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The effect of discretionary actions on small firms' ability to survive Chapter 11 bankruptcy

Jocelyn Evans *

Department of Finance, College of Business Administration, South Carolina State University, Orangeburg, SC 29117, USA

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Abstract

This paper analyzes whether judges' actions within Chapter 11 bankruptcy affect debtor firms' ability to reorganize (e.g., debt restructurings and mergers) as opposed to being liquidated in Chapter 7 bankruptcy. Our main finding is that debtor firms' control of the process, e.g., the exclusivity period, affects their ability to restructure debt. A reduction in the exclusivity period decreases the likelihood of reorganization, but increases the likelihood of deviation from absolute priority when plans of reorganization are agreed upon. An extension of the exclusivity period, however, does not increase the likelihood of either reorganization or deviation from absolute priority.

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1. Introduction

Weiss and Wruck (1998) show that in the Eastern Airline bankruptcy asset value dropped by over 50% due to an overprotective court that insulated the firm from its creditors. They conclude that the bankruptcy court judge's normative assessment of firm value directly affects the outcome of Chapter 11. Other academics and practitioners criticize bankruptcy judges for taking discretionary actions. Bradley and Rosenzweig (1992) argue that bankruptcy judges erroneously permit managers to expropriate wealth

* Tel.: +1-803-536-8186; fax: +1-803-539-2270.
E-mail address: jdevans@scsu.edu (J. Evans).

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from creditors, which in general causes debt to be costly. Giammarino (1989) also theorizes that Chapter 11 bankruptcy requires "ill-prepared" judges to value firms' assets based on conflicting information from different claimants.[1] In contrast, however, traditionalists in the law and economics literature argue it is essential that judges be invested with broad discretion to implement bankruptcy's policy of preserving distressed firms (see, for example, Warren, 1992; Whitford, 1994). A few academics in the financial economics literature also conjecture that discretion must be beneficial or else it would be eliminated (see Easterbrook, 1990; Giammarino and Nosal, 1994).

With the exception of Weiss and Wruck (1998), there is minimal direct empirical evidence of the affect of judges' discretionary actions on the outcome in Chapter 11 cases. Weiss (1990) provides anecdotal evidence that New York judges are more biased toward debtor firms than judges in California, Florida, Illinois, Massachusetts, Michigan, and Ohio. Weiss (1991) directly attacks Judge Bertram Lifland's action in Eastern's bankruptcy as being pro-debtor. In a 1991 New York Times article, he argues that Judge Lifland violated the spirit of the bankruptcy code by first ignoring creditor's rights and then destroying them. The court extended management's right to file a reorganization plan for an entire year.

We attempt to fill this void by examining how judges' discretionary action affect firms' ability to both emerge from bankruptcy and obtain concessions from creditors in the form of deviation from absolute priority.[2] A major obstacle to empirically resolving this issue is the difficulty in measuring the affect of discretionary actions on the outcome. In this study, two measures indicating pro-debtor and pro-creditor discretionary actions are developed. The first discretionary action is judges' decision to either extend or reduce management's exclusive right to file a plan of reorganization for the first 120 days followed by 60 additional days to obtain approval for the plan. The second discretionary action is judges' decision to grant or deny post-petition (debtor-in-possession) financing.

Approval of a debtor firm's request to extend the exclusivity period, denial of a creditor's request to lift exclusivity, and approval of a debtor firm's request for debtor-in-possession financing are considered to be pro-debtor discretionary actions that should increase the probabilities of survival and deviation from absolute priority. Alternatively, approval of a creditor's request to lift or reduce the exclusivity period, denial of a debtor firm's request to extend exclusivity, and disapproval of a debtor firm's request for debtor-in-possession financing are considered to be pro-creditor discretionary actions.

[1] Gilson et al. (2000) find that information often conflicts because managers have incentives to undervalue the firm's assets in order to extract concessions from creditors; subordinated unsecured creditors have incentives to overvalue the firm's assets to obtain a larger share of the reorganized firm.

[2] Absolute priority dictates that secured pre-petition creditors are paid their allowable principal and interest payments before unsecured pre-petition creditors can be repaid any portion of their claim. Then, unsecured pre-petition creditors should be repaid in total before post-petition lenders and owners receive any repayment. Unpaid accrued interest is entitled to priority under USC 506 (b) according to Norton Bankruptcy Law and Practice, Section 12.2, part 12 page 37. Most plans in this study amortized all late charges and outstanding principal, with interest, over the remaining life of the note.

Using evidence from a sample of small closely held debtor firms from a single district, we show that judges' discretionary actions sometimes are related to Chapter 11 outcomes. Approval of debtor-in-possession financing is associated with a marginally higher likelihood of reorganization. Yet, denial of debtor-in-possession financing does not coincide with greater incidences of liquidation in Chapter 7 bankruptcy. Hence, judges' decisions regarding post-petition financing are not a primary determinant of firms' ability to survive bankruptcy.

An extension of the exclusivity period does not lead to an increase in the likelihood of reorganization or deviation from absolute priority for those firms that confirmed plans of reorganization. Alternatively, a reduction in the exclusivity period increases the likelihood of "piecemeal liquidation" within Chapter 7 bankruptcy. However, when a plan of reorganization is agreed upon, a reduction in the exclusivity period raises the chance for deviation from absolute priority.

The remainder of the paper is organized as follows. Section 2 describes the discretionary actions and their affect on small closely held firms' ability to reorganize within Chapter 11 bankruptcy or obtain deviation from absolute priority. The inherent problems with testing for judicial discretion and the rationale for using small firm bankruptcies is presented in Section 3. Section 4 outlines the data selection process. The results are presented in Section 5, while Section 6 concludes.

2. Discretionary actions

2.1. Pro-debtor actions

Pro-debtor actions are expected to increase the likelihood of reorganizing within Chapter 11 and of deviation from absolute priority. The debtor firm has the exclusive right to propose a reorganization plan (120 days) and have it accepted (60 days) for the first 180 days subsequent to the Chapter 11 filing. The judge has the authority to extend the exclusivity period subsequent to management's formal request or deny creditors' requests to terminate the exclusivity period. As Betker (1995) and Weiss and Wruck (1998) note, judges' willingness to extend the exclusivity period often imposes costs on creditors by limiting their alternatives or reducing the value of assets.[3] For example, extending the exclusivity period prevents secured creditors from taking possession of their collateral. A denial to lift exclusivity is considered a pro-debtor action for similar reasons.

Judges' willingness to accept unchallenged requests and reject creditors' challenges to debtor-in-possession financing is clearly a pro-debtor action.[4] After a plan of reorganiza-

[3] It is possible that an extension of the exclusivity may preserve creditors' claim value by retaining unique management expertise or maintaining employee moral.

[4] Judges' willingness to grant uncontested debtor-in-possession requests is not necessarily anti-creditor. As noted by John (1993), debtor-in-possession financing is positively related to debtor firms' ability to reorganize. He theorizes that firm value improves due to an opportunity to invest in positive net-present-value investment projects. We categorize both actions as pro-debtor because they increase the likelihood of reorganization by injecting new capital into the firm.

tion requesting debtor-in-possession financing has been submitted, the judge can grant superpriority status to new working capital loans, e.g., debtor-in-possession financing (see Altman, 1992; Dahiya, 1998). The superpriority status of debtor-in-possession financing gives the creditor a security interest equal or senior to that of most pre-petition debt and priority over post-petition administrative expenses and taxes.

2.2. Pro-creditor actions

Pro-creditor actions are expected to decrease the likelihood of reorganizing within Chapter 11 and of deviation from absolute priority. Judges can lift or terminate the exclusivity period prior to 180 days for justifiable cause on request of a creditor or other interested party. Examples of justifiable cause are sufficient proof that the debtor firm is insolvent or that managers are not making an earnest effort to submit a feasible plan of reorganization. Lifting the exclusivity period or denial of requests to extend the exclusivity period are considered pro-creditor actions because they enable creditors to propose their own reorganization plan or take possession of their collateral at an early stage of the Chapter 11 process. Lifting the exclusivity period most likely decrease the probability of reorganization and, hence, deviation from absolute priority. Yet, LoPucki (1998) argues that lifting exclusivity may actually increase the probability of reorganization because issues are addressed at an early stage of the process.

Judges' willingness to deny unchallenged debtor-in-possession financing requests or support creditors' challenges to this type of financing is a pro-creditor action that does not alter pre-petition creditors' priority statuses.

2.3. The effect of judges' discretionary actions on secured creditors' incentives

By examining the incentives of pre-petition creditors, you more clearly understand the effect of specific actions on the outcome of Chapter 11. Several studies have analyzed creditors' actions within Chapter 11 bankruptcy. Notable contributions are those of Gilson et al. (1990) among others. Their studies find that banks and other secured creditors rarely forgive principal on their loan as part of a comprehensive debt restructuring when their debt is unimpaired. They conclude that secured creditors tend to push for liquidation in Chapter 7 because they are well protected in bankruptcy. It is anticipated that pro-creditor actions will increase secured creditors' truculent attitudes. Thus, pro-creditor actions are expected to further decrease the probability of reorganization within Chapter 11 and of deviation from absolute priority for these firms. Since pro-debtor actions protect shareholders from secured creditors, the likelihood of reorganization and of deviation from absolute priority may increase.

3. Small firm bankruptcies as objects of study

Existing anecdotal or case-study evidence suggest that actions vary from judge to judge and that these actions affect the outcome of Chapter 11 bankruptcy (see, Gilson et al., 1990; Weiss, 1990; Weiss and Wruck, 1998). It, however, is inherently difficult for researchers to empirically distinguish between judges' actions that are discretionary and those that arise from claimants' strategic gaming. One must be able to compare the actions of an individual judge to other judges in a specific jurisdiction and show that outcomes are affected by differences. Accurate information on debtor firms can only be obtained by reading bankruptcy case files, which is expensive and time-consuming.

This study expands upon previous research by providing new details about judges' discretionary actions for small firm bankruptcies within a single district.[5] The primary benefit of focusing on a single district is that debtor firms are subject to the same economic factors and peculiarities of the district venue. A limitation is our inability to generalize the results to other regions or large firms. Our study is restricted to one jurisdiction both to ensure comparability of economic events and because of costs. Lawless and Ferris (1997) estimate the cost to identify, gather and process the necessary documents to review one bankruptcy case is US$55.

Small closely held firms offer several important advantages with respect to empirical research design issues. First, obtaining a sufficiently large sample from one U.S. Bankruptcy district enables us to test for individual judges' discretionary actions while controlling for macro-economic events. Information is obtained for 290 firms. Second, the homogeneity of the sample with respect to size implicitly controls for factors that may mask the effect of judges' discretionary actions at large public corporations. For example, small firms are not able to manipulate the process by having the ability to select alternative venues.[6] Third, there is less variation in the complexity of bankruptcy cases with respect to capital structure. In the sample, managers own essentially all of the stock. Also, these firms rely solely on private debt, bank and trade credit (supplier) financing, which makes our analysis tractable. Essentially all of the unsecured debt is trade credit in our sample. Fourth, with respect to variation in outcome, White (1983) reports that less than half of nonpublic firms reorganize as opposed to 95% of large publicly traded firms, which increases the power of empirical tests.

4. Sample and data

The sample used for this study consists of 290 closely held firms that *completed* voluntary Chapter 11 filings at the Northeast Division of the Atlanta Bankruptcy Court between December 31, 1993 and December 31, 1994. The *starting* date, application for bankruptcy, ranges from 1984 to early 1993 (a 10-year period). The sample selection process begins with 414 small businesses. Several firms are excluded from the initial sample for several reasons: (1) publicly traded firm ($n=1$), (2) ongoing case ($n=81$); (3) initial voluntary Chapter 7 filings in which discretion does not exist ($n=5$); and (4)

[5] Weiss (1990) documents geographic diversity with respect to city and state.

[6] In contrast, Weiss (1990) and LoPucki and Whitford (1993) report that large organizations can, to some extent, choose the judge that will give them the most latitude. Specifically, large firms can file based upon the state they incorporated in, physical location, or business activity.

Table 1
Distribution of Chapter 11 cases for each judge based upon the initial year of filing

Years	N	1984–1986	1987–1989	1990–1992	1993
Judge A	65	4	7	29	25
Judge B	63	0	1	14	48
Judge C	60	0	3	35	22
Judge D	50	0	10	12	31
Judge E	52	3	0	12	34
All firms	290	7	21	102	160

archives ($n = 29$). An additional criterion that the cases be presided over by a judge with at least 2 years experience further reduced the sample by eight cases.

For each case, the following information is obtained from court documents in the docket: (1) the filing date; (2) the final motion date; (3) the judge's identity; (4) the number of days in the exclusivity period; (5) a request for debtor-in-possession (DIP) financing; (6) (dis)approval of DIP financing; (7) request for CEO removal;[7] (8) (dis)-approval of CEO removal; (9) creditors' names; (10) the dollar amount of each creditor's allowable claim; (11) the amount recovered by each creditor; and (12) selected firm characteristics. The figures reported in the confirmed reorganization plan are taken as the recoverable amount to each creditor. The plan either specifies the market value of cash and securities that creditors will receive or the percentage of the claim to be repaid. The plan also indicates whether priority of claims is violated for each class of creditors.

The court clerk states that the cases are randomly distributed across judges in an attempt to evenly distribute the workload. Table 1 provides information on the number of firms assigned to each judge and the initial year of the filing. Table 1 shows that the workload varies across judges. The number of cases for an individual judge ranges between 50 and 65. The majority of these filings, 90%, occurred between 1990 and 1993. Fifty-five percent of the cases were initiated in 1993, and 35% of the cases were initiated in 1990–1992. Hence, the results from the analysis should not be severely impacted by time series trends.

Moreover, these judges preside over different types of firms. Table 2 compares and contrasts the asset size and selected capital structure characteristics of debtor firms across judges using Duncan pairwise tests and F-statistics. Surprisingly, the judges who have the most cases (A, B, C) tend to have the largest firms. For example, the mean asset size for judge A is US$741,000, whereas the mean asset size for the judge with the fewest cases (D) is only US$344,000. Judge A presides over the largest, most insolvent closely held firms with the lowest percentage of secured debt. The mean percentage of secured debt relative to total debt claims is 32% and the mean debt/assets ratio is 4.4. Judge D presides

[7] In closely held firms, the owner is typically the Chief Executive Officer (CEO). As such, the CEO has an incentive to act selfishly and not liquidate when the market value of assets is less than the value of debt. In bankruptcy, the judge can take actions to increase the bargaining power of creditors relative to owners by removing the CEO. How CEO removal effects creditors' bargaining strategies in small firm bankruptcies is unclear. Due to the small number of requests, we exclude CEO removal from further analyses.

Table 2
Selected capital structure mean descriptive statistics across judges
The book value of assets at the beginning of the filing period is reported. Debt is the total amount of allowable claims. Allowable claims equal lenders' claims, deferred income taxes payable, dividend payable, accrued liabilities, and owner financing. The dollar amount of debt claims with a security interest is compared to the dollar amount of total debt. The *F*-statistic tests whether the five judges have debtor firms with similar capital structures. The null hypothesis is that the characteristics are similar across judges

Judge	A	B	C	D	E	*F*-statistic
Assets (US$ thousands)	741	506	572	344	401	**
Debt/assets	4.4	2.9	2.2	3.1	3.8	**
Secured debt/debt (%)	32	47	31	58	51	**

** Indicates significance at the 0.05 level.

over the smallest firms that have a mean secured debt/assets of 58% and a mean debt/assets ratio of 3.8.

5. Empirical results

5.1. Discretionary actions

Table 3 provides summary statistics of pro-debtor and pro-creditor discretionary actions. The number of days during the exclusivity period begins on the filing date and ends when a motion to lift the automatic stay is approved, the 180-day period ends without a request for extension or the request for extension is denied. For each of the five judges,

Table 3
Incidence of discretionary actions (no. of firms)
Debtor firms have 180 days to exclusively file the first plan of reorganization and get it accepted by the majority of creditors. Often owner/managers request an extension of the exclusivity period, whereas creditors request that the exclusivity period be lifted or shortened. Debtor-in-possession (DIP) financing is post-petition debt with superpriority status

Judge	A	B	C	D	E
Filings	65	63	60	50	52
Extension request	23	16	19	21	11
Lift request	27	29	26	21	26
DIP request	12	10	9	5	9
DIP challenged	7	8	7	1	8
Pro-debtor actions					
Extension granted	22	10	19	21	8
Lift denied	19	12	23	19	16
DIP granted	11	2	9	4	3
Pro-creditor actions					
Extension denied	1	6	0	0	3
Lift granted	8	17	3	2	10
DIP denied	1	8	0	1	6

the number of days in the exclusivity period, the number of requests to lift exclusivity, the number of requests to extend exclusivity, and the number of requests granted are determined for each case. Multiple requests from an individual firm are not considered. Then, the percentage of requests granted is computed from the total number of requests, and these percentages are compared across judges using nonparametric techniques.

All of the judges received requests to both extend and lift the exclusivity period. For example, 23% or 35% of the managers that had judge A requested extensions while 27% or 41% of the creditors requested that the extension period be lifted. Requests for an extension varied from 11% or 21% of the cases (judge E) to 35% of the cases (judge A).

Table 4
Descriptive statistics related to discretionary actions and outcomes

I. Number of days in the exclusivity period (#)

	N	Mean	Med.	Max.	Min.
Judge A	65	199	251	377	34
Judge B	63	87	112	191	10
Judge C	60	206	183	260	32
Judge D	50	215	190	263	6
Judge E	52	133	101	239	5

II. US$ Debtor-in-possession financing/US$ pre-petition debt (%)

	N	Mean	Med.	Max.	Min.
Judge A	12	21	14	70	3
Judge B	10	23	14	62	5
Judge C	9	38	16	120	5
Judge D	5	7	8	44	2
Judge E	9	17	12	51	5

III. Chapter 11 outcome (# firms)

	N	Debt restructure	Merger	Chapter 7 liquidation
Judge A	65	21	14	30
Judge B	63	11	0	52
Judge C	60	23	10	27
Judge D	50	8	13	29
Judge E	52	16	2	34

IV. Mean US$ violations of absolute priority/US$ pre-petition total debt (%) that grant ownership rights to pre-petition equityholders. The percentage measures the amount of the claim that equityholders received in a debt restructure or merger that should have been distributed to creditors

	N	Debt restructure	Merger
Judge A	35	10.9	12.8
Judge B	11	0.7	–
Judge C	33	14.0	20.6
Judge D	21	3.1	14.9
Judge E	18	1.1	23.7

Of the firms that requested an extension, judge A granted the most, 11% or 48% of the requests. The other judges extended the exclusivity period less frequently. In fact, judge B never granted an extension to a debtor firm's management.

Requests to lift the extension period varied from 21 cases (judge D) to 29 cases (judge B). Individual judges' willingness to grant extensions or lifts varies considerably. Judge D lifted the exclusivity period upon the request of a creditor the least—2% or 9% of the time. In contrast, the judge that never granted an extension (B) lifted the exclusivity period the most—17% or 59% of the time. F-statistics indicate that the percentages differ significantly across judges. Summary statistics regarding the number of days in the exclusivity period is presented in Table 4.

Table 4 also presents summary statistics on the dollar amount of debtor-in-possession financing as a percentage of allowable debt claims. The median percentage is within a narrow bound ranging from 8% to 14%. The mean and maximum percentages, however, vary considerably. The mean and maximum statistic range from 38% and 120% (judge C), respectively, to 7% and 44% (judge D). Table 3 provides additional information. Judges A, B, C, D, and E received requests for DIP financing from 19%, 16%, 15%, 10%, and 17% of their debtor firms, respectively. Creditors challenged these requests 58%, 80%, 78%, 20%, and 89% of the time, respectively. Judges A and C approved requests for DIP financing essentially all of the time, whereas judges B and E only granted the requests 20% and 33% of the time, respectively.

5.2. The effect of discretionary actions on firms' ability to reorganize

For the total sample, fewer firms were reorganized in Chapter 11 than were liquidated in Chapter 7.[8] Of the 118 firms that reorganized in Chapter 11, 79 restructured their debt and 39 were acquired as part of the plan of reorganization. A total of 172 cases were converted to Chapter 7 for several reasons: (1) continuing loss to estate and absence of reasonable likelihood of rehabilitation ($n=63$); (2) failure to propose a plan within a time fixed by the court ($n=42$); (3) unreasonable delay by debtor firm that is prejudicial to creditors ($n=17$); (4) insufficient assets to pay in full all administrative claimants ($n=19$); (5) failed acquisition ($n=4$); and (6) material default with respect to a confirmed plan or inability to effectuate a plan ($n=27$).

The logit regressions in Table 5 examine whether the judges' actions affect the likelihood of reorganization. The dependent variable equals one if the debtor firm restructured its debt or merged in Chapter 11 bankruptcy. Two regressions are computed: one for pro-debtor actions and one for pro-creditor actions. We limit our discussion of the findings to the effect of pro-debtor and pro-creditor actions on firms' ability to reorganize when secured lenders do and do not have claims. Asset size and the debt/assets ratio partially control for the differences in firm characteristics. The smallest firms with the highest percentage of secured debt are most likely to be liquidated in Chapter 7 bankruptcy.

[8] The probability of reorganization is 41% for the entire sample. However, Table 4 (III) shows that the probability of reorganization varies across judges. Under judges A and C, reorganization in Chapter 11 is more probable than liquidation in Chapter 7. The probabilities of reorganization in Chapter 11 are 53% and 58%, respectively. The probability of reorganization is less than the probability of liquidation for the remaining judges.

Table 5

A logistic regression that predicts the likelihood of reorganization (debt restructure or acquisition) compared to the likelihood of liquidation in Chapter 7 bankruptcy for the 290 firms in the sample

A positive coefficient indicates that the likelihood of reorganization (debt restructure or merger) increases as the independent variable rises. The predicted sign of the coefficient is reported next to the *p*-value. The Log (Assets) is a measure of firm size. The book value of assets at the beginning of the filing period is reported. Debt is the total amount of allowable claims. Allowable claims equal lenders' claims, deferred income taxes payable, dividend payable, accrued liabilities, and owner financing. The dollar amount of debt claims with a security interest is compared to the dollar amount of total debt. Secured debt claims are expected to decrease the probability of reorganization. The first column analyzes the effect of Pro-Debtor discretionary actions on a firm's ability to reorganize. In this column, Exclusionary Period equals one if the judge extended the exclusivity period beyond 180 days or rejected a creditor's request to lift or shorten the exclusivity period. Otherwise, this term equals zero. In this column, DIP Financing equals one if the judge grants a debtor firm's request for debtor-in-possession financing or rejects a creditor's challenge to a debtor-in-possession financing request. These Pro-Debtor Actions are expected to increase the likelihood of reorganization. The second column analyzes the effect of Pro-Creditor discretionary actions on a firm's ability to reorganize. Exclusionary Period equals one if the judge lifts or shortens the exclusivity period before 180 days or rejects a debtor firm's request to extend the exclusivity period beyond 180 days. DIP Financing equals one if the judge denies a debtor firm's request for debtor-in-possession financing or approves a creditor's challenge. Pro-Creditor Actions are expected to decrease the likelihood of reorganization. Interaction terms analyze whether judges' discretionary actions affect the probability of reorganization when secured creditors are involved in the process

	Reorganization (1) vs. liquidation in Chapter 7 (0)			
	Pro-debtor actions: coefficient (*p*-value)		Pro-creditor actions: coefficient (*p*-value)	
Intercept	− 3.68 (0.06) *		− 1.96 (0.33)	
Log (Assets)	0.24 (0.09) *		0.12 (0.05) * *	
Debt/assets	− 0.02 (0.40)		− 0.03 (0.36)	
Secured debt/debt	− 2.31 (0.02) * *	−	−2.37 (0.04) * *	−
Exclusivity period	14.26 (0.98)	+	− 0.84 (0.03) * *	−
Exclusivity period * Secured debt/debt	− 14.45 (0.97)	+	− 3.27 (0.10) *	−
DIP Financing	2.08 (0.07) *	+	− 0.41 (0.59)	−
DIP Financing * Secured debt/debt	1.75 (0.38)	+	− 0.93 (0.42)	−
Log likelihood	209.34 ($p=0.11$)		321.26 ($p=0.01$)	

* Significant at the 10% level.

* * Significant at the 5% level.

In Table 5, the first regression measures the relationship between the incidence of reorganization and pro-debtor discretionary actions. Pro-debtor actions are expected to increase the likelihood of reorganization. In the regression, Exclusivity Period equals one when the judge either agrees to extend the period or denies creditors' request to lift the exclusivity period. DIP Financing equals one when the judge grants post-petition super-priority debt. The findings, in general, are inconsistent with pro-debtor actions affecting the outcome within Chapter 11 bankruptcy. Debtor firms that are able to extend the exclusivity period are not more likely to survive than other debtor firms. The Exclusivity Period coefficients of 14.26 and 14.45 are statistically insignificant. Thus, equityholders' option to delay does not change the outcome. Post-petition financing marginally increases the probability of reorganization. The regression estimate of 2.08 ($p=0.07$) implies that, in general, the allowance of superpriority financing increases the likelihood of reorganization by 12%. DIP financing, however, has no effect on the outcome when firms rely on secured debt. The statistically insignificant coefficient of 1.75 is consistent with secured lenders having a strong bargaining position in Chapter 11 bankruptcy.

The second regression in Table 5 measures the relationship between the incidence of reorganization and Pro-Creditor actions. In this regression, Exclusivity Period equals one when judges either lift or deny an extension of the exclusivity period. DIP Financing equals one when the judge denies post-petition financing. Giving creditors early participation in the process by lifting or denying an extension of the exclusivity period is expected to be detrimental to equityholders. The regression estimate of -0.84 ($p=0.03$) implies that the likelihood of reorganization decreases by 3%. The effect is larger for firms that rely on secured debt. The coefficient of -3.27 ($p=0.10$) indicates that the likelihood of reorganization decreases substantially. In contrast, denying debtor firms' DIP financing does not significantly affect the outcome in Chapter 11 bankruptcy. The coefficients of -0.41 and -0.93 are statistically insignificant. Apparently, the denial of post-petition financing is not a new signal regarding debtor firms' solvency.

5.3. The effect of discretionary actions on creditors' willingness to deviate from absolute priority

This section analyzes whether pro-debtor or pro-creditor actions are related to deviation from absolute priority, equityholders ability to receive any value of the firm that should have been distributed to creditors in a confirmed Chapter 11 reorganization plan.[9] To determine the economic significance, we calculate the percentage dollar deviations from absolute priority. The negative intercept coefficients indicate that most closely held firms do not confirm reorganization plans that deviate from absolute priority. Priority is violated in only 18% of the confirmed plans of reorganization. Priority is generally violated only for unsecured creditors.

Of the 118 firms that reorganized, the average deviations are 6% and 17% for debt restructures and mergers, respectively.[10] Apparently, equityholders are able to extract more from creditors during mergers than debt restructures. This finding may indicate that their participation is deemed to be more essential in a merger that frequently involves a third party. In Table 4 (IV), the mean percentage of deviation is high for merger across all judges. Another plausible explanation is that, in this sample, the secured suppliers that facilitated all of the mergers are more willing to provide debt relief. Banks have a greater involvement in debt restructures.

Table 6 reports the results from logistic models that relate the incidence of deviation from absolute priority to pro-debtor and pro-creditor actions for the sample of firms that reorganized in Chapter 11 bankruptcy. The dependent variable equals one when a confirmed plan of reorganization deviated from absolute priority. The smallest firms with secured debt have confirmed plans of reorganization that are least likely to deviate from

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[9] See Eberhart and Lemma (1993) and Betker (1995).

[10] These deviations are much higher than the 2.2% equityholders receive in large firm traditional Chapter 11 bankruptcies (see McConnell et al., 1996).

Table 6

A logistic regression that predicts the likelihood that a confirmed plan of reorganization violates absolute priority in the sample of 118 Chapter 11 reorganizations that restructured debt restructure or merged

A violation of absolute priority occurs when equityholders receive a distribution before all of the creditors have been paid in full

A positive coefficient indicates that the likelihood of reorganization (debt restructure or merger) increases as the independent variable rises. The predicted sign of the coefficient is reported next to the *p*-value. The Log (Assets) is a measure of firm size. The book value of assets at the beginning of the filing period is reported. Debt is the total amount of allowable claims. Allowable claims equal lenders' claims, deferred income taxes payable, dividend payable, accrued liabilities, and owner financing. The dollar amount of debt claims with a security interest is compared to the dollar amount of total debt. Secured debt claims are expected to decrease the probability of reorganization. The first column analyzes the effect of Pro-Debtor discretionary actions on a firm's ability to reorganize. In this column, Exclusionary Period equals one if the judge extended the exclusivity period beyond 180 days or rejected a creditor's request to lift or shorten the exclusivity period. Otherwise, this term equals zero. In this column, DIP Financing equals one if the judge grants a debtor firm's request for debtor-in-possession financing or rejects a creditor's challenge to a debtor-in-possession financing request. These Pro-Debtor Actions are expected to increase the likelihood of reorganization. The second column analyzes the effect of Pro-Creditor discretionary actions on a firm's ability to reorganize. Exclusionary Period equals one if the judge lifts or shortens the exclusivity period before 180 days or rejects a debtor firm's request to extend the exclusivity period beyond 180 days. DIP Financing equals one if the judge denies a debtor firm's request for debtor-in-possession financing or approves a creditor's challenge. Pro-Creditor Actions are expected to decrease the likelihood of reorganization. Interaction terms analyze whether judges' discretionary actions affect the probability of reorganization when secured creditors are involved in the process

	Violation (1) vs. adherence (0)			
	Pro-debtor actions coefficient (*p*-value)		Pro-creditor actions coefficient (*p*-value)	
Intercept	− 4.31 (0.02)**		− 5.94 (0.09)*	
Log (Assets)	0.16 (0.05)**		0.30 (0.11)	
Debt/assets	− 0.12 (0.52)		− 0.29 (0.31)	
Secured debt/debt	− 0.09 (0.04)**	−	− 0.17 (0.01)**	−
Exclusivity period	− 0.69 (0.07)*	+	0.53 (0.04)*	−
Exclusivity period * Secured debt/debt	3.08 (0.71)	+	0.06 (0.01)*	−
DIP financing	1.50 (0.16)	+	− 0.19 (0.32)	−
DIP financing * Secured debt/debt	− 0.77 (0.98)	+	− 0.25 (0.96)	−
Log likelihood	211.86 ($p = 0.10$)		213.53 ($p = 0.06$)	

* Significant at the 10% level.

** Significant at the 5% level.

absolute priority. The intent, however, is to examine whether judges' discretionary actions are related to the incidence of deviation. Debtor-in-possession financing is unrelated to the incidence of deviation.

The first regression in Table 6 examines whether the incidence of deviation from absolute priority is related to pro-debtor actions. If judges take actions that enable shareholders to make decisions that are costly to creditors, such as agreeing to an extension of the exclusivity period, creditors may agree to deviations. Hence, creditors should be most willing to provide debt relief when the exclusivity period is not extended. For confirmed plans of reorganization, the evidence in Table 6 is consistent with creditors providing debt relief in exchange for early participation in the process. In the first regression, the regression estimate of -0.69 ($p=0.07$) is consistent with creditors adhering to absolute priority and, hence, imposing costs on equityholders that request and obtain extensions of the exclusivity period. The second regression in Table 6 analyzes whether deviation from absolute priority is related to pro-creditor discretionary actions. The results are consistent with reductions in the exclusivity period coinciding with confirmed plans of reorganization that deviate from absolute priority. The regression estimates of 0.53 ($p=0.04$) and 0.06 ($p=0.01$) imply that deviation from absolute priority is more likely when the judge lifts or fails to extend the exclusivity period.

6. Summary and conclusions

This study investigates the effect of judges' discretionary action on debt renegotiation within Chapter 11 bankruptcy. To date, the existing literature has not fully explained what determines the incentives of companies and their creditors to recontract within formal bankruptcy (see John, 1993). Brown (1989), Giammarino (1989), and Weiss (1990) suggest that court settlement uncertainty (judicial discretion) impacts claimants bargaining strategies within Chapter 11 bankruptcy and that creditors' incentives to settle out of court are affected by the legal and institutional aspects of the bankruptcy process. Yet, detailed empirical analyses of the legal aspects of the bankruptcy process, and their effect on claimants' bargaining is sparse. This study complements a growing literature on the outcomes of distressed reorganization.

The evidence indicates that judges' decisions regarding the exclusivity period are correlated with the Chapter 11 outcome. Extensions of the exclusivity period are negatively related to firms' ability to obtain deviations from absolute priority when plans of reorganization are confirmed. Extensions also are unrelated to debtor firms' ability to reorganize under Chapter 11 bankruptcy. The evidence is consistent with equityholders being unable to use Chapter 11 to behave opportunistically. The allowance of debtor-in-possession financing marginally increases the likelihood of reorganization. This discretionary action most likely benefits both equityholders and creditors. Additional evidence indicates that although shortening the extension period decreases the probability that a firm will reorganize within Chapter 11 bankruptcy, this action by judges increases the likelihood of deviations from absolute priority when a plan of reorganization is confirmed.

The results from the study and, thus, the contribution to the literature are that when judges take pro-creditor discretionary actions, the probability of reorganization is lower but the probability of deviation from absolute priority is higher. Whereas, in contrast, when judges take pro-debtor actions, higher probabilities of reorganization and deviation from absolute priority are not observed.

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