

# Why Do Distressed Companies Choose Delaware? An Empirical Analysis of Venue Choice in Bankruptcy

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## Abstract

We analyze a sample of large Chapter 11 cases to determine which factors motivate the choice of filing in one court over another when a choice is available. We focus in particular on the Delaware court, which became the most popular venue for large corporations in the 1990s. We find no evidence to suggest that Delaware's popularity was driven by managers or equity holders seeking a procedure friendly to their interests. Instead, debt structure differences, specifically, the fraction of assets financed with secured debt, and court characteristics, particularly a court's level of experience, are the most important factors driving the choice of venue. While Delaware does not appear significantly different with respect to deviations from absolute priority in favor of equity or likelihood of producing reorganizations, it does differ along the dimension of speed. Controlling for other factors, we find that a Delaware reorganization is between 140 and 190 days faster than an equivalent case in another court. Given that speed benefits secured creditors most, we conclude that Delaware's popularity in the 1990s was unlikely to have resulted from a pro-debtor bias combined with a manager or equity holder preference for Delaware.

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# 1 Introduction

When publicly held corporations file for bankruptcy in the United States, they often have a range of choices as to where to file their bankruptcy petition. In recent years, increasing numbers of corporate debtors have used this flexibility to engage in “venue shopping”—that is, they have considered the benefits of particular bankruptcy courts, rather than invariably filing for bankruptcy in the court closest to the debtor’s principal operations. A disproportionate percentage of corporate debtors took their bankruptcy cases to Delaware in the 1990s, a development that has led to vigorous debate among both academics and bankruptcy professionals, as well as a legislative proposal that would have eliminated Delaware as a venue option for many corporations.

In this paper, we analyze a sample of Chapter 11 cases in the 1990s to determine why corporate debtors choose to file in one court rather than another when a choice is available. We then consider the ways in which the choice of court can affect the outcome of a bankruptcy case. Since the Delaware court was the “venue of choice” during this period, the analysis will focus mainly on the choice of filing in Delaware versus the nearest home court as a window into these broader questions. While the results shed light on the debate over the relative efficiency of the Delaware court in particular, we believe they also reflect upon larger issues concerning the nature of competition for corporate business, and the nature of control rights over firms in distress.

The key issue at hand is how venue choice affects incentives of the actors who make the venue decision, and the efficiency or inefficiency of the decisions that result. State-level competition has been cited both for its ability to create a menu of options, and for the pure efficiency gains normally associated with competition (Romano (1998)). On the other hand, agency problems within the firm might generate competition toward services that are most favorable to agents holding the legal rights to make the venue choice (entrenched managers and their bankruptcy attorneys, for example) rather than firm value as a whole (LoPucki and Whitford, 1991). In the bankruptcy setting, courts might compete for cases by offering a procedure that favors management. Judges in a particular court, for example, can develop a reputation for generously extending management’s exclusivity period to file a reorganization plan. By giving additional bargaining power to management and equity holders through the ability to delay, the court can skew the eventual distribution of claims toward a larger deviation from absolute priority, or allow the firm to emerge as a going-concern when creditors would prefer to liquidate.

We test for this behavior by examining whether the Delaware court exhibits any tendency

toward manager-friendly or equity-friendly outcomes. The results suggest that a Delaware case during the 1990s was not significantly more or less likely to result in reorganization than an equivalent case in a different court. We also find no evidence to suggest that the Delaware court competed for business by allowing more liberal deviations from absolute priority in favor of equity. While these are not the only possible forms of a “race to the bottom” in bankruptcy court competition, our results suggest that this does not take place through courts offering friendly procedures to management or the equity holders they represent.

Instead, the Delaware court emerges as an important option for firms that stand to gain the most from its expertise in handling large bankruptcy cases. We find that firms headquartered in states whose courts have less case expertise are the most likely to incur the costs of filing in Wilmington. In this sense, Delaware provides an available “default” venue when the home venue is inadequately experienced. We also find results supporting the likelihood that the trend to Delaware was largely *creditor-driven*, particularly by secured creditors, rather than manager or equity-driven. Our venue choice regressions consistently demonstrate that a larger fraction of the firm’s assets financed by secured debt implies a significantly larger probability of a Delaware filing.

One possible justification for secured creditors’ preference for Delaware becomes apparent when we analyze the effect of venue choice on the speed with which a firm reorganizes in bankruptcy. Given existing bankruptcy rules that result in secured creditors losing more value in longer cases, we should expect a strong secured creditor preference for fast cases. While the Delaware court appears similar in terms of the likelihood of reorganization, it is an outlier in terms of speed. Controlling for other characteristics, our estimates indicate that Delaware cases are faster than equivalent cases in other courts. The estimated effects are economically large and statistically significant in most cases. Our results suggest that a Delaware case ranges between 140 and 190 days faster than an equivalent case filed in another court. Given previous research that finds a positive correlation between time spent in bankruptcy and value destruction (Carapeto, 2003), the speed result suggests that efficiency concerns are at least partially reflected in venue choice. While we cannot rule out an agency-based explanation for Delaware’s popularity entirely, the strong secured creditor preference for Delaware and the absence of equity-friendly outcomes suggest that a manager-friendly or equity-friendly procedure was not the cause.

## 2 Background and Related Literature

When a corporation decides to file for bankruptcy, its choice of possible filing locations is determined by bankruptcy's venue provision. Under this provision, corporate debtors can file for bankruptcy in any of four locations: the district where the corporation is domiciled, the district where the debtor has its principal place of business, the district where its principal assets are located, or any district where an affiliate of the debtor has already filed for bankruptcy. The first three alternatives cover all of the obvious possible filing locations; and the last alternative dramatically expands these choices, since it gives the corporation the right to select any district where any one of its subsidiaries can file for bankruptcy.

It has always been clear that differences among bankruptcy districts— whose judges may have very different approaches and levels of expertise— can have a significant effect on the outcome of a case. Recognizing this, corporate debtors began in the 1980s to make use of the flexibility of the bankruptcy venue provision, and to carefully select the district where they filed their bankruptcy case. Throughout the 1980s, a disproportionate percentage of the largest corporate debtors gravitated toward a single district: the Southern District of New York. For nearly a decade, New York served as the principal bankruptcy court for the nation's most prominent Chapter 11 cases.

In 1990, this pattern suddenly changed. When Continental Airlines encountered financial distress, it chose to file in Delaware, its state of incorporation. Delaware had a single judge whose manageable court docket enabled her to handle bankruptcy matters quickly; and the state of Delaware was already well known for its corporate culture. Following Continental's successful reorganization in Delaware, these attributes attracted an increasing number of large bankruptcy debtors to Delaware. By 1996, Delaware had completely displaced New York as the bankruptcy district of choice for large corporate debtors. During the second half of the 1990s, Delaware's bankruptcy courts achieved nearly as dominant a role in corporate bankruptcy as Delaware's state legislature and courts enjoy in corporation law generally.

This dominance created a great deal of controversy. In 1997, the final report of the National Bankruptcy Review Commission included a recommendation that Congress remove state of incorporation as a venue option, a recommendation that was designed to preclude large corporate debtors from filing for bankruptcy in Delaware. A bankruptcy bill introduced in Congress in 1998 contained a similar restriction, but it has never been enacted. During this same time frame, Delaware's district court further roiled the waters by taking control of the assignment of Delaware's bankruptcy cases from the bankruptcy court, and directing some of the cases to Delaware's district court judges. The district court's action was ostensibly taken in order to help relieve the bankruptcy court's busy caseload, but many observers attributed

it to the controversy about Delaware’s role as bankruptcy venue of choice.

These patterns of venue shopping in bankruptcy have fueled a debate in the legal academic literature— a debate that mirrors in significant respects the controversy over Delaware’s long-standing role as the nation’s most important state of incorporation for publicly held corporations. One view, advanced in Skeel (1998, 2000, 2001), acknowledges that Delaware’s bankruptcy courts are limited in important respects by the fact that bankruptcy is regulated by Congress rather than the states, but concludes that Delaware’s corporate culture and the importance of bankruptcy to local interests ensure that its bankruptcy judges will serve as effective overseers of the nation’s most important bankruptcy cases. The factors that seem to make Delaware attractive include the court’s speed and administrative efficiency, and the expertise of its bankruptcy judges.

In contrast, a series of papers by LoPucki and coauthors (Eisenberg & LoPucki (1998); LoPucki & Kalin (2001); LoPucki & Doherty (2002)) contend that efforts to attract cases have created a “race to the bottom.” Since judges have an incentive to cater to the parties— such as managers or bankruptcy lawyers— who make the filing decision, these works suggest that Delaware’s judges may be too lax in scrutinizing reorganization proposals. Empirical results in these studies focus on the post-bankruptcy performance of Delaware and New York cases compared to other venues, finding that firms filing in these more popular venues were more likely to revisit Chapter 11.

A third, intermediate view (Rasmussen & Thomas (2001)) distinguishes between prepackaged bankruptcy cases— that is, corporate reorganizations that are negotiated and voted on before the debtor ever files for bankruptcy— and traditional bankruptcy cases. Because prepacks are agreed to in advance by all of the relevant parties, the parties are likely to choose the most efficient district when they file their cases. With traditional reorganizations, agency issues between managers and claimholders are more prevalent.

This paper considers the significance of corporate debtors’ venue choice from a somewhat different perspective than previous empirical work on this subject. We attempt to determine the motives underlying venue choice, and the way the choice of courts can affect the outcome of a case along three dimensions: use of assets (reorganization or liquidation), deviation from priority, and time spent in bankruptcy.<sup>1</sup> Unlike factors related to post-bankruptcy performance (as examined in LoPucki and Doherty (2002)) we believe these are measures over which the court has a very direct influence, and might directly influence venue choice as a result. We

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<sup>1</sup>We are not the first to examine the speed issue: Eisenberg and LoPucki (1998) find a sizeable but statistically insignificant speed effect from filing in Delaware.

also depart from previous studies by generating a numerical proxy for court experience that proves to be an important factor driving venue choice. In this respect, the results suggest a fundamental cause for differences among courts that can extend to other contexts.

### 3 Data Description

The original sample of firms was collected from the Bankruptcy DataSource, which has records of all Chapter 11 bankruptcies of firms with assets of at least \$50 million. The DataSource provides monthly updates on major developments in the Chapter 11 proceeding, including summaries of proposed plans of reorganization, whether the case was prepackaged, and the dates on which plans are confirmed or converted to Chapter 7 liquidations. It also lists summary information about the firm, from which we recorded the state of the firm's headquarters, and the court and the judge presiding over the Chapter 11 case. The original sample for this study consists of all such firms filing for Chapter 11 between 1990 and 2000 with at least \$50M in assets. Firms filing twice within the sample period were classified as separate observations. We collected outcome data, such as the reorganization/liquidation/sale outcome and the time to confirmation, only for cases through 1999 to ensure that all cases would reach completion.

The Bankruptcy DataSource records were supplemented with firm characteristics from COMPUSTAT, using the data closest to but not after the date the firm filed for Chapter 11. In order for the firm's data to be considered valid, the firm must have filed a 10-K statement within 24 months of the bankruptcy date: this is to ensure that firm data such as accounting returns and size measures accurately reflect the firm's state prior to its bankruptcy filing. Since it is common for firms to forsake their SEC filings in the wake of bankruptcy, several observations were lost at this stage. Finally, as measures of bankruptcy case experience, we use the average number of business Chapter 11 cases filed in 1997 *per court* for each state, as listed on the Federal Judiciary's web site.

Based on information from the DataSource, which was supplemented through newspaper searches whenever necessary, the outcome of a firm's bankruptcy was classified as a reorganization or a liquidation/sale. A reorganization was coded if the firm emerged from bankruptcy as a going concern with at least part of its original operations intact, without being acquired by or merged with an already existing firm. Identifying a distinction between a liquidation and a going-concern sale was more subtle and required more judgment calls. Since the descriptive statistics of sold and liquidated firms are similar, but this group is quite different from the firms that successfully reorganize, we chose a bivariate classification system to identify the

outcomes of cases as reorganized or not. We also include results for all firms that confirm reorganization plans, regardless of the use of the firm’s assets, when we examine the speed of bankruptcy cases in section 5.3.

### 3.1 Summary Statistics

Tables 1 and 2 give summary statistics of the firms in the sample, grouped by the Delaware filing decision. We include all firms, whether they are incorporated in Delaware or not; restricting the sample to Delaware-incorporated firms only produces similar comparisons. Since the venue choice decision for prepackaged cases is likely to be different than for non-prepacks, Table 1 reports results for all cases, and Table 2 includes non-prepacks only.

Over the sample period, a significant fraction of the large Chapter 11 cases were filed in Delaware. Of the 381 public firm bankruptcies for which some firm-level data is available, 117 (31%) of these cases were filed in Delaware. Delaware also handled a disproportionately large share of the prepackaged cases (28 of 57, or 49%). When comparing Delaware and non-Delaware filers, several firm-level differences emerge. Our measure of firm size, the book value of assets, indicates that the typical Delaware case involves a significantly larger firm: the average Delaware filer in Table 1 has \$821M in assets, 63% larger than the average non-Delaware filer. While the sample is highly-skewed due to the presence of several large firms, the difference in median size is also large (\$309M to \$181M, a difference of 71%).

Table 1 reveals several other differences between Delaware and non-Delaware filers. While all firms in the sample are relatively poor performers, Delaware filers have a slightly better pre-bankruptcy performance than non-Delaware filers as measured by our pre-bankruptcy return measure OIBD/Total Assets (.02 for Delaware filers, -.01 for non-Delaware filers), but the difference is not statistically significant. While the pre-bankruptcy leverage is roughly equal across courts, the ratio of secured debt to total assets differs significantly, with Delaware filers reporting 25% of their assets financed with secured debt, while the same ratio is only 19% for non-Delaware filers. This does not appear to be driven by the composition of the firm’s assets, as the fixed asset ratio (the ratio of net property, plant and equipment to total assets) is actually significantly lower among Delaware-filers. This suggests that debt structure may be an important driver of venue choice; we return to this hypothesis later in the paper.

In addition to firm-level differences between Delaware and non-Delaware filers, there are also differences related to the relationship between the firm and the courts the firm might choose. The headquarters of the average non-Delaware filer is farther from Wilmington than

the average non-Delaware filer, and the difference is larger and statistically significant in the non-prepackaged cases (reported in Table 2). This might suggest that travel and distance costs, both direct and indirect, are an important determinant of the decision. Also important is the experience of the alternative option: the court in the state of the firm's headquarters. The firms that filed in Delaware came from states whose bankruptcy courts handled an average of 176 business Chapter 11 cases in 1997. The average experience for the non-Delaware filers is 205 cases. This indicates that court experience can play an important role in venue choice; our regression analysis will shed further evidence on this possibility.

## 4 Which firms chose Delaware?

The summary statistics in Tables 1 and 2 give us an early indication that firm characteristics, particularly size and capital structure differences, and court/firm relationship characteristics, such as the experience of the home court, may be driving the filing decision. Our venue choice regressions reinforce this hypothesis.

Tables 3a and 3b report results from probit regressions, where the dependent variable is an indicator that equals one when the firm files in Delaware. We report results for the sample of Delaware incorporated firms only, since we can be certain that all such firms had an identifiable choice of venues that included Delaware. Results including all firms yield qualitatively similar but statistically weaker results, as we might expect. We do, however, include results with and without prepackaged cases. It may be questionable to assume that the factors affecting the venue choice in a regular Chapter 11 would be the same in a prepack. Nevertheless, it may be the case that the prepackaged plan is shaped with a particular court in mind, or more likely, the threat of filing a regular case in a particular court will affect the terms of the prepack. As we can see, however, coefficient estimates are generally larger and the Pseudo-R<sup>2</sup> values are higher when prepacks are excluded. This suggests that the observable differences between firms and their home environments explain more of the variation in venue choice for regular Chapter 11 cases than for prepacks.

The results suggest that the probability of a Delaware filing is higher for larger firms, as measured by the book value of assets. The marginal probability estimate in specification (1) of Table 3b, for example, suggests that, all else equal, a firm that is twice as large is approximately 10% more likely to file in Delaware. The coefficient is significant at the 1%

level.<sup>2</sup> We examined several other firm level variables, which do not seem to be important determinants of venue choice. Our measure of pre-bankruptcy performance (OIBD/Total Assets) is not significant in any of the specifications, suggesting that Delaware filers are not significantly more or less likely to be viable as going concerns. Firms with a greater fixed asset ratio (PP&E/Assets) are also statistically no more likely to file in Delaware.

The strongest firm-level determinant of the Delaware filing decision is the fraction of the firm's assets financed with secured debt. In all of the specifications, the coefficient on Secured/Assets is large and significant. Controlling for fixed assets does not affect the results, suggesting the results are driven more by capital structure than by an asset-side effect such as an industry preference for or against Delaware. The result is striking because it suggests, as some authors have noted (Skeel, 2003), that recent developments in Chapter 11 cases have resulted in venue choice being more creditor-driven than manager-driven.<sup>3</sup> Our results suggest, in particular, that secured creditors are important determinants of venue choice, and exhibit a strong preference for a Delaware filing. We will examine explanations for the finding when we look at outcome measures in the following sections. It is also interesting to note that when prepacks are included in the regressions, the coefficients on the secured credit variable are closer to zero. It seems, then, that the secured creditor preference is strongest when the court has a larger impact on the outcome.

In addition to firm characteristics, we attempted several other variables related to the relationship between the firm and the bankruptcy courts. We find some evidence that the physical distance of the firm's headquarters from Wilmington affects the likelihood of a Delaware filing (specifications (3) and (6)), and that the distance effect matters less for larger firms (the interaction term on distance\*assets has a positive sign) but the estimates are insignificant. Though the evidence is weak, this is consistent with the costs of travel having a fixed component that is more easily borne by a larger firm, since this fixed cost is a smaller percentage of firm value.<sup>4</sup>

A second court/firm relationship factor in the Delaware decision with stronger predictive power is the quality of the relevant alternative: a court in the state of the firm's headquarters.

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<sup>2</sup>Results are robust to alternative measures of size, such as sales and employees.

<sup>3</sup>In an earlier version of the paper, we tested several proxies for managerial influence (tenure, compensation, whether the CEO was chairman). The estimated effects of these variables on venue choice was consistently small and insignificant.

<sup>4</sup>This may also be consistent with a law firm/representation effect. Firms headquartered farther from Delaware are also farther from major legal markets on the east coast. If lawyers drive venue choice, then this effect could be picking up a legal representation effect.

The experience variable is a proxy for the experience of the home court, as measured by the average number of business Chapter 11 cases per court in the state of the firm’s headquarters. We believe this proxy is a valid measure the perceived ability of the bankruptcy judges and professionals, but for two reasons, we acknowledge that it is not a perfect. First, the number of business Chapter 11 cases used to calculate the experience proxy includes both small and large cases. Given that our sample is large cases only, a measure of experience in large cases only might be preferred. Second, the experience variable was calculated based on one year of data; thus it does not allow for the experience proxy to change within courts over time.<sup>5</sup>

Despite these reservations, our results suggest a significant negative effect of home court experience on the probability of a Delaware filing. The coefficient in specification (1), for example, implies that a firm whose home court is twice as experienced is 11.9% less likely to choose Delaware. Once again, the coefficient estimates on the experience variable are closer to zero when prepacks are included, consistent with the notion that experience matters less when the outcome is pre-negotiated and the role of the court is less important.

To summarize, the choice of venue appears to be a carefully calculated decision by the firm, based on its own characteristics and those of the courts in which it may file. The strongest measured effect comes from variation in the firm’s pre-bankruptcy capital structure: firms with more secured credit are significantly more likely to file in Delaware. The experience of the Delaware court in large Chapter 11s seems to have been an important selling-point, as firms from less experienced states were the most likely to take advantage of their ability to use an alternative venue. In the next section, we turn to the outcomes of the cases, whether firms reorganize or liquidate/sell in bankruptcy, to determine the ways in which the choice of venue can affect the fate of the firm.

## 5 Venue choice and outcome measures

### 5.1 Predicting reorganization

In this section, we examine one potential treatment effect of a bankruptcy court, whether or not a firm that files in the court is able to successfully reorganize. We will again examine

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<sup>5</sup>A second, minor issue concerns the aggregation of the experience variable. Although Delaware has only one bankruptcy district, many other states have two or more. A more precise comparison would pit Delaware against each non-Delaware district, since a debtor’s filing options are based on the relevant districts. Given that Delaware’s single district is being compared to the multiple districts of other states, our findings are likely to understate the contrast between Delaware and other possible filing locations.

the results of probit regressions, where the dependent variable is now equal to one if the firm emerges from Chapter 11 reorganized and zero otherwise. Before analyzing the data, an important point should be emphasized. It is not necessarily true that a successful reorganization is the most desirable outcome from an efficiency perspective: many firms entering Chapter 11 would generate greater value being liquidated or sold rather than continued. Thus, a court with a higher propensity to reorganize a firm is not necessarily better or worse. Nevertheless, if the managerial agency view of venue choice is correct, a less liquidation-prone bankruptcy process could be a significant driver of the decision. Similarly, if Delaware's relative popularity is driven by self-interested secured creditors, as our venue choice regressions would suggest, this might result in a Delaware liquidation bias. Our primary goal in this section is to identify any differences between Delaware and other courts to see if a greater/lesser chance of reorganization could have been a reason for choosing Delaware.

Tables 4a and 4b lists various specifications for the probability of reorganizing. As we might expect, reorganization in Chapter 11 is strongly and positively related to the firm's size; this is primarily driven by the fact that going-concern sales are less likely for larger firms. The marginal probability estimates in Table 4b indicate that a firm that is twice as large is between 6 and 10 percent more likely to survive as a going-concern. Interestingly, the estimated effects of leverage and performance are significant and positive, and considerably stronger in the sample that includes prepacks (specifications (4)-(6)). This suggests that prepackaged bankruptcies are used most by firms in financial, but not economic distress; in other words, firms that are viable but overly-levered are the most likely to complete a prepackaged plan of reorganization. Within the non-prepackaged cases, the effect of leverage on reorganization is insignificant, while pre-bankruptcy performance is significant at the 10% level in two of the three specifications. We also test the hypothesis that firms with more specific assets are more likely to reorganize by including the fixed asset ratio; the coefficient estimates are positive, but not statistically significant in all cases. Thus, we find modest empirical evidence in support of Acharya, John and Sundaram (2004) that "specific assets" are indeed a proxy for excess going-concern value.

Two other variables deserve mention. First, the secured credit coefficient is small and insignificant. Given our earlier results suggesting secured creditor influence over venue choice, Tables 4a and 4b suggest that secured creditors do not appear to be exercising their control rights to affect the reorganization/ liquidation decision, as is often suggested. Finally, and most importantly for our analysis, we include a dummy variable for a Delaware filing and find that controlling for the variables mentioned above, the Delaware treatment effect on

reorganization is insignificant and close to zero in magnitude. There is no evidence to suggest, then, that the Delaware venue choice was driven by management seeking a greater likelihood of survival, or by creditors who expected Delaware judges to produce more liquidations.

## 5.2 Deviations from the Absolute Priority Rule

While there is some theoretical debate about the efficiency of the absolute priority rule (APR) in corporate bankruptcy (Ayotte (2004) , Jackson (1986), Povel (1999), and others), it is clearly in the interests of junior claimants to seek deviations from this rule when the firm lands in Chapter 11. Given that management compensation is more closely tied to the value of equity rather than firm value, we might expect that those making the filing decision stand to gain the most from achieving deviations from APR in bankruptcy. This creates a potential for managers to shop for venues based on the likelihood of emerging with a valuable interest in the final agreement. Court discretion can affect the bargaining power of management in several ways, most notably by extending the period during which management has exclusive rights to submit a reorganization plan. We now turn to the data in Tables 5a and 5b to see if venue choice affected the likelihood of distributions to equity in confirmed reorganization plans.<sup>6</sup>

Since the distribution to various claimant groups are only available when a plan is confirmed, we restrict the sample used in the probit regressions in Tables 5a and 5b to reorganizations only. We also ran tests that include going-concern sales and liquidations, and the results are not affected.<sup>7</sup> As we might expect, the strongest predictor of whether pre-bankruptcy equity retains value after the reorganization is the pre-bankruptcy leverage. The coefficient on the leverage variable is strongly negative and significant: the larger the value of debt claims relative to the value of the firm, the more likely is the interest of pre-bankruptcy equity to be extinguished. Other control variables have little explanatory power. Once again, the Delaware court has a small and insignificant effect, counter to what a managerial forum

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<sup>6</sup>We acknowledge that equity receiving a claim or interest does not imply a deviation from APR and vice-versa, though the two are closely related. Since we are interested in the motives underlying venue choice, particularly whether the Delaware preference is driven by its managerial/equity-friendliness, we believe the former is more valuable here.

<sup>7</sup>We do not have data on the distribution to equity for all observations if a plan is not confirmed; we ran the regressions with the missing observations recorded as missing, and with the assumption that the missing observations are zeros (since this is the most likely outcome for the non-reorganizations). Results are similar—the coefficient on leverage is negative and we find a small and insignificant Delaware effect.

shopping theory would predict. This provides further evidence against a manager-friendly or equity-friendly reorganization procedure in Delaware.

### **5.3 Venue choice and speed: Predicting time spent in bankruptcy**

Aside from the ultimate outcomes of bankruptcy cases, speed is another potential differentiating factor between courts. Previous research has established a link between the time spent in bankruptcy and the loss of firm value (Carapeto (2003)). Prior work argues that Delaware has developed a reputation among practitioners for its speed and efficiency (Skeel (1998)) but existing empirical evidence is mixed. Eisenberg and LoPucki (1999) find a sizeable Delaware speed effect controlling for book value (144 days faster) but stress the lack of statistical significance of this estimate; LoPucki and Doherty (2002) also find that the Delaware speed effect is positive, but insignificant when controlling for prepackaged bankruptcies which are inherently faster.

We believe the analysis here will add to the discussion in several ways. First, we use a slightly different sample that includes more moderate sized firms that were excluded from the LoPucki database. Because of this, we can achieve a sample of reasonable size even when prepacks are excluded. Second, we include more covariates to capture the fact that Delaware, as we have already seen, attracts a different subset of firms than other courts.

In Table 6, we report results from samples that include only reorganizations, and samples that include all cases with confirmed reorganization plans. Speed is measured, as in previous work, by the number of days to confirmation of a plan.

While the entire sample of confirmed plans serves as a robustness check on the results (particularly the outcome classification scheme), we believe that the sample of reorganizations is a more accurate way to distinguish speed effects between courts. We believe this is appropriate for two reasons. First, in many liquidation and sale cases, a fixed exit date is unavailable, since some cases are converted to Chapter 7, and many liquidate without confirmation of a plan. Thus, including the liquidation and sale cases may not be a random subsample of these outcomes and may differ across courts. Second, speed is more likely to be beneficial when the firm continues to operate. In a liquidation or sale case, a quick sale may result in a fire-sale price and/or a misallocation of the firm's assets to uses other than their most valuable. For cases like these, allocating more time to finding buyers for the assets may be beneficial. For firms that continue to operate, however, a quicker exit from Chapter 11 is more likely to generate efficiency gains in the form of less managerial distraction and greater supplier and consumer confidence, in addition to the direct savings of legal and administrative fees from

faster emergence.

Table 6 presents the results with respect to the determinants of the length of the Chapter 11 case. Equation (1) repeats the estimation presented in Eisenberg and LoPucki (1999), where the regressors include only book value and a Delaware dummy, and prepacks are excluded. In our sample, the results are larger in magnitude and statistically significant: the estimated Delaware speed effect is a sizeable 190 days and significant at the 5% level.

Equations (2)-(3) include other control variables, as in earlier specifications. The Delaware coefficient is of similar magnitude (157 days in equation 2 and 148 days in equation 3) but is not statistically significant in equation 3. This is likely due to the increase in missing observations when the secured debt control is added. In equations (4)-(6), we repeat the first three regressions with all confirmed plans included. The Delaware speed effect remains statistically significant in equations (4) and (5), but the coefficients fall sharply.<sup>8</sup>The Delaware speed effect seems particularly strong in reorganization cases compared to liquidations and going-concern sales.

We should emphasize the natural complementarity between the speed results and the secured creditor preference for Delaware found in Tables 3a and 3b. Given the rules of Chapter 11, we should expect secured creditors to have a particular preference for fast cases. If the secured creditor's collateral is worth less than the amount it is owed, for instance, the secured creditor is not entitled to any interest for the period of time that the Chapter 11 case is pending. The longer the case lasts, the more interest is foregone. Even if the secured creditor is fully collateralized and therefore receives interest, the creditor will be undercompensated if the bankruptcy judge sets the interest rate at a below-market level, as often appears to be the case. Secured creditors also worry that the value of their collateral may be dissipated in the course of a long case. Although secured creditors can ask for "adequate protection" of their collateral, this protection is also viewed as imperfect. The fact that longer cases hurt secured creditors in particular suggests a particular preference for courts that will process cases more quickly; our results suggest that the Delaware courts show a large advantage along this dimension.

Surprisingly, however, when we include the secured credit variable in addition to the Delaware variable, the secured credit variable is small and not significant. Overall, the results are consistent with secured creditors having a preference for faster cases, and exercising this preference through a Delaware filing. Once the venue choice is made, however, the

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<sup>8</sup>We have also run regressions using  $\log(\text{days})$  as the dependent variable. Results are similar, as the Delaware speed effect is approximately 20 percent of case length for reorganizations and is statistically significant in some but not all specifications, as we report in Table 6.

ability of secured creditors to force a faster emergence is modest, if at all.

We should note the possible objection that the Delaware speed effect is driven by non-random selection, rather than a court treatment effect. This would occur if the presence of unobservable factors correlated with the inherent speed of the reorganization are positively correlated with an underlying preference for Delaware. We are not aware of any anecdotal evidence to suggest that inherently faster cases are prone to Delaware filings. Along observable dimensions, the results suggest the opposite. Larger firms exhibit a clear preference for Delaware, and not surprisingly, the larger firms require more time to successfully confirm a reorganization plan. In addition, we believe the exclusion of prepacks from the sample may create a bias *against* a Delaware speed effect. If prepacks are known to be handled more efficiently in Delaware than in other districts, a potentially fast case may become a prepack in Delaware and a regular Chapter 11 outside of Delaware. This potential selection bias would result in an underestimation of the Delaware treatment effect, all else equal.

## 6 Conclusion

In this paper, we attempt to isolate the factors affecting venue choice in Chapter 11 bankruptcy, and the ways in which the choice of court affects outcomes. We focus in particular on the Delaware court, which became the premier “venue of choice” in the 1990s and a source of controversy for its dominant position. The bankruptcy venue provisions, combined with Delaware’s prominence as a state of incorporation allows us to identify a large number of firms with an identifiable choice of venue. This, in turn, helps us identify the factors that make a venue desirable for a given firm, which reflects on the way courts will compete for bankruptcy business.

Our analysis focuses on two competing hypotheses previously identified as driving forces behind venue choice. We find no evidence of a “race to the bottom” in which agency problems cause venue choice to be guided by the self-interest of management or equity at the expense of other claimants. We find no evidence that the Delaware court differs significantly with respect to equity-friendly outcomes, such as an increased likelihood of reorganization or more generous deviations from absolute priority in favor of equity. Instead, the results support the notion that Delaware was preferred for its experience and for its speed in the more complicated cases. Home court inexperience was a significant factor in the choice to go to Delaware, and the largest firms, whose reorganizations take the longest to complete, also exhibited a clear Delaware preference. Controlling for firm-level observable factors, Delaware cases are

significantly faster than cases in other courts.

Given that previous research has identified a link between the time spent in bankruptcy and value destruction, the Delaware speed effect suggests an overall efficiency explanation for venue choice, but this is not the only interpretation consistent with our findings. We find that an important driving force behind the preference for Delaware is the fraction of assets financed by secured debt, which can be seen as a proxy for secured creditor influence. Our finding related to secured creditor preference for Delaware is also consistent with a *creditor-based agency problem*, rather than a managerial one. Secured creditors are likely to benefit the most from the Delaware speed effect due to the risk that value will be diverted from them in a long case. From a secured creditor's perspective, a lengthy case will often entail significant costs (such as the loss of interest or the risk that the value of its collateral will deteriorate, as described earlier), without corresponding upside benefits. The secured creditor's interests are likely to be better protected in a more expeditious Chapter 11 case. If faster reorganizations entail more costs than benefits, then the Delaware effect could be helping secured creditors at the expense of firm value.

Although we can not rule out this possibility entirely, we do not find any evidence to support it in our data. In particular, firms with more secured creditor influence were no more likely to liquidate, and Delaware firms were no more likely to be liquidated than others based on their pre-bankruptcy characteristics. If the creditor-driven push to Delaware was inefficient, the inefficiency does not appear to be excessive liquidations of viable firms. We are also skeptical about the prevailing view that refailure rates are appropriate measures of (in)efficient bankruptcy outcomes. As prior theoretical research has established (Kahl, 2002), a fundamental uncertainty about the going-concern value of the firm can produce an equilibrium where distress is long-lived and multiple bankruptcies can occur. To put the issue more simply, a bankruptcy procedure could minimize refailure rates by mandating an all-equity capital structure upon reorganization. It is unlikely that this would maximize firm value, since firms which are later found to be non-viable would be harder to shut down.

From a policy point of view, our results identify no tangible benefit to restricting choice and competition for bankruptcy cases.<sup>9</sup> Evidence suggests that other courts have responded to the popularity of venues such as Delaware by adopting their desirable features. The Colorado court is a recent example. Faced with the relative absence of bankruptcy cases, Colorado bankruptcy attorneys have formed a task force to make recommendations to the bankruptcy

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<sup>9</sup>For a more specific discussion of proposals related to venue choice see Rasmussen and Thomas (2000) and Skeel (2000).

court. Among those recommendations is for the court to quickly approve “first day orders” that allow payment of pre-petition wages, a distinct feature of Delaware cases that contribute to a faster reorganization (Skeel (1998)).<sup>10</sup>

We recognize that our analysis does not exhaust all possible factors in Delaware’s success. Some commentators have suggested that generosity in paying debtors’ attorneys fees, for instance, could be an important factor (Cole, (2002)). But our findings suggest that attorneys fees are likely to be, at most, a small part of a much larger picture. Remaining for future research is the issue of how broadly our results apply to other contexts. The fact that our measure of court experience drives the key results suggests that the benefits of competition for bankruptcy cases should extend beyond merely Delaware during the 1990s. Recently, a series of high profile cases, including Enron, Global Crossing, and WorldCom, have filed for bankruptcy in New York, and several others filed in Chicago (KMart, United Airlines). Anecdotal evidence suggests that these courts have adopted many of the same techniques as the Delaware court.

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<sup>10</sup>For more information on the Colorado bankruptcy reform, see “State missing out on bankruptcy business” Denver Business Journal, January 11, 2002.

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Table 1  
Summary Statistics: All Firms<sup>1</sup>

Variable	Non-Delaware Filers			Delaware Filers		
	Mean	Median	Std. Dev.	Mean	Median	Std. Dev.
Total Assets	503.69	180.96	1124.73	820.71**	309.43***	1321.25
Leverage	1.02	.90	.55	1.07	.93	.45
OIBD/Assets	-.01	.02	.24	.02	.05*	.17
PP&E/Assets	.36*	.33	.25	.32	.27	.23
Secured/Assets	.19	.07	.24	.25*	.12	.32
Distance to Dela	960.56	653	854.08	830.49	653	690.34
Experience	205.24**	176	134.29	175.69	176	105.07
Prepacks	.11	0	.31	.24***	0	.43
Value for Equity	.42	0	.49	.41	0	.50
Observations	264			117		

<sup>1</sup> Notes:

The sample includes all publicly traded firms with more than \$50M in assets who filed for Chapter 11 between 1990 and 2000 and had reported financial statements within 24 months of the bankruptcy date. (\*\*\*, \*\*, \*) denote significance at the 1, 5, and 10 percent levels, respectively, based on two-sided t-test for equality of means and  $\chi^2$  test for equality of medians.

Notes on variable definitions:

Total Assets is the book value of assets in year 2000 dollars.

Leverage is the book value of total liabilities divided by the book value of total assets.

OIBD is operating income before depreciation.

Distance to Dela is the distance in miles from the largest city in the state of the firm's headquarters to Wilmington, Delaware.

Experience is the total number of business Chapter 11 cases heard in the state of the firm's headquarters in 1997, divided by the number of bankruptcy districts in that state.

Prepack is a dummy variable that equals one if the case is prepackaged.

Value for Equity equals one if old common stock holders retain value after the case is completed, for those cases in which the distributions are known.

Table 2  
Summary Statistics: No Prepackaged Cases<sup>2</sup>

Variable	Non-Delaware Filers			Delaware Filers		
	Mean	Median	Std. Dev.	Mean	Median	Std. Dev.
Total Assets	517.66	181.08	1179.36	925.68**	309.43***	1483.85
Leverage	1.00	.88	.55	1.04	.87	.47
OIBD/Assets	-.02	.01	.25	.02	.05**	.19
PP&E/Assets	.36	.33	.25	.33	.28	.24
Secured/Assets	.20	.09	.24	.27*	.18*	.34
Distance to Dela	959.78*	653	831.27	779.58	653	632.53
Experience	205.84	176	127.89	181.85	176	106.82
Value for Equity	.36	0	.48	.29	0	.46
Observations	235			89		

<sup>2</sup> Notes:

The sample includes all publicly traded firms with more than \$50M in assets who filed a non-prepackaged Chapter 11 between 1990 and 2000 and had reported financial statements within 24 months of the bankruptcy date. (\*\*\*,\*\*,\*) denote significance at the 1,5, and 10 percent levels, respectively, based on two-sided t-test for equality of means and  $\chi^2$  test for equality of medians.

Notes on variable definitions:

Total Assets is the book value of assets in year 2000 dollars.

Leverage is the book value of total liabilities divided by the book value of total assets.

OIBD is operating income before depreciation.

Distance to Dela is the distance in miles from the largest city in the state of the firm's headquarters to Wilmington, Delaware.

Experience is the total number of business Chapter 11 cases heard in the state of the firm's headquarters in 1997, divided by the number of bankruptcy districts in that state.

Prepack is a dummy variable that equals one if the case is prepackaged.

Value for Equity equals one if old common stock holders retain value after the case is completed, for those cases in which the distributions are known.

Table 3a: Determinants of the Delaware Filing Decision<sup>3</sup>

	(1)	(2)	(3)	(4)	(5)	(6)
Log Assets	0.265*** (0.006)	0.288*** (0.003)	-0.533 (0.354)	0.218** (0.015)	0.236*** (0.009)	-0.499 (0.355)
OIBD/Assets	-0.299 (0.628)	-0.318 (0.605)	-0.311 (0.616)	-0.289 (0.625)	-0.285 (0.627)	-0.264 (0.655)
Secured/Assets	1.002** (0.011)	1.102*** (0.007)	1.085*** (0.008)	0.691* (0.053)	0.759** (0.038)	0.746** (0.042)
Log Experience	-0.307* (0.060)	-0.309* (0.059)	-0.315* (0.058)	-0.267* (0.062)	-0.269* (0.060)	-0.265* (0.068)
PP&E/Assets		-0.594 (0.176)	-0.560 (0.205)		-0.477 (0.227)	-0.438 (0.270)
Distance to Dela			-0.764 (0.143)			-0.685 (0.157)
Dist*Assets			0.131 (0.152)			0.117 (0.171)
Prepacks included?	No	No	No	Yes	Yes	Yes
Pseudo-R <sup>2</sup>	.0837	.0940	.1046	.0517	.0585	.0668
Log likelihood	-92.38	-90.87	-89.79	-115.15	-113.78	-112.78
Observations	149	148	148	177	176	176

<sup>3</sup> Notes:

1. Sample includes only Delaware-incorporated firms.

2. Dependent variable is equal to one if the firm files for bankruptcy in Delaware, zero otherwise.

3. Probit coefficients are reported.

(\*\*\*, \*\*, \*) denote significance at the 1, 5, and 10 percent levels, respectively. P values are in parentheses

Table 3b: Determinants of the Delaware Filing Decision<sup>4</sup>  
Marginal Probabilities

	(1)	(2)	(3)	(4)	(5)	(6)
Log Assets	0.103*** (0.006)	0.112*** (0.003)	-0.206 (0.354)	0.086** (0.015)	0.093*** (0.009)	-0.197 (0.355)
OIBD/Assets	-0.116 (0.628)	-0.123 (0.605)	-0.120 (0.616)	-0.114 (0.625)	-0.112 (0.627)	-0.104 (0.655)
Secured/Assets	0.388** (0.011)	0.428*** (0.007)	0.420*** (0.008)	0.272* (0.053)	0.300** (0.038)	0.294** (0.042)
Log Experience	-0.119* (0.060)	-0.120* (0.059)	-0.122* (0.058)	-0.105* (0.062)	-0.106* (0.060)	-0.104* (0.068)
PP&E/Assets		-0.231 (0.176)	-0.217 (0.205)		-0.188 (0.227)	-0.173 (0.270)
Distance to Dela			-0.296 (0.143)			-0.270 (0.157)
Dist*Assets			0.051 (0.152)			0.046 (0.171)
Prepacks included?	No	No	No	Yes	Yes	Yes
Pseudo-R <sup>2</sup>	.0837	.0940	.1046	.0517	.0585	.0668
Log likelihood	-92.38	-90.87	-89.79	-115.15	-113.78	-112.78
Observations	149	148	148	177	176	176

<sup>4</sup> Notes:

1. Sample includes only Delaware-incorporated firms.
2. Dependent variable is equal to one if the firm files for bankruptcy in Delaware, zero otherwise.
3. Marginal probabilities are reported, (\*\*\*, \*\*, \*) denote significance at the 1, 5, and 10 percent levels, respectively. P values are in parentheses

Table 4a: Predicting the Likelihood of Reorganization<sup>5</sup>

	(1)	(2)	(3)	(4)	(5)	(6)
Log Assets	0.236*** (0.002)	0.212*** (0.007)	0.188** (0.031)	0.210*** (0.003)	0.186** (0.011)	0.147* (0.066)
Leverage	0.163 (0.300)	0.148 (0.352)	0.166 (0.384)	0.317** (0.027)	0.303** (0.036)	0.384** (0.022)
OIBD/Assets	0.946* (0.075)	1.042* (0.054)	1.257** (0.041)	1.318*** (0.009)	1.364*** (0.007)	1.745*** (0.002)
Delaware	-0.051 (0.799)	0.016 (0.937)	0.039 (0.860)	0.094 (0.580)	0.164 (0.346)	0.213 (0.254)
PP&E/Assets		0.719** (0.033)	0.584 (0.112)		0.587* (0.053)	0.503 (0.126)
Secured/Assets			0.083 (0.811)			-0.214 (0.498)
Prepacks included?	No	No	No	Yes	Yes	Yes
Pseudo-R <sup>2</sup>	.0524	.0623	.0588	.0652	.0708	.0745
Log likelihood	-159.30	-154.69	-133.15	-196.95	-192.57	-165.84
Observations	247	243	212	304	299	259

<sup>5</sup> Notes:

1. Dependent variable is equal to one if the firm reorganizes, zero if the outcome is a going concern sale, liquidation in Chapter 11, or conversion to Chapter 7.

2. Probit coefficients are reported, (\*\*\*, \*\*, \*) denote significance at the 1, 5, and 10 percent levels, respectively. P values are in parentheses

Table 4b: Predicting the Likelihood of Reorganization<sup>6</sup>  
Marginal Probabilities

	(1)	(2)	(3)	(4)	(5)	(6)
Log Assets	0.092*** (0.002)	0.082*** (0.007)	0.071** (0.031)	0.084*** (0.003)	0.074** (0.011)	0.059* (0.066)
Leverage	0.063 (0.300)	0.058 (0.352)	0.063 (0.384)	0.126** (0.027)	0.121** (0.036)	0.153** (0.022)
OIBD/Assets	0.369* (0.075)	0.404* (0.054)	0.477** (0.041)	0.526*** (0.009)	0.544*** (0.007)	0.694*** (0.002)
Delaware	-0.020 (0.799)	0.006 (0.937)	0.015 (0.860)	0.038 (0.580)	0.065 (0.346)	0.085 (0.254)
PP&E/Assets		0.279** (0.033)	0.222 (0.112)		0.234* (0.053)	0.200 (0.126)
Secured/Assets			0.032 (0.811)			-0.085 (0.498)
Prepacks included?	No	No	No	Yes	Yes	Yes
Pseudo-R <sup>2</sup>	.0524	.0623	.0588	.0652	.0708	.0745
Log likelihood	-159.30	-154.69	-133.15	-196.95	-192.57	-165.84
Observations	247	243	212	304	299	259

<sup>6</sup> Notes:

1. Dependent variable is equal to one if the firm reorganizes, zero if the outcome is a going concern sale, liquidation in Chapter 11, or conversion to Chapter 7.

2. Marginal probabilities are reported, (\*\*\*, \*\*, \*) denote significance at the 1, 5, and 10 percent levels, respectively. P values are in parentheses

Table 5a: Predicting Value for Equity after Bankruptcy<sup>7</sup>

	(1)	(2)	(3)	(4)	(5)	(6)
Log Assets	-0.068 (0.523)	-0.054 (0.628)	0.033 (0.804)	-0.061 (0.503)	-0.053 (0.573)	-0.068 (0.535)
Leverage	-0.938*** (0.002)	-0.873*** (0.005)	-1.091** (0.012)	-0.621*** (0.008)	-0.586** (0.013)	-0.577** (0.048)
OIBD/Assets	0.226 (0.841)	0.170 (0.882)	-0.395 (0.751)	1.226 (0.191)	1.068 (0.258)	0.807 (0.423)
Delaware	-0.137 (0.647)	-0.136 (0.656)	-0.022 (0.948)	-0.095 (0.670)	-0.065 (0.777)	-0.068 (0.787)
PP&E/Assets		0.707 (0.175)	0.875 (0.141)		0.443 (0.298)	0.649 (0.176)
Secured/Assets			0.369 (0.486)			-0.045 (0.911)
Prepacks included?	No	No	No	Yes	Yes	Yes
Pseudo-R <sup>2</sup>	.0792	.0858	.0940	.0459	.0472	.0503
Log likelihood	-65.70	-63.35	-50.86	-100.48	-97.68	-79.55
Observations	103	100	81	153	149	122

<sup>7</sup> Notes:

1. Dependent variable is equal to one if common shareholders receive value in the confirmed reorganization plan, zero otherwise. Sample includes only those firms that reorganized.
2. Probit coefficients are reported, (\*\*\*, \*\*, \*) denote significance at the 1, 5, and 10 percent levels, respectively. P values are in parentheses

Table 5b: Predicting Value for Equity after Bankruptcy<sup>8</sup>  
Marginal Probabilities

	(1)	(2)	(3)	(4)	(5)	(6)
Log Assets	-0.027 (0.523)	-0.021 (0.628)	0.013 (0.804)	-0.024 (0.503)	-0.021 (0.573)	-0.027 (0.535)
Leverage	-0.374*** (0.002)	-0.348*** (0.005)	-0.435** (0.012)	-0.246*** (0.008)	-0.232** (0.013)	-0.228** (0.048)
OIBD/Assets	0.090 (0.841)	0.068 (0.882)	-0.158 (0.751)	0.485 (0.191)	0.422 (0.258)	0.318 (0.423)
Delaware	-0.054 (0.647)	-0.054 (0.656)	-0.009 (0.948)	-0.038 (0.670)	-0.026 (0.777)	-0.027 (0.787)
PP&E/Assets		0.282 (0.175)	0.349 (0.141)		0.175 (0.298)	0.256 (0.176)
Secured/Assets			0.147 (0.486)			-0.018 (0.911)
Prepacks included?	No	No	No	Yes	Yes	Yes
Pseudo-R <sup>2</sup>	.0792	.0858	.0940	.0459	.0472	.0503
Log likelihood	-65.70	-63.35	-50.86	-100.48	-97.68	-79.55
Observations	103	100	81	153	149	122

<sup>8</sup> Notes:

1. Dependent variable is equal to one if common shareholders receive value in the confirmed reorganization plan, zero otherwise. Sample includes only those firms that reorganized.
2. Marginal probabilities are reported, (\*\*\*, \*\*, \*) denote significance at the 1, 5, and 10 percent levels, respectively. P values are in parentheses

Table 6: Predicting the Length of Bankruptcy Cases<sup>9</sup>

	(1)	(2)	(3)	(4)	(5)	(6)
Log Assets	133.314*** (4.14)	112.698*** (3.62)	105.620*** (2.80)	125.065*** (5.12)	116.037*** (4.67)	100.981*** (3.62)
Delaware	-190.378** (2.04)	-157.791* (1.86)	-148.399 (1.51)	-128.074* (1.93)	-115.828* (1.78)	-101.237 (1.42)
OIBD/Assets		572.433* (1.78)	630.497* (1.80)		128.141 (1.16)	155.102 (1.32)
Leverage		-86.649 (1.06)	-80.608 (0.74)		-32.571 (0.51)	10.842 (0.13)
PP&E/Assets		-51.383 (0.35)	-123.791 (0.74)		91.077 (0.80)	95.591 (0.76)
Secured/Assets			6.586 (0.04)			-65.847 (0.57)
Reorganizations only?	Yes	Yes	Yes	No	No	No
Adj R <sup>2</sup>	0.14	0.16	0.13	0.11	0.10	0.07
Observations	107	101	82	212	201	174

<sup>9</sup> Notes:

1. Regressions are OLS, dependent variable is the number of days until a plan is confirmed. Sample in specifications (1)-(3) uses reorganizations only; specifications (4)-(6) include all confirmed plans, whether the firm was liquidated, reorganized or sold. Dismissals, conversions to chapter 7, etc. are not included.

2. (\*\*\*, \*\*, \*) denote significance at the 1, 5, and 10 percent levels, respectively. t-statistics are in parentheses