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

Kenneth M. Ayotte and David A. Skeel, Jr.\*

May 21, 2003

## 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 of agency problems governing the venue choice or affecting the outcome of the bankruptcy process. Instead, firm characteristics and court characteristics, particularly a court's level of experience, are the most important factors. We find that court experience manifests itself in both a greater ability to reorganize marginal firms and in reorganizing such firms faster. Delaware is similar to other high-experience courts in terms of the likelihood of reorganization controlling for firm characteristics, but is a standout in terms of speed. We estimate that a Delaware bankruptcy requires approximately 40% less time to complete than an equivalent case in another court.

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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 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 among states for corporate business in contexts outside of bankruptcy.

The key issue at hand is whether court competition for bankruptcy cases creates a “race to the top” or a “race to the bottom.” The benefits of 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 those making the venue choice (managers and their bankruptcy attorneys) rather than firm value as a whole. 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 gathering data on the management of firms that file for Chapter 11, to test whether variables associated with greater CEO influence (equity share,

compensation, tenure) are able to predict a tendency to seek or avoid Delaware when a choice was available. We also test to see if these characteristics influence the outcome of the case. On this dimension, we find no evidence that managerial characteristics drive venue choice in bankruptcy, or have noticeable effects on the outcome. We also find no evidence suggesting courts gained business by allowing more liberal deviations from absolute priority. 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 find, however, that this alternative venue is not equally accessible by all firms: a greater distance from Delaware makes a firm less inclined to file there, and this distance cost is particularly large for the smaller firms in our sample.

We examine three possible ways that the choice of venue can matter: the eventual outcome (whether the firm is liquidated, sold, or reorganized), deviations from priority (measured by the likelihood that equity receives a valuable claim) and the length of time spent in bankruptcy for firms that reorganize. On the outcome and time dimensions, large differences exist between experienced and inexperienced courts. We find that cases in courts with below-median experience are significantly less likely to result in reorganization, controlling for the firm’s observable characteristics. These less experienced courts are also slower to process the firms that eventually emerge as going-concerns. While less-experienced courts appear slightly more likely to allow deviations from absolute priority, the differences are not statistically significant.

The Delaware court appears similar to its high-experience peer courts in terms of the firms it reorganizes, but it is an outlier in terms of speed. Controlling for other characteristics, our estimates indicate that Delaware cases are over 200 days faster than an equivalent case filed in another court. These differences persist when we use bivariate probit and instrumental variables methods to correct for the endogeneity of the Delaware venue choice with respect to bankruptcy outcomes. Throughout our analysis, the number of employees in a firm has a strong explanatory power in both the filing decision and the length of time spent in Chapter 11. High-employee firms, even when controlling for book value and sales, are more likely to file in Delaware, and it is these firms that take the longest to reorganize. We posit that

employees, rather than book value or leverage, may be an empirical proxy for the complexity of a bankruptcy case.

## 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 also depart from previous studies by generating a numerical proxy for court experience that drives many of the underlying results. 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 1999, for which the DataSource included balance sheet information and listed the firm’s executive officers; 302 bankruptcies met this initial qualification. Firms filing twice within the sample period were classified as separate observations. Both the managerial and balance sheet data were later replaced because the DataSource often did not report the most recent data available prior to the bankruptcy filing.

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 18 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.

Managerial data, including CEO ownership, identity, and tenure, was collected from individual SEC filings, along with the firm’s state of incorporation. Most often this data came

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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; the speed effect is statistically significant in Carapeto (1999).

from 10-K and proxy statements. In some instances, data from filings after the bankruptcy date were used in place of prior data as long as it could be used to infer the characteristics of the CEO/firm that persisted most closely to, but not after, the bankruptcy date. Finally, as measures of bankruptcy case experience by state, we used 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. We aggregate the number of Chapter 11 cases at the state level, rather than in each district, because many districts have very few Chapter 11 cases, and attempting to assign a firm to a given home district would entail substantial error.

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 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.

### **3.1 Summary Statistics**

Table 1 describes the characteristics of the Delaware incorporated firms in the sample, grouped by the Delaware filing decision. Since all of these firms are eligible to file in Delaware by virtue of their state of incorporation but none were headquartered in Delaware, we can assume that all firms in Table 1 had a choice of venues. Table 1 provides some preliminary evidence regarding the types of firms that are more likely to look to Delaware to reorganize. Since the motives for choosing one court over another are less obvious when the bankruptcy is prepackaged (since the potential of the court to affect the outcome is reduced) we calculate means of the relevant variables with and without prepacks. With prepacks included, 47.6% of the eligible firms chose Delaware; with prepacks excluded the figure drops slightly to 44.4%. As expected, the differences among Delaware and non-Delaware filers are more visible when we exclude prepacks so we will focus primarily on these results; those of the sample as a whole are similar.

Our three variables related to firm size (book value of total assets, employees, and sales) indicate that among the Delaware-eligibles, larger firms are more likely to go to Delaware.



The difference in the mean of sales (250.39 to 146.20) is significant at the 10% level, while the difference in employees is significant at the 5% level and substantial (2361.38 to 1276.67). While Delaware filers are on average 27% larger in terms of book value (271.24 to 213.15), the difference in means is not statistically significant.<sup>2</sup>

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 significantly better pre-bankruptcy performance than non-Delaware filers as measured by their pre-bankruptcy return on assets (-.04 vs. -.15). This may indicate that the higher quality firms in the sample, those that are more likely to reorganize than liquidate, are more likely to seek out Delaware. Another important difference concerns 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 130.71 business Chapter 11 cases in 1997. The average experience for the non-Delaware filers is 192.87 cases, which is significantly larger at the 1% level. This indicates that court experience can play an important role in bankruptcy; we will test this hypothesis later in the paper. Finally, the Delaware filers' headquarters is closer to Wilmington: the average Delaware filer is 680 miles from Wilmington while the non-Delaware filers are 808 miles away (the difference is not significant). It is also interesting to note that the average distance between Delaware and non-Delaware filers grows when prepacks are excluded, implying that the cost of travelling to an outside venue depends positively on the length of the time spent in court.

With respect to managerial characteristics, few major differences emerge. Delaware filers have a smaller average equity stake and lower tenure, but are more highly paid. None of these differences are significant. Interestingly, Delaware firms are more likely to have a CEO who is a professional restructuring expert (.15 vs. .06), providing some evidence that experience of management with respect to bankruptcy is a factor in the filing decision. It may also suggest a preference for Delaware by bank lenders, who are often instrumental in replacing the incumbent CEO with the restructuring consultant.

Table 2 repeats the comparison of means, considering all firms as Delaware-eligible. Ten firms in the sample who were not incorporated or headquartered in Delaware were able to file there without any apparent connection to the state, suggesting that some firms used alternative means such as filing through an affiliate. When all firms are included in the sample, the results appear similar to those in Table 1, with the size disparities between Delaware and

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<sup>2</sup>For the variables total assets, sales, employees, distance, and experience, we report geometric means since we will be using logarithmic specifications and these variables (particularly the size variables) are skewed to the right.

non-Delaware filers growing. Many of the smaller and more closely-held firms in the sample were not Delaware-incorporated and thus were much more likely to file in their home state. As a robustness check on the data, we will examine specifications of the filing choice that consider only the Delaware-incorporated firms to be eligible, and others that assume all firms are eligible.

## 4 Which firms chose Delaware?

The summary statistics in Tables 1 and 2 give us an early indication that firm characteristics, and not management characteristics, drive the filing decision. The data in Table 3 reinforce this hypothesis. Furthermore, the results indicate that a substantial percentage of the variation in the filing decision (up to 30%) can be predicted by these firm-level covariates. Venue choice seems far from a random assignment, thus a proper evaluation of the efficacy (or lack thereof) of the Delaware court relative to other bankruptcy courts should take into account the differing characteristics of the firms that tend to file there.

Table 3 reports results from probit models, where the dependent variable is an indicator that equals one when the firm files in Delaware. We report specifications on both the narrow and broad definition of Delaware eligibility, and with and without prepacks. 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, the Pseudo- $R^2$  values are higher when prepacks are excluded (.1150 in specification (1) compared to a median of .2944 in (2)–(5)).

The results suggest that the probability of a Delaware filing is higher for firms with more employees and lower sales revenue, and these relationships are robust to the varying samples and equation specifications. The coefficients in equation (3) suggest that, all else equal, a firm that has twice as many employees is 14.5% *more* likely to file in Delaware; similarly a firm with twice the dollar revenue in sales is 19.3% *less* likely to file there. Given that we are already controlling for the book value of assets, the employee and sales variables may be picking up industry-level effects. While we are not concerned with industry differences per se, it is certainly possible that the complexity of the bankruptcy process varies according to these characteristics, and that this affects venue choice. We will explore this possibility later

in the paper.

In terms of the firm quality variables, the results are mixed. Book leverage can be seen as a proxy for firm quality conditional on being in Chapter 11, since the highly-levered firms in the sample are more likely to be financially distressed without being economically distressed. In other words, the highly levered firms may be in Chapter 11 solely to fix an inappropriate capital structure, hence their going-concern value is more likely to exceed their liquidation value. The coefficient on book leverage is small and insignificant. On the other hand, firms with higher pre-bankruptcy return-on-assets (ROA) seem more inclined to choose Delaware. Equation (3) suggests that a Delaware-eligible firm with an ROA that is one standard deviation (.35) higher will be approximately 18% more likely to file away from home.

In addition to firm characteristics, our variables related to firm location and court characteristics have large explanatory power in predicting venue choice. A larger distance of firm headquarters from Delaware provides a strong negative incentive to file, indicating that the parties in the firm making the venue decision internalize the direct and indirect costs of travel. Interestingly, the interaction of book value and distance is positive and significant, implying that the distance effect is larger for firms with smaller book value. 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. Figure 1 graphs this relationship for various firm sizes based on the coefficient estimates in equation (3), showing the effect of a change in the distance from Wilmington on the probability of filing with the Wilmington court.

Another critical determining factor in the decision of whether to choose Delaware is the relevant alternative: a court in the state of the firm's headquarters. The variable "home-court cases" is a proxy for the experience of the home court, as measured by the average number of business Chapter 11 cases per court in a given state. 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. Here we find a strong negative effect of court experience on the probability of a Delaware filing. The coefficient in specification (3) implies that a one standard deviation increase in the experience of the home court makes a firm approximately 18% less likely to go to Delaware.

Specification (4) looks further into the experience variable to discover which types of firms find it most advantageous to leave an inexperienced home-court for Delaware. We expect

that the more complicated bankruptcies would benefit more from a court with more expertise. We interact the experience variable with three variables related to firm size, which we expect to increase the complexity of the bankruptcy case: book value, employees, and sales. We find that the interaction of court experience with employees is negative and the largest in magnitude, while the other three interactions (not reported) have small and insignificant positive coefficients. While none of the interaction terms is significant, the point estimate suggests that employee-intensive firms are more concerned with choosing an experienced venue. A firm with more employees, then, could imply a more complicated bankruptcy process. We will look for more evidence of this hypothesis in section 4 when we consider the determinants of the length of the bankruptcy case.<sup>3</sup>

Finally, equation (5) replicates (3) with the addition of the managerial characteristics: CEO tenure, equity ownership, and a dummy variable indicating that the CEO was a restructuring consultant.<sup>4</sup> The ownership variable is fairly large and negative, indicating that a CEO with greater ownership is less likely to file in Delaware, while restructuring consultants appear slightly more likely to file there. None of these coefficients, however is statistically significant, and we fail to reject the hypothesis that these managerial variables taken jointly have no effect on the filing decision.<sup>5</sup>

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. Firms that choose to assume the costs of filing in Delaware appear to be healthier firms, with potentially more complicated bankruptcy cases. 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. Managerial characteristics, on the other hand, tell us very little. If the Delaware court (or any other court) competed for bankruptcy business by offering a reorganization chapter that was friendly to managers, it did not have a visible effect in encouraging more powerful/entrenched CEOs to take advantage. 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.

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<sup>3</sup>For interests of space the insignificant interaction terms were omitted. None of the estimated coefficients had a p-value below .5.

<sup>4</sup>CEO compensation was also used in some specifications but was not included for the interest of space; it too had a small insignificant effect on the filing choice.

<sup>5</sup>Result based on likelihood ratio test using the observations in equation (5) for which none of the variables are missing. P-value of  $\chi^2$  test is .6605.

## 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 the results of probit models, where the dependent variable is now equal to one if the firm emerges from Chapter 11 reorganized and zero otherwise. Before analyzing the data, two important points should be made. First, 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. 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. We will, however, attempt to draw some inferences about the efficiency of the Delaware treatment by comparing to its comparably-experienced and less-experienced peers.<sup>6</sup>

Second, we have seen from the previous section that the characteristics of firms that choose Delaware are quite different from those that use their home court (or a non-Delaware remote venue). If these differences are captured entirely by the control variables used in the regressions (i.e. size, employees, ROA, etc.) then a simple Delaware dummy variable will give us an estimate of the treatment effect of the court: whether Delaware was more or less likely to reorganize a firm, controlling for its characteristics. If there are other unobserved variables, however, that make a firm more likely to reorganize and these variables are correlated with the decision to file in Delaware, then our estimate of the Delaware treatment effect will be biased. We attempt to correct for this non-random venue selection by using bivariate probit and instrumental-variables estimates and comparing these to the simple single-equation probit models.

Table 4 lists various specifications for the single-equation probit estimates of the probability of reorganizing. As we might expect, the probability of successful emergence from Chapter 11 is positively related to the firm's size (book value), and the two measures of its quality, ROA and leverage. Again, managerial characteristics appear to have little, if any,

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<sup>6</sup>In other specifications (not reported) we attempted to test whether Delaware outcomes were more or less responsive to firm viability (measured by ROA) than other cases by interacting the Delaware dummy with the ROA variable. The interaction term was positive, suggesting that Delaware cases are more responsive to firm viability, but the coefficients were not statistically significant.

effect on the probability of firm survival. This is consistent with previous results indicating the high degree of managerial turnover in and around bankruptcy (Hotchkiss (1995), LoPucki and Whitford (1993)). In equations (1)-(3), the effect of filing in Delaware increases the probability of reorganization between 11 and 17.6 percent; the effect is not statistically significant in two of the three specifications. It appears, then, that there is no statistically identifiable tendency of Delaware judges to avoid liquidations when all other courts compose the comparison group. There does, however, appear to be a large and significant difference between experienced courts (including Delaware) and inexperienced courts as shown in equation (4).<sup>7</sup> Firms filing in courts with below-median experience are 23.9% less likely to reorganize than above-median experienced courts; this effect is surprisingly large and significant at the 1% level.<sup>8</sup> In specification (5), we include the low-experience dummy and the Delaware dummy simultaneously. The coefficient on the Delaware dummy is small and insignificant, implying that the Delaware treatment is similar to those of other high-experienced courts, but significantly different from courts with lower experience, which are less likely to reorganize a firm successfully. The low-experience dummy is again significant at the 5% level.

## 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 (2002), Berkovitch, Israel and Zender (1997), 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 claim 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

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<sup>7</sup>States in the sample that ranked at or above the median in the experience of its bankruptcy courts were the following: AZ, CA, DE, NJ, NY, MA, MD.

<sup>8</sup>With respect to the state of filing, we chose to use a dummy variable specification rather than the log number of cases, as we did with the “home court” variable. Our measure of experience includes large and small Chapter 11 cases. Ironically, we believe this is least appropriate for Delaware, which handles large cases disproportionately and thus appears underexperienced by this proxy measure relative to other states. Results are similar, however, using the log specification.

to the data to see if the more experienced courts, particularly Delaware, were more likely to confirm plans that resulted in distributions to equity.<sup>9</sup>

Since the distribution to various claimant groups are only available when a plan is confirmed, the sample used in the probit models in Table 5 consists of only those firms that reorganized.<sup>10</sup> As we might expect, 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 less likely is equity to emerge with a valuable claim.

The first two specifications examine the Delaware and low-experience effects, respectively, on the probability of equity receiving a claim conditional on reorganization. Compared to all other courts, equation (1) estimates that Delaware cases are 21.9% *less likely* to result in a claim to equity controlling for leverage, book value, and whether the case is prepackaged. Low-experience courts, on the other hand, are 19.4% *more likely* to allow equity to retain value as reported in equation (2). Equations (3) and (4) confirm these results adding the sales and employees variables as controls; neither of these variables are significant and including them reduces the magnitude of the estimate of the Delaware and low-experience courts. Based on these estimates, we find no evidence that Delaware generated business through equity-friendly reorganizations; if anything, experience leads to a closer connection to the absolute priority rule.

Before proceeding, we should emphasize that the estimates in Tables 4 and 5 should be treated with some caution. As we have seen in Table 3, the choice of venue is far from random, and it appears that the healthier firms based on observables were more likely to file in Delaware. If unobservable factors related to firm viability are also correlated with the decision to file in Delaware (as we would expect), then the positive Delaware effect (negative low-experience effect) on reorganization will be biased upward (downward). Similarly, unobservable differences in firm quality correlated with the filing decision may bias the estimate of the differences between courts with respect to APR deviations. The following section addresses these issues.

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<sup>9</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 we believe the former is more valuable here.

<sup>10</sup>Results are similar (in particular, the signs on the Delaware and experience coefficients) when liquidations/sales are included. In these regressions, we coded a zero distribution to equity when the firm was liquidated/sold and no reorganization plan was available (such as when the case was converted to Chapter 7).

### 5.3 Accounting for Venue Selection: Bivariate Probit and IV estimates

To account for the fact that the choice of venue is not random and may bias the estimate of the Delaware effect on reorganization, we estimate the venue choice equation and the reorganization equation simultaneously using a bivariate probit technique that allows the error terms in the two equations to be correlated. The results in the reorganization equations ((1b) and (2b)), while measured with greater error, are qualitatively similar to the univariate specifications. Because of the small sample size and the moderate power of the instruments, the bivariate probit estimates of the Delaware effect is measured with greater error but is not significantly different from zero.

It is worth noting that the estimate of  $\rho$ , the correlation between the error terms in the venue choice and reorganization equations, is positive. This implies that a firm whose unobservable characteristics make it more likely to reorganize is more likely to have chosen Delaware. This is consistent with the fact that the Delaware treatment effect on reorganization falls when we move from the univariate to the bivariate model: part of the Delaware effect in the single-equation model was driven by better firms, who were more likely to survive, filing in Delaware instead of their home court.

In regression (3) in Table 6, we use an instrumental variables approach to estimate the Delaware treatment effect. The distance variable and the dummy for Delaware incorporation are used as instruments for the Delaware filing dummy. While this method ignores the fact that the dependent variable is bounded, the estimate of the treatment effect has been shown to be consistent (Angrist (1991)). We include this specification as a check on the bivariate probit estimates. The results confirm that Delaware is not significantly different from other courts with respect to reorganizing a firm controlling for its characteristics.

On the other hand, the negative effect of low experience on reorganization continues to hold after correcting for the non-random selection of firms into a venue. In specification (4) we instrument for the low-experience dummy with a dummy variable that equals one if the firm is headquartered in a low-experience state. The estimate of the low-experience dummy increases in magnitude from the probit estimates in Table 4: courts with below-median experience are 33.4% less likely to reorganize a given firm than a high-experience court; the estimate is significant at the 5% level.

Finally, we repeat the IV procedure with respect to deviations from absolute priority. The dummy variables for the Delaware filing (equation (5)) and low-experience (equation (6)) have



the same signs as in the single-equation probit regressions in Table 5, but are not statistically significant. While the point estimates suggest that Delaware cases (cases in low-experience courts) are less (more) likely to result in deviations from priority, it is more reasonable to conclude that courts did not differ significantly on this dimension. In this sense, there is no evidence of the pro-debtor bias of Delaware commonly cited as the cause of its popularity.

## **6 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 (2001)) Delaware has developed a reputation among practitioners for its speed and efficiency (Skeel (1998)) but 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 size 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.

We focus our discussion on firms that successfully reorganize rather than firms that liquidate. We believe this is appropriate for two reasons. First, we can maintain a consistent measure of the time spent in Chapter 11, namely the number of days from the filing to the date of plan confirmation. In liquidation and sale cases, a fixed exit date is often unavailable, since some cases are converted to Chapter 7, and many liquidate without confirmation of a plan. 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 7 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. The results are similar to the previous study, as the estimated Delaware speed effect is a sizeable 105 days but statistically insignificant.

Equations (2)-(6) include more covariates, and the Delaware effect becomes larger as a result. Part of this follows from the fact that the number of employees explains a significant amount of the variation in the length of the Chapter 11 case. Coefficient estimates range between 60 and 78.1, implying that a firm with 10% more employees will require an extra 5-7 days to confirm a reorganization plan. This reinforces the pattern in the data that the number of employees is related to the complexity of a Chapter 11 case; because such cases were more likely to file in Delaware, previous estimates of the speed of the Delaware court that did not include employees in the regression were biased toward zero.

In all specifications, the Delaware effect is large in magnitude and statistically significant. Equation (2) estimates that, controlling for firm characteristics, a Delaware case is an overwhelming 196 days faster than cases in other courts. Since the average length of non-prepackaged cases that result in reorganization is 495 days, this implies that Delaware is estimated to be approximately 40% faster than other bankruptcy courts in processing large Chapter 11 cases. In equations (3) and (4) we look to the court experience variables and compare with Delaware and its comparably-experienced peers. As with the reorganization equations, there are large differences between experienced and inexperienced courts. Equation (3) suggests that courts with low-experience require an extra 228 days to complete controlling for firm characteristics; this is significant at the 5% level. Equation (4) reports similar results using the low-experience and Delaware dummies in the same regression. Here, Delaware reorganizations are estimated to be 131 days faster than its above-median experienced peers, while the below-median courts are 175 days slower. The speed difference between Delaware and the below-median courts (estimated to be 306 days) is extremely large and significant ( $p=.013$ ).<sup>11</sup>

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<sup>11</sup>For reference we have also run specifications in which we instrumented for the Delaware dummy and low-experience dummy, respectively, using the same instruments used in the reorganization regressions; point estimates of the Delaware speed effect and the inexperienced court effect are similar and not statistically different from the OLS estimates, but standard errors are substantially larger due to the small sample of reorganized firms.

## 6.1 Are employees a proxy for complexity?

Throughout the empirical tests, the number of employees in a firm has successfully explained more of the dynamics of venue choice and bankruptcy outcomes than book value, sales, or leverage. Firms with more employees were more likely to seek out Delaware, and high-employee firms from states with inexperienced courts were the most likely to assume the costs of filing away from the home venue. One can imagine two possible (non-exclusive) explanations for this result. First, firms with many employees may face extra pressure from their workers that leads to a filing away from home. A second possible explanation is that high-employee firms tend to be more complex cases and benefit more from court experience. Though we cannot discount the first explanation, evidence for the complexity hypothesis emerged when we looked at the treatment effect of bankruptcy courts, namely the speed of the process. Among the survivors, high-employee firms took significantly longer to emerge from Chapter 11 than low-employee firms. The experienced courts (particularly Delaware) are significantly faster and thus more appealing to a firm facing a long stay in bankruptcy. As we saw in the venue choice regressions (Table (3)), while the high-employee firms were more likely to file in Delaware (consistent with both explanations), they were particularly more likely to leave when the home venue was less experienced (consistent with complexity hypothesis). The results taken as a whole suggest that court experience is particularly important in dealing with complex bankruptcies: not only are the more experienced courts able to bring these companies out of Chapter 11 protection faster, but they may also be preventing a premature liquidation due to their expertise.

Table 8 lists the twenty (non-prepackaged) bankruptcies in our sample with the largest number of employees. There appears to be a great deal of industry-level similarity among this group: the highest employee firms tend to be retail stores, restaurant chains, and health care organizations. Of the top 20 firms by employees, only one case was filed in a below-median experienced court (Best Products Co., in Virginia) and was liquidated. The firms that reorganized took 615 days to complete, which is 27% longer than the average time required by the remaining firms in the sample.

## 7 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. Characteristics related to managerial influence do not appear to affect venue choice. We also find no evidence that courts differ significantly with respect to allowing deviations from absolute priority. If anything, the most experienced (and thus most popular) courts were the least likely to allow equity to emerge from the process with a valuable claim.

Instead, experienced courts seem more able to produce outcomes consistent with efficiency. This is most evident with respect to the number of days spent in bankruptcy: courts with below-median experience require more than 200 additional days to complete a given case. On this front, the Delaware court was a particular standout, even when compared to other high-experience courts. We also find that the ability to reorganize depends strongly on the experience of the court, with high-experience courts being significantly more able to reorganize marginal firms. When we jointly estimate the venue choice and reorganization equations, we find that it is the more viable firms that choose to file in Delaware, both in terms of observable factors (such as pre-bankruptcy ROA) and unobservable factors. While differential probabilities of firm-survival may have affected venue choice, it did not have the pernicious effect of encouraging weaker firms to select venues that increase survival chances, as the agency hypothesis might suggest.

From a policy point of view, our results suggest benefits associated with choice and competition for bankruptcy cases.<sup>12</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 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>13</sup>

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<sup>12</sup>For a more specific discussion of proposals related to venue choice see Rasmussen and Thomas (2000) and Skeel (2000).

<sup>13</sup>For more information on the Colorado bankruptcy reform, see “State missing out on bankruptcy business”

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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Denver Business Journal, January 11, 2002.

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Table 1: Delaware-Incorporated Firms Only<sup>1</sup>

## Pre-Bankruptcy Firm Characteristics by State of Chapter 11 Filing

	Prepacks included		No Prepacks	
	Delaware	Other States	Delaware	Other States
A. Firm Characteristics	Mean	Mean	Mean	Mean
Total Assets (millions)	317.98 <sup>c</sup>	214.86	271.24	213.15
Sales (millions)	268.80 <sup>c</sup>	165.34	250.39 <sup>c</sup>	146.20
Employees	2188.56	1445.20	2361.38 <sup>b</sup>	1276.67
Book leverage	.942	.946	.884	.884
Return on assets (ROA)	-.03 <sup>b</sup>	-.12	-.04 <sup>b</sup>	-.15
Distance from Dela. of hqt.	609.72	791.55	679.94	807.54
Home-state Chapter 11's	126.47	182.91 <sup>a</sup>	130.71	192.87 <sup>a</sup>
B. Management and Ownership				
CEO % equity	.06	.11 <sup>b</sup>	.07	.10
CEO salary (thousands)	396.90	360.75	393.53	331.01
CEO tenure	3.41	4.23	3.51	3.89
Restructuring consultant	.15 <sup>c</sup>	.06	.15	.06
N	72	79	52	65

<sup>1</sup>a,b,c denote statistical significance at the 1, 5, 10% levels, respectively. The reported means for the variables total assets, sales, employees, distance, and experience are geometric averages. All others are arithmetic averages. Distance from Delaware is reported as the distance in miles from the largest city in the state in which the firm is headquartered. Home-court cases is the average number of business Chapter 11 cases per court in the state of firm headquarters in 1997.

Table 2: All Firms<sup>2</sup>

## Pre-Bankruptcy Firm Characteristics by Filing Decision

	Prepacks included		No Prepacks	
	Delaware	Other States	Delaware	Other States
A. Firm Characteristics	Mean	Mean	Mean	Mean
Total assets (millions)	369.44 <sup>a</sup>	187.35	272.33 <sup>b</sup>	174.33
Sales (millions)	268.00 <sup>a</sup>	138.38	264.01 <sup>a</sup>	137.55
Employees	2356.67 <sup>a</sup>	1118.79	2392.27 <sup>a</sup>	987.32
Book leverage	1.00 <sup>b</sup>	.907	.888	.896
Return on assets (ROA)	-.06	-.09	-.07	-.10
Distance from Delaware (miles)	499.70	648.07 <sup>b</sup>	613.39	692.98
Home-state Chapter 11's	132.29	173.82 <sup>a</sup>	132.95	173.47 <sup>b</sup>
B. Management and Ownership				
CEO % equity	.06	.11 <sup>a</sup>	.07	.11 <sup>c</sup>
CEO salary	396.90	360.75	378.90	320.36
CEO tenure	3.57	4.86 <sup>c</sup>	3.48	4.92
CEO is restructuring consultant	.14	.11	.15	.12
N	95	208	62	159

<sup>2</sup>a,b,c denote significance at the 1,5,10% levels, respectively. The reported means for the variables total assets, sales, employees, distance, and experience are geometric averages. All others are arithmetic averages. Book leverage is total liabilities/total assets. Distance from Delaware is reported as the distance in miles from the largest city in the state in which the firm is headquartered. Home-court cases is the average number of business Chapter 11 cases per court in the state of firm headquarters in 1997.



Table 3<sup>3</sup>

## Probit Regressions: Determinants of the Delaware Filing Decision

Dependent variable = 1 if firm files in Delaware

Specification #	(1)	(2)	(3)	(4)	(5)
Sample	all firms	Del inc.	Del. inc	Del. inc	Del. inc
Firm variables					
Log total assets	-.124 (.455)	-.795 <sup>b</sup> (.013)	-1.85 <sup>a</sup> (.001)	-2.16 <sup>b</sup> (.026)	-1.82 <sup>a</sup> (.003)
Log employees	.097 <sup>a</sup> (.007)	.101 <sup>c</sup> (.051)	.145 <sup>b</sup> (.034)	.902 (.216)	.147 <sup>b</sup> (.046)
Log sales	-.086 <sup>b</sup> (.058)	-.126 <sup>b</sup> (.039)	-.193 <sup>c</sup> (.033)	-.390 (.611)	-.211 <sup>b</sup> (.027)
Book leverage	.079 (.348)	.093 (.490)	.247 (.147)	.114 (.565)	.251 (.160)
ROA	.015 (.889)	.494 <sup>c</sup> (.096)	.517 (.131)	.790 <sup>b</sup> (.037)	.499 (.160)
Court/state variables					
Ln( hqt. distance from Dela.)	-.249 <sup>c</sup> (.077)	-.804 <sup>a</sup> (.005)	-1.65 <sup>a</sup> (.000)	-1.61 <sup>a</sup> (.002)	-1.67 <sup>a</sup> (.001)
Ln(dist)*Ln(assets)	.034 (.175)	.125 <sup>b</sup> (.012)	.285 <sup>a</sup> (.001)	.269 <sup>a</sup> (.004)	.281 <sup>a</sup> (.002)
Ln(home-court cases)	-.104 <sup>b</sup> (.028)	-.133 <sup>c</sup> (.064)	-.247 <sup>b</sup> (.011)	.263 (.696)	-.275 <sup>a</sup> (.008)
Ln(HCC)*Ln(Empl)	-	-	-	-.147 (.278)	-
Managerial characteristics					
CEO tenure					.008 (.565)
CEO equity ownership					-.692 (.183)
CEO = consultant					.043 (.821)
Prepacks included?	yes	yes	no	no	no
Pseudo-R <sup>2</sup>	.1150	.1538	.2633	.3008	.2979
N	220	120	97	92	93

<sup>3</sup>a,b,c denote significance at the 1,5,10% levels, respectively. Coefficients reported are the marginal effects of a change in the independent variable on the probability of filing in Delaware. P-values are in parentheses. All dollar-denominated terms are in

Figure 1: The Effect of Size and Distance on the Probability of Filing in Delaware

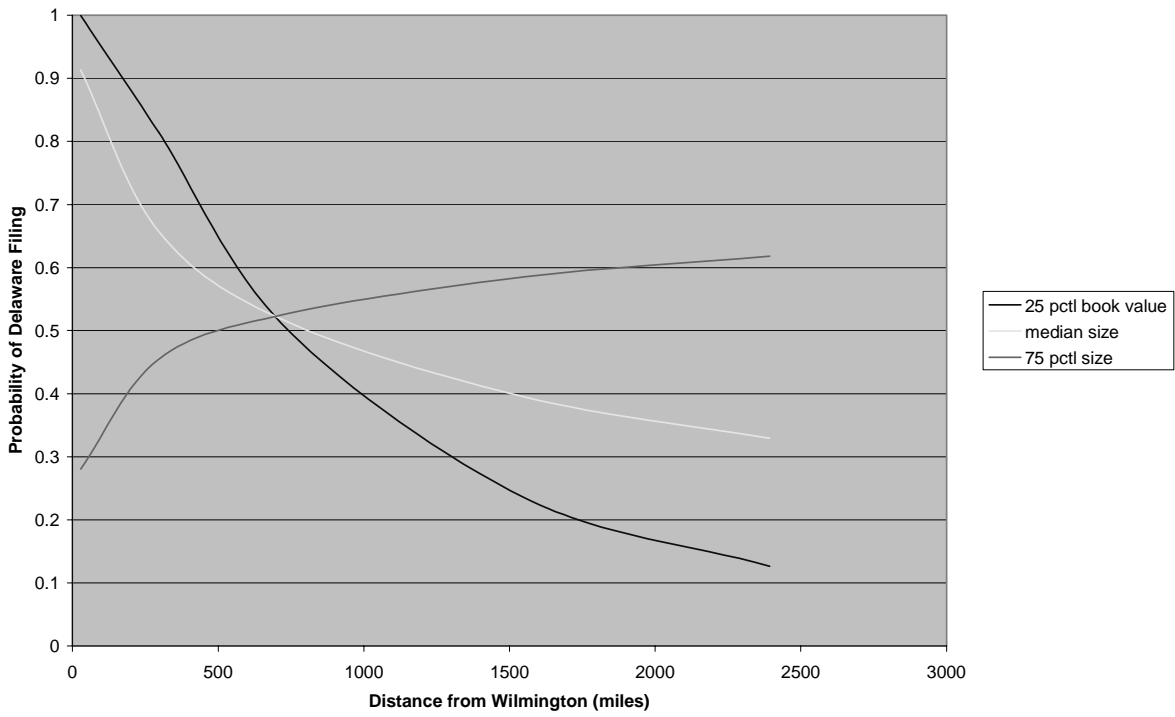


Figure 1:

Table 4<sup>4</sup>

## Probit Regressions: Predicting the Likelihood of Reorganization

Specification #	(1)	(2)	(3)	(4)	(5)
Dependent Variable	reorg	reorg	reorg	reorg	reorg
Firm variables					
Log total assets	-.136 <sup>a</sup> (.002)	.140 <sup>a</sup> (.005)	.154 <sup>a</sup> (.001)	.156 <sup>a</sup> (.001)	.154 <sup>a</sup> (.001)
Log employees	-.009 (.807)	.003 (.942)	-.050 (.206)	-.052 (.183)	-.056 (.158)
Log sales	-.054 (.286)	-.059 (.274)	-.040 (.450)	-.042 (.434)	-.038 (.474)
Book leverage	.287 <sup>a</sup> (.001)	.298 <sup>a</sup> (.002)	.180 <sup>c</sup> (.067)	.184 <sup>c</sup> (.068)	.181 <sup>c</sup> (.072)
ROA	.190 (.149)	.204 (.144)	.151 (.214)	.146 (.250)	.160 (.220)
Chosen-court variables					
Filed in Dela.	.126 (.103)	.110 (.185)	.176 <sup>b</sup> (.036)	-	.055 (.564)
Below-median experience	-	-	-	-.239 <sup>a</sup> (.002)	-.213 <sup>b</sup> (.018)
Managerial variables					
CEO tenure	-	.000 (.951)	-	-	-
CEO equity ownership	-	.178 (.510)	-	-	-
CEO = consultant	-	-.002 (.986)	-	-	-
Prepacks included?	yes	yes	no	no	no
Pseudo-R <sup>2</sup>	.1067	.1047	.1102	.1121	.1344
N	205	183	180	172	180

year 2000 dollars. ROA is operating income before depreciation divided by total assets. Book leverage is total liabilities divided by total assets. Distance from Delaware is reported as the distance in miles from the largest city in the state in which the firm is headquartered. Home-court cases is the average number of business Chapter 11 cases per court in the state of firm headquarters in 1997.

<sup>4</sup>a,b,c denote significance at the 1,5,10% levels, respectively. Coefficients reported are the marginal effects of a change in the independent variable on the probability of reorganization. P-values are in parentheses. All dollar-denominated terms are in year 2000 dollars. ROA is operating income before depreciation divided by total assets. Book leverage is total liabilities divided by

Table 5: Deviations from Absolute Priority<sup>5</sup>

Sample: Reorganized firms only

Dependent Variable = 1 if equity receives valuable claim

Specification #	(1)	(2)	(3)	(4)
Firm variables				
Log total assets	-.027 (.469)	-.028 (.466)	.112 <sup>c</sup> (.077)	.114 <sup>c</sup> (.077)
Log employees			-.072 (.144)	-.074 (.146)
Log sales			-.111 (.211)	-.111 (.209)
Book leverage	-.434 <sup>a</sup> (.001)	-.411 <sup>a</sup> (.001)	-.580 <sup>a</sup> (.000)	-.578 <sup>a</sup> (.000)
Chosen-court variables				
Case is prepackaged	.402 <sup>a</sup> (.002)	.364 <sup>a</sup> (.004)	.544 <sup>a</sup> (.000)	.542 <sup>a</sup> (.000)
Filed in Dela.	-.219 <sup>c</sup> (.051)	-		.019 (.900)
Below-median experience	-	.194 (.108)	.157 (.246)	.167 (.286)
Pseudo-R <sup>2</sup>	.1283	.1224	.2516	.2517
N	97	98	94	94

total assets. Distance from Delaware is reported as the distance in miles from the largest city in the state in which the firm is headquartered. Below-median experience is a dummy variable equal to one if the average number of business Chapter 11 cases per court in the state of the filing is below the median.

<sup>5</sup>a,b,c denote significance at the 1,5,10% levels, respectively. Coefficients reported are the marginal effects of a change in the independent variable on the probability of reorganization. P-values are in parentheses. Equity is defined as receiving a valuable claim if old common stockholders received any combination of cash or new common stock. If old common stock received warrants only, this was coded as no distribution. Results are similar if warrants are coded as a distribution.

Table 6<sup>6</sup>

## Bivariate Probit and 2SLS estimates: Venue Choice and Reorganization

Specification #	Bivariate Probit		IV	IV	IV	IV
	(1a)	(1b)	(3)	(4)	(5)	(6)
Dependent Variable	dela	reorg	reorg	reorg	aprdev	aprdev
Firm variables						
Log total assets	-2.60 <sup>a</sup> (.001)	.442 <sup>a</sup> (.001)	.157 <sup>a</sup> (.001)	.137 <sup>a</sup> (.001)	.078 (.235)	.070 (.145)
Log employees	.288 <sup>b</sup> (.029)	-.025 (.842)	-.022 (.609)	-.058 (.118)	-.046 (.370)	-.061 (.139)
Log sales	-.310 <sup>c</sup> (.080)	-.180 (.223)	-.057 (.265)	-.029 (.535)	-.075 (.337)	-.067 (.325)
Book leverage	.423 (.173)	.565 <sup>b</sup> (.039)	.198 (.044)	.141 (.117)	-.443 <sup>a</sup> (.001)	-.423 <sup>a</sup> (.000)
ROA	.361 (.438)	.466 (.156)	.162 (.125)	.124 (.217)		-
Court & state variables						
Filed in Dela.	-	-.310 (.549)	-.016 (.933)		-.285 (.354)	-
Below-median experience	-	-		-.334 <sup>b</sup> (.013)	-	.068 (.743)
Ln(home-court cases)	-.638 <sup>a</sup> (.001)	-		-	-	-
Ln(hqt dist. from Dela)	-2.58 <sup>a</sup> (.000)	-		-	-	-
Ln(dist)*Ln(assets)	.430 <sup>a</sup> (.001)	-		-	-	-
Incorporated in Dela.	1.47 <sup>a</sup> (.000)	-		-	-	-
Case is prepackaged	-	-		-	.464 <sup>a</sup> (.000)	.452 <sup>a</sup> (.000)
Rho	.622 (.209)			-	-	-
Prepacks included?	no		no	no	yes	yes
adjusted R <sup>2</sup>			.0773	.1150	.1918	.2296
N	165		165	165	82	94

<sup>6</sup> a,b,c denote significance at the 1,5,10% levels, respectively. Coefficients reported are the marginal effects of a change in the independent variable on the probability that the dependent variable is equal to one. The dependent variable is the Delaware

Table 7: Reorganized firms only<sup>7</sup>

OLS regressions: Predicting the Time Spent in Chapter 11

Dependent variable = Days to confirmation of reorganization plan

	(1)	(2)	(3)	(4)
	OLS	OLS	OLS	OLS
Firm variables				
Log total assets	75.9 <sup>b</sup>	39.2	42.9	38.7
	(.012)	(.340)	(.291)	(.340)
Log employees		71.8 <sup>c</sup>	60.0	78.1 <sup>c</sup>
		(.088)	(.125)	(.062)
Log sales		-14.0	-4.7	-14.9
		(.807)	(.933)	(.793)
Book leverage		54.4	68.6	70.3
		(.630)	(.542)	(.531)
Court/state variables				
Filed in Dela.	-105	-196 <sup>b</sup>	-	-131
	(.228)	(.052)		(.218)
Below-median experience	-	-	228 <sup>b</sup>	175
			(.030)	(.118)
Adjusted R <sup>2</sup>	.0735	.1288	.1424	.1502
N	70	67	67	67

indicator in (1a) and (2a), and the reorganization indicator in all others. The instruments in the IV regressions are the same as in the bivariate probit. P-values are in parentheses. See notes for Tables 3 and 4 for variable definitions.

<sup>7</sup>a,b,c denote significance at the 1,5,10% levels, respectively. P-values are in parentheses. See Tables 3 and 4 for variable definitions.

Table 8

Characteristics of the twenty largest bankruptcies by employees, 1990-1999

Firm Name	Employees	Industry description (SIC-2)	State of court	Outcome	Length (days)
Sun Healthcare Group	68,900	health services	DE	reorganized	846
Montgomery Ward Holding Co.	63,200	general merchandise stores	DE	reorganized	749
Vencor, Inc.	57,900	health services	DE	reorganized	550
Semi-Tech Corporation	30,000	electronic/electrical equipment	NY	liquidated	–
Bruno's Inc.	25,000	food stores	DE	reorganized	695
Edison Brothers Stores (I)	23,400	apparel and accessory stores	DE	reorganized	676
McCrory Corporation	23,100	general merchandise stores	NY	liquidated	–
MedPartners Provider Network	19,636	health services	CA	reorganized	553
Hills Department Stores	18,650	general merchandise stores	NY	reorganized	952
Best Products, Inc.*	17,400	general merchandise stores	VA	liquidated	–
MEI Diversified	16,474	personal services	DE	reorganized	582
Just For Feet	15,000	apparel and accessory stores	DE	liquidated	–
Edison Brothers Stores (II)	14,639	apparel and accessory stores	DE	liquidated	–
Sizzler International	14,600	eating and drinking places	CA	reorganized	449
Discovery Zone, Inc.	14,500	amusement/recreation services	DE	reorganized	480
Merry-Go-Round Enterprises	13,911	apparel and accessory stores	MD	liquidated	–
Harnischfeger Industries	13,700	industrial/commercial machinery	DE	reorganized	715
Venture Stores	12,600	general merchandise stores	DE	liquidated	–
House of Fabrics	12,580	miscellaneous retail	CA	reorganized	615
Boston Chicken	12,470	eating and drinking places	AZ	liquidated/sold	–