertainty Hedging (Carry Forward)	PriceVol Hedging (Raw)	PriceVol Hedging (Carry Forward)
Law*Uncertainty	-0.3040 (-1.47)	-0.2655 (-1.28)	0.0166 (0.11)	-0.0136 (-0.09)	-0.3216** (-2.57)	-0.3699*** (-2.86)
Law	0.0388* (1.68)	0.0391* (1.67)	0.0141 (1.50)	0.0168* (1.90)	0.3759*** (2.63)	0.4341*** (2.93)
Uncertainty	-0.7313** (-2.40)	-0.7313** (-2.50)	-0.0520 (-0.44)	-0.0604 (-0.51)	0.0334 (0.33)	0.0811 (0.77)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes
Industry-Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	34,257	34,292	31,047	31,071	34,227	34,262
R-squared	0.5930	0.6131	0.5942	0.6155	0.5925	0.6128

**Table 10. Testing the Common Trend Hypothesis**

This table describes the changes in firm policies prior to the adoption of anti-recharacterization laws. *PreLaw* is an indicator that equals one if a firm is in a state that will pass an anti-recharacterization law in the next three years. *Law* is a dummy variable that equals to one for firms incorporated in Texas or Louisiana after 1997, for firms in Alabama after 2001, for firms in Delaware after 2002, for firms in South Dakota after 2003, for firms in Virginia after 2004, and for firms in Nevada after 2005. All remaining variables are defined in the Appendix. All regressions include firm-fixed effects and industry-year-fixed effects. T-statistics are presented in parentheses. Standard errors are corrected for heteroscedasticity and clustered at the industry-year level. \*\*\*, \*\*, \* denote significance at 1%, 5%, and 10% levels, respectively.

Dep. Var.:	(1) Cash	(2) Payout	(3) Leverage	(4) Net Leverage
PreLaw*CashFlowVol	0.1422 (0.66)	-0.1941 (-1.45)	0.0595 (1.02)	0.1237 (1.51)
Law*CashFlowVol	-0.4116*** (-2.72)	0.3970*** (3.13)	0.4420*** (5.68)	0.4702*** (5.38)
Law	0.0234** (2.02)	-0.0036 (-0.40)	-0.0232*** (-3.63)	-0.0267*** (-3.42)
PreLaw	0.0038 (0.41)	0.0169*** (2.62)	-0.0014 (-0.32)	-0.0088* (-1.74)
Controls	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes
Industry-Year FE	Yes	Yes	Yes	Yes
Observations	61,915	71,288	71,099	71,099
R-squared	0.6348	0.5091	0.7338	0.7846



**Table 11. Alternative Mechanisms**

This table examines alternative mechanisms that could explain our findings. Panel A examines the changes in firms' responses to uncertainty alongside the changes in their responses to distress risk around the adoption of anti-recharacterization laws. DP is the probability of default, constructed based on the method introduced of Bharath and Shumway (2008). Panel B examines the changes in firms' responses to uncertainty alongside the changes in their responses to financial constraint around the adoption of anti-recharacterization laws. *HP* stands for Hadlock-Pierce index, with higher values indicating stronger financial constraints (Hadlock and Pierce (2010)). *Law* is a dummy variable that equals to one for firms incorporated in Texas or Louisiana after 1997, for firms in Alabama after 2001, for firms in Delaware after 2002, for firms in South Dakota after 2003, for firms in Virginia after 2004, and for firms in Nevada after 2005. All remaining variables are defined in the appendix. All regressions include firm-fixed effects and industry-year-fixed effects. T-statistics are presented in parentheses. Standard errors are corrected for heteroscedasticity and clustered at the industry-year level. \*\*\*, \*\*, \* denote significance at 1%, 5%, and 10% levels, respectively.

<i>Panel A: Effects of Financial Distress</i>				
	(1)	(2)	(3)	(4)
Dep. Var.:	Cash	Payout	Leverage	Net Leverage
Law*CashFlowVol	-0.6704*** (-3.79)	0.3001*** (3.49)	0.4695*** (6.60)	0.6769*** (6.38)
Law	0.0309*** (3.22)	-0.0128*** (-2.61)	-0.0231*** (-4.26)	-0.0343*** (-4.56)
CashFlowVol	0.1053 (0.79)	-0.0280 (-0.35)	-0.0892 (-0.80)	-0.2003 (-1.26)
Law*DP	0.0349*** (3.28)	-0.0249*** (-3.87)	-0.0141 (-1.64)	-0.0289*** (-2.90)
DP	-0.0404*** (-5.68)	0.0133*** (2.95)	0.1598*** (23.14)	0.1938*** (22.93)
Controls	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes
Industry-Year FE	Yes	Yes	Yes	Yes
Observations	36,521	36,521	36,521	36,521
R-squared	0.6868	0.5305	0.7525	0.8004

*(Continued)*

**Table 11---Continued**

<i>Panel B: Effects of Financial Constraints</i>				
Dep. Var.:	(1)	(2)	(3)	(4)
	Cash	Payout	Leverage	Net Leverage
Law* CashFlowVol	0.0003*** (3.92)	-0.0001*** (-3.33)	-0.0001** (-2.41)	-0.0002*** (-4.42)
Law	-0.7187*** (-3.89)	0.3164*** (3.56)	0.4835*** (6.57)	0.7149*** (6.50)
CashFlowVol	0.0316*** (3.24)	-0.0131*** (-2.66)	-0.0236*** (-4.31)	-0.0350*** (-4.61)
Law*HP Index	0.1494 (1.07)	-0.0258 (-0.32)	-0.0664 (-0.59)	-0.2137 (-1.32)
HP Index	-0.0002*** (-2.72)	0.0000 (0.37)	-0.0001 (-1.44)	0.0001* (1.92)
Controls	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes
Industry-Year FE	Yes	Yes	Yes	Yes
Observations	36,521	36,521	36,521	36,521
R-squared	0.6870	0.5308	0.7527	0.8005

**Table 12. Effects of Anti-recharacterization Laws before 2003**

This table compares the effects of anti-recharacterization laws prior to 2003 and the effects of the laws throughout our sample period. Law is a dummy variable that equals to one for firms incorporated in Texas or Louisiana after 1997, for firms in Alabama after 2001, for firms in Delaware after 2002, for firms in South Dakota after 2003, for firms in Virginia after 2004, and for firms in Nevada after 2005. All regressions include firm-fixed effects and industry-year-fixed effects. Law (Pre-2003) is defined as Law prior to 2003 and is set equal to zero afterwards. All remaining variables are defined in the Appendix. T-statistics are presented in parentheses. Standard errors are corrected for heteroscedasticity and clustered at the industry-year level. \*\*\*, \*\*, \* denote significance at 1%, 5%, and 10% levels, respectively.

Dep. Var.:	(1) Cash	(2) Payout	(3) Leverage	(4) Net Leverage
Law (all)*CashFlowVol	-0.3917** (-2.45)	0.3230*** (2.83)	0.4777*** (6.13)	0.6568*** (6.08)
Law (all)	0.0173 (1.57)	-0.0047 (-0.60)	-0.0178*** (-2.89)	-0.0236*** (-2.70)
Law (Pre-2003)*CashFlowVol	0.1633 (1.05)	-0.0047 (-0.06)	-0.2592*** (-2.82)	-0.4260*** (-3.51)
Law (Pre-2003)	-0.0100 (-0.87)	0.0016 (0.22)	0.0011 (0.12)	0.0098 (0.81)
CashFlowVol	-0.0045 (-0.03)	0.3361** (2.50)	-0.0587 (-0.48)	-0.0285 (-0.15)
Controls	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes
Industry-Year FE	Yes	Yes	Yes	Yes
Observations	64,700	74,226	74,030	74,030
R-squared	0.6269	0.5026	0.7001	0.7551