

Why Are Delaware and New York Bankruptcy Reorganizations Failing?

Lynn M. LoPucki*

Joseph W. Doherty**

I.	INTRODUCTION	1934
II.	METHODOLOGY.....	1937
III.	DO DELAWARE AND NEW YORK REORGANIZATIONS FAIL MORE OFTEN?.....	1939
	A. <i>Measured by Refiling</i>	1939
	B. <i>Measured by Business Failure</i>	1939
	C. <i>Measured by Business Performance</i>	1942
	D. <i>Measured by Plan Failure</i>	1944
	E. <i>Conclusions</i>	1945
IV.	POSSIBLE FAILURE CAUSES EXOGENOUS TO DELAWARE.....	1946
	A. <i>What Firm Characteristics Make Reorganization Difficult?</i>	1946
	1. Degree of Financial Distress Prior to Filing.....	1947
	a. <i>Prefiling Leverage</i>	1947
	b. <i>Abnormal Prefiling Leverage</i>	1948
	c. <i>Prefiling Losses</i>	1948

* Lynn M. LoPucki is the Security Pacific Bank Professor of Law at the UCLA School of Law (lopucki@law.ucla.edu). We thank the Council on Research of the UCLA Academic Senate and the UCLA Law School for the financial support that made this study possible. We thank Stephen Choi, Hulya Eraslan, Frances Foster, Matthias Kahl, Ken Klee, Harvey Miller, John Pottow, Bob Rasmussen, Alan Schwartz, David Skeel, Lynn Stout, Elizabeth Warren, Jay Westbrook, and participants in the Vanderbilt University Law School Symposium, "Convergence on Delaware: Corporate Bankruptcy and Corporate Governance," the Law and Economics Workshop at the University of California at Berkeley School of Law (Boalt Hall), and the UCLA/USC Corporate Law Roundtable for comments on earlier drafts. We thank Jason Burnett, Steve Cademartori, Paul Ham, and Chris Wichrowski for assistance with research. The data used in statistical testing are available at <http://www.law.ucla.edu/erg/pubs.html> (last visited Aug. 28, 2002) along with the SPSS command file for the statistical tests reported.

** Joseph W. Doherty is the Associate Director of the UCLA School of Law's Empirical Research Group.

	<i>d.</i>	<i>Recency of Decline in Prefiling Profits</i>	1949
	2.	Size and Complexity of Capital Structure ..	1951
	<i>a.</i>	<i>Size</i>	1951
	<i>b.</i>	<i>Complexity of Capital Structure</i>	1952
	3.	Industry	1954
	4.	Multiple Regression Analysis.....	1954
	<i>B.</i>	<i>Are Delaware-Reorganizing Firms Different?</i>	1956
	<i>C.</i>	<i>Conclusions</i>	1956
V.		IS DELAWARE'S FAILURE RATE EFFICIENT?	1958
	<i>A.</i>	<i>Framing the Issues</i>	1958
	<i>B.</i>	<i>Does Delaware Have an Offset?</i>	1959
	1.	From Reorganizing a Larger Proportion of Firms.....	1959
	2.	From Better Results in Complete Liquidations.....	1960
	3.	From Better Results in Partial Liquidations	1961
	4.	From Firms Emerging Privately.....	1962
	5.	From Savings on the Direct Costs of Bankruptcy	1963
	6.	From Savings on the Indirect Costs of Bankruptcy	1964
	<i>C.</i>	<i>Conclusions</i>	1966
VI.		POSSIBLE FAILURE CAUSES ENDOGENOUS TO DELAWARE.....	1967
	<i>A.</i>	<i>Postbankruptcy Earnings</i>	1967
	<i>B.</i>	<i>Postbankruptcy Leverage</i>	1969
	<i>C.</i>	<i>Reduction in Firm Size</i>	1971
	<i>D.</i>	<i>Prepackaging</i>	1972
	<i>E.</i>	<i>Speed</i>	1975
	<i>F.</i>	<i>Plan Complexity</i>	1977
	<i>G.</i>	<i>Multiple Regression Analysis</i>	1979
	<i>H.</i>	<i>Conclusions</i>	1982
VII.		CONCLUSIONS, SPECULATIONS, AND DIRECTIONS FOR FUTURE RESEARCH.....	1983

I. INTRODUCTION

Before 1990, the United States Bankruptcy Court for the District of Delaware was a sleepy backwater. During the entire decade of the 1980s, Phoenix Steel—whose only plant was located in

Delaware—was the only large, public company to file there.¹ In 1990, two large, public companies—Continental Airlines and United Merchants and Manufacturers—filed in Delaware. They constituted 7% of the twenty-nine large, public companies filing in the United States that year.² From 1990 to 1996, Delaware's market share steadily increased to 87% (thirteen of fifteen cases).³ In just seven years, Delaware had become the bankruptcy reorganization capital of the United States.⁴

Lynn LoPucki and Sara Kalin recently suggested that the Delaware bankruptcy court's spectacular success in winning market share may have been accompanied by an equally spectacular failure in the reorganizations that the court processed during those years.⁵ Their suggestion was based principally on an empirical finding that by February 2000, nine of the thirty companies (30%) emerging from bankruptcy reorganization in Delaware from 1991 to 1996 had filed bankruptcy a second time.⁶ Excluding New York—which had a refiling rate almost as high as Delaware's (23%)—only four of the seventy-five large, public companies (5%) emerging from bankruptcy in other courts during the same period filed a second time.⁷

LoPucki and Kalin's study made only a preliminary attempt to discover the reasons for Delaware's higher refiling rate. But, as their findings on the disparity of refiling rates gained wide publicity,⁸ bankruptcy scholars, lawyers, and judges offered a variety of possible explanations. Most of those explanations sought to exonerate the courts. Some argued that refiling is an inadequate measure of success,

1. See, e.g., Lynn M. LoPucki & Sara D. Kalin, *The Failure of Public Company Bankruptcies in Delaware and New York: Empirical Evidence of a "Race to the Bottom"*, 54 VAND. L. REV. 231, n.6, 232 (2001).

2. Lynn M. LoPucki, Bankruptcy Research Database, at <http://lopucki.law-lib.ucla.edu> (last visited Oct. 30, 2002).

3. *Id.*

4. See Theodore Eisenberg & Lynn M. LoPucki, *Shopping for Judges: An Empirical Analysis of Venue Choice in Large Chapter 11 Reorganizations*, 84 CORNELL L. REV. 967, 983-87 (1999) (describing the reasons for the shift in filings to Delaware).

5. See *supra* note 1, at 236 ("Paradoxically, large public companies in need of bankruptcy reorganizations seem to be flocking to the courts least likely to reorganize them successfully."), available at <http://www.lexis.com> (last visited Oct. 18, 2002).

6. See LoPucki & Kalin, *supra* note 1, at 250 (Table 5).

7. *Id.* at 250.

8. See, e.g., Peter Aronson, *Study Faults Delaware Court*, NAT'L L.J., Sept. 18, 2000, at B1 (summarizing the LoPucki/Kalin study along with comments from lawyers); Jef Feeley, *Companies Are Not Getting Proper Bankruptcy Help, Study Says*, BLOOMBERG NEWS, July 31, 2000 (same); Michelle Johnson, *Has the Market Misgauged Delaware's Efficiency?*, BANKR. CT. DECISIONS: WKLY. NEWS & COMMENT, Aug. 10, 2000 (reporting that LoPucki & Kalin's high refiling rate finding "has the academic community buzzing").

because it ignores distressed debtors that fail without refiling.⁹ Some argued that the firms filing in Delaware might have been more difficult to reorganize because they had more complex capital structures¹⁰ or more serious business problems.¹¹ Others argued that Delaware's high refiling rate was economically efficient,¹² implying that other courts should ease their standards and accept higher refiling rates. Still others argued that it was impossible to know whether Delaware was doing a worse job without knowing the individual reasons that each reorganization failed.¹³

This Article reports the results of a study designed to confirm that Delaware's and New York's higher *refiling* rates indicate higher *failure* rates and to begin the inquiry into the reasons for those higher failure rates. Part II describes the universe of cases studied, the sources of data, and the method by which the data were gathered.

9. Robert K. Rasmussen & Randall S. Thomas, *Whither the Race? A Comment on the Effects of the Delawareization of Corporate Reorganizations*, 54 VAND. L. REV. 283, 294 (2001) ("The first problem with focusing exclusively on refiling rates is that a recurrence of financial distress does not necessarily lead to a second bankruptcy proceeding."); David A. Skeel, Jr., *What's So Bad About Delaware?*, 54 VAND. L. REV. 309, 318 (2001) ("LoPucki and Kalin drop a firm from their study, for instance, if it merges with or is sold to another firm during or after bankruptcy. Yet a merger or sale may often be the best possible outcome for the creditors of the firm."); E-mail from Tom Salerno, Partner, Squires, Sanders & Dempsey, to Lynn M. LoPucki, Professor, UCLA School of Law (Sept. 22, 2001) (on file with author) (arguing that in jurisdictions other than Delaware and New York, "there are sale plans or cases with a dominant secured creditor such that if there's a plan default the secured creditor will foreclose").

10. See, e.g., Michelle Johnson, *Chapter 22: Who's to Blame?*, BANKR. CT. DECISIONS: WKLY. NEWS & COMMENT, July 5, 2001 (quoting Harvard Business School Professor Stuart Gilson's statement that it may be "a different and more complicated type of company that goes into Delaware with a larger, more complex capital structure. So it is not fair to indict Delaware courts for not doing their job."), available at <http://www.lexis.com> (last visited Oct. 18, 2002); Skeel, *supra* note 9, at 319 ("First, the firms that file for bankruptcy in Delaware may have more complicated capital structures—such as more classes of debt and stock—than firms that take their cases elsewhere.").

11. E.g., Skeel, *supra* note 9, at 320 ("Second, the firms that file for bankruptcy in Delaware may be the ones with the most serious business problems.").

12. See, e.g., *id.* at 312 n.16 ("[I]t is also quite possible that the benefits of a quicker and less costly Delaware reorganization more than offset the greater likelihood of a second reorganization."). Professors Rasmussen and Thomas agree with Professor Skeel, but only with respect to prepackaged bankruptcies. See Rasmussen & Thomas, *supra* note 9, at 291 n.29 (arguing that prepackaged bankruptcies are just efforts to determine whether a full-blown Chapter 11 proceeding is necessary).

13. See Aronson, *supra* note 8, at B4 (noting that bankruptcy specialists, including New York bankruptcy attorney Harvey Miller and Delaware bankruptcy attorney Mark Collins, believe that "conclusions could only be drawn after the facts of each refiling are examined—but not based solely on the number of refilings"); Michelle Johnson, *What Other Legal Scholars Think of the LoPucki/Kalin Study*, BANKR. CT. DECISIONS: WKLY. NEWS & COMMENT, BCD NEWS & COMMENT, Aug. 10, 2000 (quoting UCLA Law Professor Ken KJee, "It's not valid to jump to the conclusion and say, 'Delaware must be bad.' You have to ask why the system in Delaware doesn't work as well as elsewhere if you're measuring success in terms of refiling statistics."), available at <http://www.lexis.com> (last visited Oct. 18, 2002).

Part III describes four criteria for evaluating the success of reorganized firms and applies them to determine whether Delaware and New York reorganizations are less successful than reorganizations in other courts. Part III concludes that in the five years after emerging, Delaware- and New York-reorganized firms refiled more often, failed to perform their plans more often, suffered greater losses, and even went out of business due to financial distress more often. Part IV compares, on several criteria, the firms entering reorganization in Delaware and New York with those entering reorganization elsewhere but finds no reason to believe that the Delaware- or New York-reorganized firms differed in ways that made them more difficult to reorganize. Part V considers and rejects the claim that the two courts' high failure rates might be efficient. Part VI examines several differences in the bankruptcy process as it operates in Delaware, New York, and other courts, concluding that certain differences in Delaware's reorganization process appear to contribute to Delaware's high failure rates. Part VII offers some additional conclusions and speculations on other, as-yet-untested features of Delaware reorganization that might also contribute to Delaware's high failure rates.

Because the phenomena we examine appear more distinctly in the Delaware data than in the New York data, we focus our discussion on Delaware. Some of the conclusions that we draw solely with respect to Delaware, however, might also be drawn with respect to New York.

II. METHODOLOGY

This study analyzed the reorganizations of all companies that (1) were large, public companies at the time they filed for reorganization in a United States bankruptcy court and (2) emerged from reorganization as operating public companies during the period from January 1, 1991 to December 31, 1996. We chose this period because the Delaware bankruptcy court began the period with no market share, built to an 87% market share, and ended the period "locked-in" as the preeminent reorganization court in the United States.¹⁴ Measured by the standard of the marketplace, it was a period of astonishing success for the Delaware bankruptcy court.

The universe of eligible firms was identified from Lynn M. LoPucki's Bankruptcy Research Database ("BRD").¹⁵ The application

14. From 1996 through 2001, 57% of all bankruptcy filings by large public companies in the United States (123 of 215) were in Delaware. See LoPucki, *supra* note 2.

15. Under BRD protocols, a company is considered "public" at filing if it filed a Form 10-K for a year ending within three years prior to its bankruptcy filing and if the company did not

of the above criteria identified twenty-six Delaware reorganizations, sixteen New York reorganizations, and fifty-six reorganizations in other courts, for a total of ninety-eight reorganizations.

We obtained most of the financial data for the five years prior to filing and the five years after the effective date of the plan¹⁶ from Compustat, a service that extracts that data from the firms' filings with the Securities and Exchange Commission. For several firms, Compustat had no data. For many, Compustat's data did not cover all of the relevant years. For both groups of firms, we obtained some or all of the data directly from the firms' SEC filings. We obtained nonfinancial data principally from the BRD. The BRD data ultimately came from a variety of published and unpublished sources, including court files, SEC filings, newspapers, newsletters, and bankruptcy data services.

We report data for three categories of courts. "Delaware" indicates the United States Bankruptcy Court for the District of Delaware, which sits only in Wilmington. "New York" indicates the Manhattan division of the United States Bankruptcy Court for the Southern District of New York.¹⁷ "Other Courts" indicates all United States Bankruptcy Courts other than those sitting in Wilmington and New York City. The methodologies employed with respect to particular issues are explained in the relevant sections below.

take steps to go private more than one year before its bankruptcy filing. Lynn M. LoPucki, *Protocols for the Bankruptcy Research Database*, Aug. 31, 2001 (draft on file with authors). A company is considered public at emergence if it filed a 10-K for a year ending within three years after confirmation of its plan. *Id.* Companies are considered "large" under those protocols if, on their last 10-K filed prior to bankruptcy, they report total assets in excess of \$100 million, measured in 1980 dollars (or about \$216 million in 2001 dollars). Companies that otherwise met the requirements for inclusion, but whose plans provided for their gradual liquidation after bankruptcy, were excluded.

16. "Effective date of the plan" is a term of art referring to the date on which the plan of reorganization confirmed by the court becomes effective between the parties to the case. That date is usually shortly after the "confirmation date"—the date on which the court entered its order confirming the plan of reorganization.

17. Cases in other court locations in the Southern District of New York are heard by a different panel of judges. With respect to venue and refiling, those cases more closely resemble the cases of Other Courts than the New York City cases. For that reason, they are included in the statistics for Other Courts.

III. DO DELAWARE AND NEW YORK REORGANIZATIONS FAIL MORE OFTEN?

A. Measured by Refiling

The data show that during their first five years, firms emerging from Delaware bankruptcy court reorganizations refile more often than firms emerging from Other Court reorganizations. Specifically, firms emerging from Delaware reorganization were more than ten times as likely to refile (42%) during this period than were firms emerging from reorganization in Other Courts (4%) and more than twice as likely to refile as firms emerging from New York reorganization (19%) (Table 1). This difference in refiling rates is statistically significant at the .001 level.

Table 1: Refiling Rates by Court

Status	Bankruptcy Court			Total
	Delaware	New York	Other Courts	
Not refiling	58%	81%	96%	84%
Refiling	42%	19%	4%	16%
N	26	16	56	98

Pearson chi-square = 19.585, df = 2, p < .001

B. Measured by Business Failure

The plans for each of the ninety-eight firms studied contemplated that the reorganized firms would remain in business indefinitely.¹⁸ In fact, only seventy (71%) remained in business for even five years after confirmation (Table 2).¹⁹

18. In a few cases, plans provided that the firms would emerge as public companies but would gradually liquidate after emerging. We omitted those firms from the study.

19. To determine whether a firm "remained in business" we applied the following criteria. Neither the fact that the emerging firm acquired the stock of another firm nor that the emerging firm's stock was acquired by another was by itself sufficient to classify the firm as discontinued. That remained true even if the acquired firm was merged with an empty shell subsidiary of the acquirer. But if the firms merged in such a manner that the assets of acquirer and acquired were commingled in the ownership of a single entity (an "asset merger"), we considered the emerging firm to have been discontinued. We made two exceptions. First, if the emerging firm was clearly the dominant party in the transaction, we considered the emerging firm to remain in existence. Second, the emerging firm's retention of its separate identity as a subsidiary immediately after acquisition was not sufficient to consider it continuing if at the time of the acquisition the acquirer expressed an intention to integrate the assets of the emerging firm into its business.

Table 2: Business Continuation Rates by Court

Status	Bankruptcy Court			Average/ Total
	Delaware	New York	Other Courts	
Continuing	65%	75%	73%	71%
Not continuing	35%	25%	27%	29%
N	26	16	56	98

Pearson chi-square = .653, df = 2, p = .721

Although the proportion of Delaware firms surviving for five years was lower than those for New York and Other Courts, the differences among them were not statistically significant. Delaware's lower survival rate may have occurred by chance.

Business continuation is, however, an imperfect measure of success. Mergers and liquidations, even when they occur within a few years after a plan that does not contemplate them, are not necessarily business failures. Even a successful firm might merge into a larger business, either because the deal is attractive or because a hostile takeover eliminated its options. In theory, at least, even a piecemeal liquidation might be a success from the standpoint of the firm's investors if the pieces sell for a sufficiently high price.

The particular firms we classified as "liquidated" after emerging were clearly failures of their earlier reorganizations. All were liquidated through bankruptcy refiling, and all had negative total earnings from the time they emerged from the first bankruptcy until they filed the second bankruptcy. But many of the firms that were discontinued through mergers had postreorganization earnings exceeding those of firms continuing in business. On the whole, the postreorganization earnings of firms discontinued by merger were lower than the postreorganization earnings of continuing firms, but the difference was not even significant.²⁰ We concluded that some of the mergers were distress mergers tantamount to the failure of the emerging firm's business, but that others were successes or something in between.

20. We standardized profits by company size for purposes of comparing them. The profits are expressed as percentages of the firms' sizes, with size calculated as the average of a firm's total assets and sales. In this metric, the average profit after reorganization for merged firms was -3% of firm size, which is not significantly different from the average profit after reorganization for continuing firms (-1%) (N = 89, F = .584, df = 1, p = .447).

To take account of this difference, we divided the merger cases into two groups, classifying those with positive postbankruptcy earnings prior to the date of merger as business "successes" (along with all firms continuing in business for five years after confirmation) and those with negative postbankruptcy earnings to the date of merger as "failures" (along with all firms liquidating during the five years after confirmation).²¹ Using these classifications, Table 4 shows the distribution of business success and failure by reorganization court.

21. Of the twenty-eight firms that discontinued operations, six (21%) did so by liquidation, while twenty-two (79%) did so by merger into other firms in such a manner that they lost their separate existence. Table 3 shows what the data from Table 2 look like when the firms that "merged" out of existence are distinguished from the firms that "liquidated." Theoretically, the distinction is an imperfect one. But the six liquidations in the cases studied were all financial disasters, and all six occurred in subsequent bankruptcy cases. These liquidations—the more certain failures—tend to be concentrated in Delaware and New York, which in itself somewhat undermines the conclusion that Delaware and New York's rate of business failure is no greater than that of Other Courts.

**Table 3: Business Continuation Rates by Courts,
Separating Mergers and Liquidations**

Status	Bankruptcy Court			Total
	Delaware	New York	Other Courts	
Continuing	65%	75%	73%	71%
Merged	23%	13%	25%	22%
Liquidated	12%	13%	2%	6%
N	26	16	56	98

Pearson chi-square = 5.088, df = 4, p = .278

Table 4: Business Failure Rate by Court

Status	Bankruptcy Court			Total ²²
	Delaware	New York	Other Courts	
Continuing or merged without distress	76%	75%	88%	82%
Liquidated or merged in distress	24%	25%	13%	18%
N	25	16	56	97

Pearson chi-square = 3.025, df = 2, p = .220

Our three-way categorization of the courts does a poor job of explaining business failure. When we compare subsets, however, the differences are somewhat significant.²³ The business failure rate between Delaware and Other Courts is significant at the .10 level.²⁴ Moreover, when the Delaware cases are combined with the New York cases into a single category, the difference between that combination and Other Courts is significant at the .07 level.²⁵ Businesses reorganized in Delaware and New York appear more likely to fail than businesses reorganized in Other Courts.

C. Measured by Business Performance

The purpose of a business is to earn profits; a business that does not do so can fairly be said to have failed. Profits reported on a firm's income statement are admittedly an imperfect measure of success,²⁶ but they are nevertheless a useful one.

22. Three firms emerged from reorganization twice during the period of this study. Both of Memorex/Telex's reorganizations occurred in Delaware, and the company failed within five years of the first emergence. LoPucki & Kalin, *supra* note 1, at 259-60. Memorex/Telex is counted as only a single failure, because only a single firm failed. TWA emerged from one reorganization in Delaware and a second in Other Courts and continued in business for more than five years after the second emergence. *Id.* at 262-63. TWA is counted as a success for Delaware and Other Courts. Lomas Financial emerged from one reorganization in New York and a second in Other Courts and continued in business for more than five years after the second emergence. LoPucki, *supra* note 2. Lomas is counted as a success for New York and Delaware.

23. p = .220.

24. Fisher's Exact p = .10 (one-sided).

25. Fisher's Exact p = .07 (one-sided).

26. Some consider particular kinds of businesses "successful" even though those businesses have not earned profits. One example is Amazon.com, which was considered by many to have been a successful business long before it reported a profit on an income statement. Another

We collected two measures of profits for the first five full fiscal years after the firm emerged from bankruptcy: profit (loss)²⁷ and operating profit (loss) after depreciation.²⁸ The figure used for each firm was the average for as many of the five years as were available.²⁹ To control for the sometimes widely differing sizes of the emerging firms, the profits were expressed as percentages of the firms' sizes. The size of a firm for this purpose was the average of its total assets³⁰ and sales.³¹

We calculated the averages and medians of the annual average postbankruptcy earnings for the cases in each of the three jurisdictions. The average earnings for Delaware-reorganizing firms in the period after bankruptcy were negative in an amount equal to 9% of the firm's entire size—an astonishingly poor performance (Table 5). By contrast, firms reorganized in Other Courts on average had positive earnings in amounts equal to 1% of their size. The median earnings for Delaware firms were negative in an amount equal to 4% of firm size each year, while the median Other Court firm had positive earnings of 1% of firm size. The differences in earnings between courts is highly significant.³² Firms emerging from Delaware reorganization have consistently lower postbankruptcy earnings than firms emerging from reorganization in New York or in Other Courts.

example is a business that provides tax benefits to its owners sufficient to provide a favorable rate of return even if the business were never profitable by accounting measures.

At least one commentator on this Article suggested that we should have used cash flows rather than profits as the measure of success. We rejected that measure because of the tendency of cash flows to be tautological for firms in financial difficulty. That is, a firm in financial difficulty is nearly always short of cash. The firm spends all the cash it can get and does not spend more only because the firm does not have it. Thus, cash outflow tends to equal cash inflow.

27. Compustat Consultants, Inc., Compustat industrial annual data array codes, data item number 172, at <http://faculty.gsm.ucdavis.edu/~data/anncodes.html> (last visited Oct. 22, 2002).

28. *Id.*, data item number 178. This measure is sometimes referred to as EBIT, earnings before interest and taxes.

29. Many firms have short fiscal years immediately after their emergence from bankruptcy or before their merger or liquidation. These short fiscal years were ignored. Unless data were available for at least one full (twelve-month) fiscal year, the firm was treated as having no data available.

30. Compustat, *supra* note 27, data item number 6.

31. Compustat, *supra* note 27, data item number 12.

32. $p < .01$.

Table 5: Average Annual Profits During Five Years After Emerging, as a Percentage of Firm Size

Court	Operating Profits			Profits		
	Average of Averages	Median of Averages	N	Average of Averages	Median of Averages	N
Delaware	1%	0%	25	-9%	-4%	26
New York	4%	3%	15	-3%	0%	15
Other Courts	7%	6%	49	1%	1%	54
Total	5%	4%	89	-2%	0%	95

F = 5.529, df = 2, p = .006

F = 6.852, df = 2, p = .002

D. Measured by Plan Failure

The criteria of refiling and business failure are separate measures of reorganization failure in that a firm's business can completely fail without the firm refiling, and a firm can refile even though its business has not completely failed. Thus, each of these measures recognizes some failures not recognized by the other.

"Plan failure" is a criterion that recognizes both kinds of failure simultaneously.³³ That is, it treats a reorganization as a failure if the firm refiles, liquidates, or distress-merges³⁴ within five years of emerging.³⁵ By this criterion of failure, Delaware also fares poorly.

33. The name "plan failure" signifies that reorganizations that fail by this criterion either do not perform their plans or perform them only technically, in a manner financially disappointing to investors.

34. Our criteria for classifying a merger as "distress" are discussed in note 20 and text accompanying note 21.

35. One additional kind of failure is possible—namely, default under a plan followed by a workout agreement that enables the firm to remain in business. Only one of the firms, Amdura, engaged in such a workout. Because Amdura merged within five years, its reorganization was already counted as having failed. LoPucki, *supra* note 2, at <http://lopucki.law-lib.ucla.edu> (last visited Oct. 30, 2002).

Table 6: Plan Failure Rate by Court

Status	Bankruptcy Court			Total
	Delaware	New York	Other Courts	
Succeeded	46%	69%	86%	72%
Failed	54%	31%	14%	28%
N	26	16	56	98

Pearson chi-square = 14.053, df = 2, p = .001

Fifty-four percent of the Delaware reorganization plans failed (Table 6).³⁶ That figure compares with only 31% of New York plans and 14% of Other Court plans. The difference between Delaware's plan failure rate and the plan failure rate in New York or Other Courts is statistically significant.³⁷ The failure rate in Delaware was three times the overall failure rate of New York and Other Courts combined (18%).

Aside from its relevance as a direct measure of failure, plan failure also serves an important methodological purpose in this study. Because it identifies more failures than either the refiling or the business failure measures from which it is composed, it yields statistically significant results in tests where neither of those measures do.

E. Conclusions

Delaware-reorganized firms were significantly more likely to refile, significantly more likely to go out of business as a result of their financial distress, and significantly less likely to perform successfully under their plans of reorganization. They also had significantly lower postbankruptcy earnings. These findings warrant the conclusion that Delaware-reorganized firms emerging in the period from 1991 to 1996 failed more often than firms emerging from reorganization in Other Courts.

36. Mergers are not necessarily failures in plan performance. In a typical merger, the creditors of the emerging firm are paid in full, and the shareholders receive sufficient consideration to prompt them to vote for the plan. They are failures in the sense that the shareholders are in nearly all cases successors in interest of the former creditors of the reorganized firm. In a distress merger less than five years after emergence, those shareholders are unlikely to receive as much value as was assigned to their stock in the reorganization.

37. p = .001.

IV. POSSIBLE FAILURE CAUSES EXOGENOUS TO DELAWARE

The data presented in Part III demonstrate that Delaware reorganizations fail more often. But that fact alone does not prove that Delaware's process is faulty. Two other possibilities remain. First, Delaware's higher failure rate may reflect some differences among Delaware-reorganizing firms that make them more difficult to reorganize successfully. That is, characteristics of the firms choosing Delaware, rather than characteristics of Delaware's reorganization process, could be causing Delaware's high failure rates. Second, even if the firms filing in Delaware and Other Courts were equally difficult to reorganize, Delaware's higher failure rate might still be "efficient" if it resulted from the taking of risks that were justified by the potential returns.

Two propositions must hold for the difficulty of Delaware's cases to cause Delaware's higher failure rates. First, some category of cases must be more difficult to reorganize than others. Second, Delaware must have more cases from that category.³⁸

A. What Firm Characteristics Make Reorganization Difficult?

Under one theory, a variety of characteristics might make a firm more difficult to reorganize successfully. The firm's financial distress may be more severe, its decline into distress more precipitous, or its managers less skilled. The firm may be in a depressed industry, a more competitive industry, or an industry with no future prospects. It may be disadvantaged by the location of its plants, its poor relations with regulators, or the patent holdings of its competitors. The firm's lenders and suppliers may be unwilling to continue to deal with it. The firm's creditors and shareholders may be hostile or unreasonable. The firm may have alienated its customers.

Under a different theory, such factors might be expected to have no significant effect on the rate at which reorganizations fail. If the reorganization process functions well, participants can discover the debtor's problems and resolve them. Managers can be replaced, plants closed, and the objections of creditors, shareholders, and customers met. If the firm's leverage is excessive, the firm can reduce it. If the bargaining parties insist on unrealistic recoveries, the court can force them back to the bargaining table by refusing to confirm an

38. The possibility that such a category exists is known as the problem of lurking variables. A lurking variable is a variable that causes a correlation between two other variables—here, between Delaware and failure. If the lurking variable is the true cause of Delaware's high failure rate, then Delaware is not the cause.

unfeasible plan. If operating problems might prevent the firm from making substantial payments under the plan, the payments can be reduced or eliminated almost entirely through an all-equity plan. In the worst case—a firm incapable of paying even its operating expenses—the solution is to liquidate the firm in the initial bankruptcy case. Because the firm was not reorganized, there could be no “failure” of reorganization as that term is defined in this study.³⁹

To determine which of these competing theories best fit the data, we examined eleven factors that we suspected, or others suggested, might make firms more difficult to reorganize. For each factor, we tested for a relationship to each of three measures of failure: refiling, plan failure, and postbankruptcy earnings. Only one of the suspected factors appears related to success and failure—complexity of capital structure. That relationship is not strong and runs in apparently the wrong direction to explain Delaware’s high failure rates. It appears that none of the other ten factors makes firms prone to failure, and hence none of the eleven factors can explain or excuse Delaware’s high failure rates. For presentation here, we have grouped the eleven factors examined under three headings.

1. Degree of Financial Distress Prior to Filing

Eight of the eleven factors tested were measures of the reorganizing firms’ levels of financial distress prior to the firms’ initial bankruptcy filings. Those measures are leverage before bankruptcy, abnormal leverage before bankruptcy, four measures of prebankruptcy earnings, and two measures of decline in earnings in the year prior to bankruptcy.

a. Prefiling Leverage

“Leverage” is the ratio of a firm’s liabilities to its assets. High leverage generally results in high interest expenses and the need to apply high amounts of cash to repayment of debt. If leverage is sufficiently high, the business cannot operate at a profit and cannot meet its obligations as they become due.

39. LoPucki and Kalin’s data show that Delaware reorganized a smaller proportion of its caseload than did Other Courts. *See* LoPucki & Kalin, *supra* note 1, at 256 (showing Delaware reorganizing only 30 of 38 cases (79%), while Other Courts reorganized 99 of 117 cases (85%)). This suggests that if liquidations were taken into account, Delaware’s failure rate would be even worse than we report.

We calculated the prefiling leverage of each firm at the last fiscal year-end prior to filing by dividing the firm's liabilities by its assets as shown on the firm's balance sheet.⁴⁰

b. Abnormal Prefiling Leverage

Normal leverage ratios differ from industry to industry. To illustrate, in 1996 the average leverage for grocery stores⁴¹ was 80%, while the average ratio for crude petroleum and natural gas businesses was 48%.⁴² These differences probably reflect differing debt carrying capacities. Consequently, a leverage ratio of 80% might indicate deep financial distress for a crude petroleum business but no financial distress for a grocery store chain.

To control for these differences, we constructed a variable that indicates the leverage of each of the firms studied in relation to what is normal for the firm's industry. We first calculated the average leverage for all firms in each debtor's industry.⁴³ We then subtracted that average from the debtor's actual leverage to determine the "abnormal prefiling leverage" for each of the firms studied. "Abnormal prefiling leverage" for a firm is the excess of the firm's leverage over the level normal in the industry.

c. Prefiling Losses

One might suppose that an unprofitable firm would be harder to reorganize.⁴⁴ Firms cannot continue to lose money indefinitely. The

40. We rejected the alternative of using assets and liabilities as reported by the debtor in its bankruptcy filings (petition values), because (1) book values were easier to obtain; (2) petition values are often selected by the parties for strategic reasons and therefore may not be comparable from case to case; and (3) book values are available in more cases than petition values.

41. U.S. E.E.O.C., Standard Industrial Classification Code 5411, *Standard Industrial Classification Code Descriptions*, available at <http://www.eeoc.gov/stats/jobpat/siccodes.html> (last visited Oct. 21, 2002).

42. U.S. E.E.O.C., Standard Industrial Classification Code 1311, *Standard Industrial Classification Code Descriptions*, available at <http://www.eeoc.gov/stats/jobpat/siccodes.html> (last visited Oct. 21, 2002).

43. The average leverage was calculated from Compustat data for the firms' fiscal year 1996. In some instances, Compustat reported no firms with four-digit SIC Codes identical to those of studied firms, but did report categories for which the first three digits were identical and the fourth digit was "0." (Valid SIC Codes do not end in "0.") If that category was of sufficient size, we used it for firms whose first three digits matched. For the remaining firms studied, we used all Compustat firms for which the first three digits of the SIC Code matched the first three digits of the studied firm's SIC Code.

44. In a recent study of seventy-eight emerging firms, Denning, Ferris, and Lawless found that greater firm profitability in the last year prior to filing was correlated with successful reorganization. See Karen C. Denning et al., *Serial Bankruptcy: Plan Infeasibility or Just Bad*

more money a firm is losing before bankruptcy, the greater the changes the firm must make to emerge successfully.

To test this seemingly obvious proposition, we examined four measures of the firms' profitability in the period prior to the filing of the bankruptcy case. They are (1) profits in the last full fiscal year prior to filing (profits in the year before filing); (2) operating profits in the last full fiscal year prior to filing (operating profits in the year before filing); (3) average annual profits for the last five full fiscal years prior to filing (profits in the five years before filing); and (4) average annual operating profits for the last five full fiscal years prior to filing (operating profits in the five years before filing).⁴⁵

Although all of the firms studied were large, some were much larger than others. Profits or losses in a particular dollar amount might have far greater consequences for a small firm than for a large one. To control for the size of the firm, we expressed the amounts of profits and losses as percentages of the sizes of the firms in which they were incurred. The size of a firm for this purpose is the average of its assets and sales in the last full fiscal year prior to filing.⁴⁶

d. Recency of Decline in Prefiling Profits

A firm whose earnings declined immediately before bankruptcy may be more difficult to reorganize than a firm whose earnings declined earlier and then stabilized. We calculated recency of decline in two variables: profits and operating profits. We defined recency of decline as the difference between average annual profits in the five years prior to bankruptcy and average annual profits in the year before bankruptcy, expressed as a percentage of firm size.

We tested each of these eight factors against each of three measures of success and failure: refiling, plan failure, and average annual profits.⁴⁷ For none of the three measures of success was the

Luck?, 8 APPLIED ECON. LETTERS 105, 108 (2001). The study included "all public serial bankrupt firms over the sample period of 1970-1996." *Id.* at 106.

45. For some firms, data were available for some but not all of the five years prior to filing. We used only full fiscal years and annual average figures so that we could include these firms. Firms were included only if data were available for at least three of the five years, including the year immediately prior to filing.

46. The sales and assets of large firms are, on average, about equal. But in some industries, sales are much larger than assets, while in others, assets are much larger than sales. In a few cases, sales and asset figures were not available for the year prior to filing. In those cases we used the last available figures, but not figures for any date more than three years prior to filing.

47. A simple F-test was employed to analyze the relationship between the eight factors (leverage before, abnormal leverage before, profits, operating profits, average profits for five years preceding, average operating profits for the five years preceding, declining profits, and declining operating profits) and our two binary measures of failure (refiling within five years and

difference between the successful cases and the unsuccessful cases in any of the eight factors statistically significant. The data provide no reason to believe that the financial condition of a firm prior to bankruptcy has any effect on its likelihood of reorganizing successfully.⁴⁸

To illustrate the manner of this testing, we found no important differences in pre-filing leverage, statistical or otherwise, between firms that refiled and those that did not. The mean and median pre-filing leverages for re-filing firms were only slightly below those of firms that did not refile for bankruptcy within five years (Table 7).

Table 7: Leverage Before Filing

	Average Leverage Before Filing	Median Leverage Before Filing	Number of Cases
Refilers	108%	95%	16
Nonrefilers	110%	100%	82
Total	110%	100%	98

100%: debt is equal to assets.

F = .036, df = 1, p = .850

Adjustment for differences in leverage from industry to industry did not change the result. The mean and median values of the abnormal pre-filing leverage⁴⁹ follow the same pattern as reported for the unadjusted leverage before filing. There are no significant differences in the industry-adjusted leverage of firms that refiled for bankruptcy within five years and those that did not refile (Table 8).

plan failure). None of the analyses resulted in a p-value smaller than .35. Pearson's R correlation was used to test the relationship between the eight factors and average annual profits after the plan. None of the p-values associated with this operation was below .31.

48. These findings are consistent with those of Matthias Kahl. *Financial Distress as a Selection Mechanism: Evidence from the United States* (October 2001) (unpublished manuscript), at http://www.anderson.ucla.edu/acad_unit/finance/wp/2001/16-01.pdf (last visited Aug. 20, 2002). In a study of 102 firms in financial distress, Kahl found that "[t]he firm's leverage ratio at the onset of financial distress has no statistically significant effect on survival, as it should not in an efficient selection process." *Id.* at 3. He found "some weak evidence that size has a positive effect on short-term survival." *Id.* However, that finding is opposite that which is necessary to exculpate the Delaware and New York bankruptcy courts. During the period covered by this study, the firms filing in Delaware and New York were somewhat larger than those filing in Other Courts. *See infra* Part IV.B.

49. The method by which we calculated "abnormal leverage" is explained *supra* Part IV.A.1.b.

Table 8: Above-Normal Leverage Before Filing

	Average Abnormal Leverage Before Filing	Median Abnormal Leverage Before Filing	Number of Cases
Refilers	42%	39%	16
Nonrefilers	50%	37%	82
Total	49%	37%	98

Cells are pre-filing leverages above industry average.

F = .315, df = 1, p = .576

2. Size and Complexity of Capital Structure

a. Size

Prior research has shown a strong relationship between size of the firm and success of the reorganization when success is measured by confirmation or consummation of the plan. Larger firms are more often successful than smaller firms.⁵⁰ One reason may be that a large firm has the option of closing unprofitable plants, divisions, or product lines while continuing the remainder of its business, while small firms may have only a single plant, division, or product line. None of those studies, however, deals directly with the issue addressed here: the success after confirmation of a business emerging from the reorganization of a large, public firm.

To address that issue, we tested each of six measures of size: (1) assets before bankruptcy;⁵¹ (2) assets after bankruptcy;⁵² (3) sales before bankruptcy;⁵³ (4) sales after bankruptcy;⁵⁴ (5) employees before

50. *E.g.*, THEODORE EISENBERG, BUSINESS INSOLVENCY LAW: CREATING AN EFFECTIVE SWEDISH RECONSTRUCTION LAW (Stockholm: Studieförbundet Näringsliv och Samhälle, Center for Business Policy Studies, Occasional Paper No. 75, 1995) (reporting that Chapter 11 confirmation rates decrease monotonically with firm size: the rate is 96% for firms with assets greater than \$100 million, 36% for firms with assets between \$1 million and \$100 million, and 20% for firms with assets less than \$1 million); Timothy C.G. Fisher & Jocelyn Martel, *Should We Abolish Chapter 11? Evidence from Canada*, 28 J. LEGAL STUD. 233, 244-47 (1999) (summarizing success rates under Chapter 11 of the U.S. Bankruptcy Code, measured by confirmation and consummation of plans, and concluding that success is substantially a function of size).

51. "Assets before bankruptcy" is the total assets of the firm (Compustat, *supra* note 27, data item number 6) at the last fiscal year-end prior to the bankruptcy filing.

52. "Assets after bankruptcy" is the total assets of the firm (Compustat, *supra* note 27, data item number 6) at the first fiscal year-end after the effective date of the plan.

53. "Sales before bankruptcy" is the sales or net revenues of the firm (Compustat *supra* note 27, data item number 12) during the last fiscal year ending before bankruptcy.

bankruptcy;⁵⁵ and (6) employees after bankruptcy,⁵⁶ against each of three measures of success and failure. For none of the three measures of success—refiling, plan failure, and postbankruptcy earnings—was the difference between the successful cases and the unsuccessful cases for any of the six measures of size statistically significant.⁵⁷ The data provide no reason to believe that within the population of relatively large cases studied, smaller or larger firms were more difficult to reorganize successfully.

b. Complexity of Capital Structure

In response to LoPucki and Kalin's findings, Professor David Skeel suggested that Delaware's higher refiling rates may result from Delaware-reorganizing firms having more complex capital structures.⁵⁸ To further explore the relationship between capital structure complexity and success, we gathered data on the number of separate classes of claims and interests in the reorganizing firms' confirmed plans of reorganization.⁵⁹ The number of separate classes might be a measure of capital structure complexity because it indicates the number of types of claims or interests that differed in ways that required different treatment. The differences that result in separate classification and treatment are usually differences in the

54. "Sales after bankruptcy" is the sales or net revenues of the firm (Compustat, *supra* note 27, data item number 12) during the first twelve-month fiscal year beginning after the effective date of the plan.

55. "Employees before bankruptcy" is the number of employees of the firm (Compustat, *supra* note 27, data item number 29) at the last fiscal year-end prior to the bankruptcy filing.

56. "Employees after bankruptcy" is the number of employees of the firm (Compustat, *supra* note 27, data item number 29) at the first fiscal year-end after the effective date of the plan.

57. To prevent outlying cases from dominating the statistical tests, we used the natural logs of assets, sales, and employees in each of the analyses. As with the previous tests, the relationship between the size variables and refiling or plan failure was analyzed using a simple F-test. None of the tests produced a p-value smaller than .30, and we therefore conclude that these relationships are not significant. Pearson's R correlation similarly produced nonsignificant results. Average annual profits after emergence from bankruptcy is not correlated with any of the indicators of prebankruptcy size; none of the p-values falls below .20.

58. Skeel, *supra* note 9, at 319 (equating more complicated capital structures with "more classes of debt and stock").

59. The numbers of classes were determined from the plan summaries prepared by the BANKRUPTCY DATASOURCE, at www.lexis.com (last visited Oct. 18, 2002). We counted a group of claims or interests as a separate class if the property the group was to receive under the plan was determined differently from the property to be received by other groups. For example, if the plan created two classes of claims against the same entity and treated them identically, we considered them to be a single class. If the plan provided a separate treatment for unclassified claims (typically administrative expense and priority tax claims), we treated them as a class of claims. If the plan created separate classes for claims against or interests in different entities, we presumptively treated them as separate classes. But if the plan expressly joined the classes together in specifying identical treatment, we considered them a single class.

holders' rights against the reorganizing firm. Separate classes typically exist for unsecured debts of differing priority, stock with different preferences, claims against different members of a corporate group, and secured creditors with different priorities or different collateral.

We tested the hypothesis that successful reorganizations are related to complexity by examining our data on plan classes in light of three measures of success. Under our two binary measures of success (refiling and plan failure) the mean number of plan classes is larger among firms that had successful reorganizations (Table 9). Of particular interest is the relationship between plan failure and the number of plan classes. Among firms whose reorganizations were successful there were, on average, 16.8 separate classes in their plans; while among firms whose reorganizations failed there were only 13.3 separate classes. The difference is statistically significant.⁶⁰ Even under a more conservative definition of failure (refiling) the differences among companies tend in the same direction; failed reorganizations are less complex (12.8 plan classes) than the successful ones (16.5 plan classes). This relationship is significant by conventional standards.⁶¹ Finally, the relationship between the number of classes and postbankruptcy earnings (size-adjusted) is also significant.⁶²

Table 9: Mean Number of Plan Classes⁶³ by Different Measures of Failure

	Failure Measure			
	Refiling	N	Plan Failure	N
Successful reorganizations	16.5	80	16.8	70
Failed reorganizations	12.8	16	13.3	26
Total	15.8	96	15.8	96

F = 3.907, df = 1, p = .051 F = 5.054, df = 1, p = .027

60. p = .027.

61. p = .051.

62. Pearson's R = .202, p = .052.

63. Plan class has a skewed distribution. It has two extreme outlying values of 69 and 93, with the balance of cases ranging between 5 and 34. We compensated for this distribution by using the natural logs of plan class. Logging is a widely accepted linear transformation of data comprised of counts and amounts that often results in normally distributed values. We used these transformed values in our tests of statistical significance. The figures we report in the table were computed by raising Euler's Constant to the mean of the logged variable.

Measured by plan classes, capital structure complexity appears to be related to success and failure. The direction of the relationship—complex structures are associated with lower failure rates—is opposite the direction that Skeel predicted: complex structures would be associated with higher failure rates. If we adhere to Skeel's premise that simple structures make reorganization easier, we must conclude that Delaware has higher failure rates despite having an easier caseload. Alternatively, we could abandon his premise and conclude that complex capital structures make firms *easier* to reorganize successfully. We are not comfortable with either alternative and so return to the issue in Part IV.C.

3. Industry

In their study of large, public firms reorganizing from 1980 to 1996, LoPucki and Kalin found that manufacturing and retail trade firms were significantly more likely to refile than firms in other industries.⁶⁴ Because the universe of cases we studied is a subset of the universe studied by LoPucki and Kalin, we expected to find the same relationship. We did not. None of the most likely groups—manufacturers, retailers, or manufacturers and retailers combined—was significantly more likely than other firms to fail.⁶⁵

4. Multiple Regression Analysis

Table 10 shows the results of a multivariate analysis of the key factors tested in the section above, with the addition of court location. This analysis is motivated by the following proposition: *Delaware's record of plan failure is an artifact of difficult reorganizations. No single measure of difficulty adequately captures this phenomenon, but together these measures comprise an index of difficulty.* To test this proposition, we constructed a model that estimates Delaware's exceptionalism while controlling for several exogenous factors that we considered most likely to influence significantly the success or failure of a reorganization plan: prefiling leverage, prefiling profits, industry (here represented by membership in either the manufacturing or retail industries),⁶⁶ firm size before filing (here represented by the

64. See LoPucki & Kalin, *supra* note 1, at 257.

65. Manufacturers and retailers combined had a refiling rate of 21% (n = 48), compared to 12% (n = 50) in all other industries. The difference is not significant (F = 1.390, df = 1, p = .241).

66. Analyzing data from a larger universe of cases and using single-digit SIC codes, LoPucki and Kalin found a weakly significant relationship between industry and refiling and found that manufacturing and retail trade firms were more likely to refile. LoPucki & Kalin,

book value of assets prior to the first bankruptcy), and the complexity of the reorganization (here represented by the number of plan classes). In order to further test the validity of our “plan failure” variable, we analyzed it in tandem with the more straightforward measure of failure—refiling.

Table 10: Multiple Regression Analysis of Plan Failure and Refiling

	Plan Failure	Refiling
Leverage Before Filing <i>Mean = 1.100, sd = .462</i>	-.321 (.883)	-.745 (1.129)
Profits Before Filing (averaged over five years preceding filing and adjusted for firm size) <i>Mean = -.055, sd = .097</i>	-1.843 (4.736)	-2.454 (6.376)
Manufacturing or Retail <i>Mean = .490</i>	.011 (.589)	.544 (.769)
Number of Plan Classes (natural log) <i>Mean = 2.760, sd = .468</i>	-.688 (.809)	-.505 (1.014)
Assets Before Filing (in millions, natural log) <i>Mean = 6.511, sd = .994</i>	-.275 (.327)	-.038 (.390)
Delaware <i>Mean = .265</i>	1.945** (.655)	2.792** (.909)
New York <i>Mean = .163</i>	1.188 (.795)	1.417 (1.107)
Constant	2.122 (2.417)	-1.073 (3.122)
N	84	84
Nagelkerke R ²	0.25	0.33
Hosmer & Lemeshow Goodness of Fit	$\chi^2 = 10.820,$ P = .212	$\chi^2 = 6.631,$ P = .577

Cell entries are logistic regression coefficients (standard errors in parentheses).

***p < .001, **p < .01, *p < .05

If the proposition stated above is true, then we should find a diminished or even insignificant relationship between court location and plan failure after controlling for the difficulty of the reorganization. Our analysis suggests that the proposition is false. Delaware reorganizations fail significantly more often than New York or Other Court reorganizations, controlling for exogenous factors.⁶⁷ None of the other variables has an individually significant

supra note 1, at 257. Our analysis using single-digit SIC codes showed no significant relationship between industry and refiling. *See supra* note 1 and accompanying text.

67. Other Courts are represented in the intercept term. Delaware's significant coefficient indicates that it is different from Other Courts, while New York's insignificant coefficient indicates that it is not different from Other Courts. From this observation we infer that Delaware is different from New York.

relationship to plan failure or refiling.⁶⁸ The lack of relationship suggests that plan failure cannot be predicted from firm-specific conditions that existed before the petition arrived at the courthouse.

B. Are Delaware-Reorganizing Firms Different?

We identified only one prefiling characteristic that made a significant difference in firms' abilities to reorganize successfully: capital structure complexity. That relationship was weak and appears to run in the direction opposite that needed to explain Delaware's high failure rates. The ten other characteristics we investigated appeared unrelated to failure. Thus, no difference in those characteristics between Delaware-reorganizing firms and Other Court-reorganizing firms could explain Delaware's higher refiling rates.

Out of an abundance of caution, however, we tested to determine if the population of firms choosing Delaware (or Delaware and New York) was significantly different from the population choosing Other Courts in any of the eleven characteristics examined. Only two additional differences were statistically significant. Firms reorganizing in Delaware and New York (combined) had significantly higher average prefiling sales (\$805 million) and prefiling numbers of employees (5,792) than firms reorganizing in Other Courts (\$488 million and 2,839 employees).⁶⁹ We found no other significant differences between the firms that chose Delaware for their reorganizations and the firms that chose Other Courts.

C. Conclusions

Eight of the eleven prefiling firm characteristics we examined were measures of the firms' financial distress. None appears to be related to the success or failure of the firms' reorganizations. To put it another way, the likelihood of a successful reorganization does not appear to depend upon the depth or suddenness of the reorganizing firm's prefiling financial distress.

68. Exogenous factors also failed in two separate analyses that are not reported in the body of this Article. One was a block analysis, in which exogenous factors were entered into the model as a group. The goodness-of-fit measure, Nagelkerke R-squared, will change significantly if this group has explanatory power, even if no single variable within the group is statistically significant. The block did not increase the goodness-of-fit. The other analysis involved entering factor scores created from the exogenous variables. Factor scores are estimates of the shared variance of the variables (i.e., the "difficulty" a firm is experiencing). The factor scores did not improve the explanatory power of the model, nor did they render Delaware's correlation with plan failure insignificant.

69. $p = .035$ and $p = .063$, respectively.

Nor did we find any relationship between the sizes of firms or their industries and the firms' likelihood of successful reorganization. Earlier studies found such relationships in other contexts.⁷⁰ That, together with the relatively small size of the universe of cases we studied, causes us to be cautious in concluding that no such relationship exists among firms generally. But if such a relationship does exist, it is sufficiently subtle that it alone could not explain Delaware's high failure rates.

We did find a weak relationship between "complexity of capital structure," as measured by the number of classes of claims and interests distinguished under the firms' plans. We are, however, skeptical. First, the relationship runs in the direction opposite that expected: firms with more complex capital structures appear easier to reorganize successfully.⁷¹ Second, as we explain below, the number of classes in plans may be more a product of the reorganization process than of capital structure complexity.

Taken together, these data suggest that prefiling characteristics of the firms filing in Delaware cannot explain Delaware's high failure rates. Prefiling firm characteristics appear unrelated to the success or failure of reorganizations, and firms choosing to reorganize in Delaware do not differ grossly from firms choosing to reorganize in Other Courts.

70. Denning et al., *supra* note 44, at 108 ("It was found that the coefficient for firm size is significantly positive, indicating that larger firm size increases the likelihood of a successful reorganization."); LoPucki & Kalin, *supra* note 1, at 258 (finding smaller firms more likely to refile).

71. Any inference from our plan class data that Delaware-reorganizing firms have simpler capital structures should be tempered by consideration of contrary evidence. The holders of claims and interests of different members of a debtor's corporate group have different legal rights. Those different rights constitute a complexity of capital structure. One would therefore expect that corporate groups composed of larger numbers of entities would tend to have more complex capital structures. Among the firms in the LoPucki and Kalin universe, the average number of entities in groups reorganizing in Delaware was slightly higher than the average number of entities in groups reorganizing in Other Courts. The difference was not statistically significant. Lynn M. LoPucki, *Can the Market Evaluate Legal Regimes? A Response to Professors Rasmussen, Thomas, and Skeel*, 54 VAND. L. REV. 331, 351 (2001) (Delaware-reorganizing firms had an average of 26.5 entities per group compared to an average of 24.6 per group for the firms reorganizing in Other Courts). This finding suggests that the capital structures of Delaware-reorganizing firms are slightly more, not less, complex than the capital structures of firms reorganizing in Other Courts.

V. IS DELAWARE'S FAILURE RATE EFFICIENT?

A. Framing the Issues

LoPucki and Kalin presented data showing that firms emerging from Delaware reorganization refiled more frequently than firms emerging from reorganization in Other Courts. They acknowledged that “[r]elatively high refiling rates are theoretically defensible,” because the refiling losses might be more than offset by gains from a higher rate of reorganization or a greater magnitude of a jurisdiction’s successes.⁷² LoPucki and Kalin did not think this defense saved Delaware, however, because Delaware did not have a higher rate of reorganization than other courts or obvious, dramatic successes.⁷³

In separate replies to LoPucki and Kalin, Rasmussen and Thomas and Skeel pressed the efficiency issue. Rasmussen and Thomas argued that measurement of success and failure should take both reorganizations and liquidations into account. They also argued that lower direct costs of reorganization might more than offset the cost of additional reorganizations in Delaware. Both Skeel and a well-known, but unidentified New York bankruptcy lawyer concurred in the latter argument. As the lawyer put it:

Very often the right solution is to do a fix that lasts for a period of time and, if it doesn't work, do it again. That's how the workout world works. When you're talking about big companies, it's just a workout under court protection. Why is that such a bad outcome? [Some] will say it's a bad outcome because that's not what the statute provides for. But a good outcome may be different than what the statute really requires. [The statute] doesn't contemplate incremental restructurings. A judge has to make a determination about plan feasibility, but if no one opposes [the plan] and it turns out not to work, what's wrong with using the same mechanism a second time?⁷⁴

The data show dramatically what is wrong with using the same mechanism a second time. Between the first and second bankruptcies, the refiling firms suffered huge losses. Our data fix those losses at 18% of firm size per year during the five years after emergence.⁷⁵ By comparison, firms that did not refile averaged profits of 1% of firm size per year. In a related study, LoPucki found that the nine Delaware-reorganized firms that refiled averaged operating losses alone of 18%

72. LoPucki & Kalin, *supra* note 1, at 255.

73. *Id.* at 255-56.

74. Michelle Johnson, *Chapter 22: Does It Matter?*, BANKR. CT. DECISIONS: WKLY. NEWS & COMMENT, Aug. 1, 2001 (quoting an unidentified “well-known New York bankruptcy attorney”). *But see id.* (stating that “most turnaround professionals are completely outraged at an answer like that [of the unidentified attorney]”), available at www.lexis.com (last visited Oct. 18, 2002).

75. *See infra* Part VI.A.

of the firms' pre-filing assets.⁷⁶ The losses associated with a failed reorganization are huge. The fact that Other Court-reorganized firms refiled at one-tenth the rate for Delaware-reorganized firms suggests that the bulk of those losses were avoidable.

The mere fact of these avoidable losses does not prove Delaware reorganization is inefficient. The possibility remains that they can be offset by advantages of the Delaware bankruptcy process. Six potential sources for such an offset can be identified: (1) Delaware might have saved firms that would have been liquidated in Other Courts; (2) Delaware might have liquidated firms more efficiently than Other Courts; (3) Delaware might have accepted more risk in reorganized firms to capture even greater gains from the partial liquidations of those firms before confirmation; (4) Delaware might have had more success among the firms that emerged as private firms than among the firms we studied—only those that emerged as public firms; (5) direct costs of reorganization might have been lower in Delaware; and (6) indirect costs might have been lower in Delaware. Each of these potential sources will be considered separately.

B. Does Delaware Have an Offset?

The data presented in Part III demonstrated that firms emerging from Delaware reorganization had significantly lower earnings and failed significantly more often in the ensuing five years. Our study was confined to emerging firms. We did not examine complete or partial liquidations that occurred during the first bankruptcy, the costs incurred by the firms in their initial bankruptcies, or emerging private firms. Thus, it is possible that Delaware's poor performance in the respects that we did study misses a larger picture in which Delaware performed well. We think this possibility can be assessed by examining six potential sources for a comparative Delaware advantage.

1. From Reorganizing a Larger Proportion of Firms

Saving firms may yield much larger gains than liquidating them. If Delaware had a higher failure rate because it was attempting to save firms that Other Courts would have liquidated, that higher failure rate might nevertheless be efficient. To illustrate, assume that four firms file in Delaware and that an identical set of four other firms file in Other Courts. One firm in each set is certain to fail, one firm is

76. See LoPucki, *supra* note 71, at 338.

certain to succeed, and two firms each have a 50% chance of success. Each firm is worth one if it liquidates (at bankruptcy or upon later failure) and three if it reorganizes successfully. Delaware reorganizes all of its firms except the one certain to fail. Other Courts reorganize only the firm certain to succeed.

On these facts, the expected failure rate for Delaware would be 33%. Delaware would attempt three reorganizations and, on average, two would succeed. Other Courts would attempt only the reorganization certain to succeed, giving them a failure rate of zero. The expected value from the Delaware bankruptcy process would be eight (two successful reorganizations at three each and two liquidations at one each), while the expected value from the Other Court bankruptcy process would be only six (one successful reorganizations worth three and three liquidations worth one each).

No evidence exists, however, that Delaware is attempting to reorganize more marginal firms. To the contrary, LoPucki and Kalin found that during the period studied, Delaware reorganized a *smaller* percentage of the firms filing there than did Other Courts.⁷⁷

2. From Better Results in Complete Liquidations

Rasmussen and Thomas criticized LoPucki and Kalin for attempting to evaluate Delaware reorganization without taking Delaware liquidation into account.⁷⁸ They implied that Delaware might have liquidated assets for higher prices than Other Courts, thereby achieving a success that went unrecognized under LoPucki and Kalin's methodology and that will go unrecognized under ours as well.

Even if that is so, it in no way detracts from the validity of our finding that Delaware reorganizations fail more often. Complete liquidation and reorganization are mutually exclusive processes. A firm can do one or the other, but not both. No interrelationship has been suggested between the two that might, for example, cause a court's reorganization success rate to fall because its liquidation success rate rises. Thus, it makes sense to study the success of reorganizations separately from the success of complete liquidations.⁷⁹

77. LoPucki & Kalin, *supra* note 1, at 256 (showing that Delaware reorganized 79% of the firms that filed there after 1989 and whose cases were disposed of before 1997, while the corresponding proportion for Other Courts was 85%).

78. Rasmussen & Thomas, *supra* note 9, at 298.

79. Studying them together may be impossible because the "success" of liquidation—obtaining a high price for assets in relation to their intrinsic value—would be difficult to operationalize. The "intrinsic value" of assets is merely a theoretical construct not linked to any measurable parameter.

If Other Courts have a better reorganization process, Delaware could copy it without impairing any advantage that Delaware may have in liquidations.

3. From Better Results in Partial Liquidations

The argument in the preceding section does not apply to partial liquidation cases. In partial liquidations, only some assets are liquidated. The cash received from liquidation may be used in the reorganization or distributed to parties in interest. Because the liquidation and the reorganization occur with respect to the same firm, they are interrelated. Liquidating the best assets may maximize the bankruptcy dividend to creditors but reduce the likelihood of a successful reorganization of what remains.

To illustrate the interrelationship, assume that every firm is composed of two businesses. One is a strong business that has a liquidation value of ninety, a reorganization value of 200, and a 50% chance of surviving reorganization; the other is a weak business that has a liquidation value of ninety, a reorganization value of 400, and a 25% chance of surviving reorganization. Further assume that the firm can continue neither business without the cash infusion that would come from liquidation of the other.

In such a world, every firm should reorganize one of its two businesses. In the absence of risk aversity, it does not matter which. Either business has an expected value of 100.

Now assume that something in the reorganization process of Delaware causes the firms filing there to choose to reorganize the weak business, while something in the reorganization process of Other Courts causes the firms filing there to choose to reorganize the strong business. The courts' processes would be equally efficient, generating an average of 100 in value from each filing firm, but the Delaware court would have a 75% failure rate, while the Other Courts would have only a 50% failure rate. Delaware would appear worse, even though it was not.

Similarly, firms that liquidate their strongest assets and keep their weakest assets may be able to distribute substantial cash to their investors but only at the cost of an increased risk of refiling. Firms that liquidate their weakest assets and keep their strongest assets may distribute little cash but minimize the risk of refiling. Neither necessarily produces more value for investors.

Despite the theoretical possibility of such an offset between successful partial liquidation and failed reorganization, (1) no evidence exists that Delaware has an advantage in liquidation, and (2)

even if such an advantage exists, it is unlikely to be large enough to offset the entire difference in reorganization failure between Delaware and Other Courts.

The latter statement is based on our finding that relatively little shrinkage in firm size occurred during reorganization.⁸⁰ Specifically, we found that on average, Delaware-reorganizing firms shrank by 20% in dollar value of assets; the corresponding figures for Other Courts and New York were 22% and 29% respectively.⁸¹ Table 11 shows that in 75% of the reorganizing firms, assets after bankruptcy were more than 50% of assets prior to bankruptcy.⁸²

Table 11: Asset Shrinkage During Reorganization

Emerging Company Assets as a Percentage of Filing Company Assets	LoPucki & Whitford Confirmed 1981-88		LoPucki & Doherty Confirmed 1991-96	
	Number	Percentage	Number	Percentage
Over 90%	2	7%	30	31%
51%-90%	9	31%	43	44%
50% -10%	11	38%	20	20%
Under 10%	7	24%	5	5%
Total	29		98	

These data suggest that the proportion of assets liquidated is substantially less than the proportion reorganized. For Delaware's spectacular reorganization failures to be fully offset by Delaware's liquidation successes, the liquidation successes would have to be substantially more spectacular than reorganization failures. That seems improbable.

4. From Firms Emerging Privately

Our data represent only firms emerging as public companies. Failure rates for the 48% of firms emerging as private companies may

80. Our method for calculating shrinkage is described *infra*, in Part VI.C.

81. These figures may tend to understate shrinkage, because they are averages that include some increases in firm size. On the other hand, they may tend to overstate shrinkage, because reductions in assets may have come from write-downs in the values of assets rather than from sales of assets, and liquidated assets may have yielded proceeds substantially less than their book values.

82. Table 11 also shows the corresponding percentages for twenty-nine firms that reorganized before the era of Delaware. The proportions of assets liquidated during that period appear to have been greater. The difference is significant at the .001 level.

be different. The data gathered by LoPucki and Kalin regarding refiling rates, however, cover firms emerging as private companies as well. Those data suggest that Delaware's failure rates among private firms are nearly as bad as Delaware's failure rates among public firms.⁸³ LoPucki and Kalin used refiling as the sole measure of success, but no reason exists for thinking that the data regarding other measures of failure would be different.

5. From Savings on the Direct Costs of Bankruptcy

In their reply to LoPucki and Kalin, Rasmussen and Thomas argued that savings from lower direct costs of reorganization in Delaware might provide some offset.⁸⁴ To quantify their point, they offered the following formula for calculating the direct cost of a firm's choice of Delaware for its bankruptcy:

$$c_d = D + \delta p D$$

where c_d is the total cost of choosing Delaware, D is the direct cost of a Delaware bankruptcy, δ is the discount rate, and p is the probability of refiling.⁸⁵ Intuitively, the total direct cost of filing a case in Delaware is the cost of a Delaware case, plus the probability of a refiling times the cost of the refiling, the latter term reduced to present value as of the time of the initial choice. That total direct cost is to be compared with the total direct cost of filing in Other Courts, which is given by the following formula:

$$c_o = O + \delta q O$$

where c_o is the total direct cost of choosing an Other Court, O is the direct cost of an Other Court bankruptcy, δ is the discount rate, and q is the probability of refiling.

Using LoPucki and Kalin's probabilities of refiling, .3 for Delaware and .1 for Other Courts, and hypothesizing that Delaware's direct cost of reorganization would be 80% of that for Other Courts,⁸⁶

83. The comparison is difficult to make because LoPucki and Kalin reported refiling rates as percentages for all years they followed the firms (ranging from less than one year to seventeen years) and as percentages per year. See LoPucki & Kalin, *supra* note 1, at 238-39. We report failure rates for the five-year period after emergence.

84. Rasmussen & Thomas, *supra* note 9, at 295-97.

85. *Id.* at 297. Their formula for Delaware was misprinted; we rely here on their formula for Other Court filings, which was correctly printed.

86. *Id.*

Rasmussen and Thomas calculated a substantial direct cost advantage to filing in Delaware.⁸⁷

No data currently exist regarding the comparative direct cost of reorganizing in Delaware versus Other Courts during the period from 1991 to 1996. But Eisenberg and LoPucki have compiled data comparing the direct costs of reorganization for fourteen Delaware firms with those for ten Other Court firms during the period 1998 to 2001. Those data show the cost of Delaware reorganization to be 94% of the cost of Other Court reorganization.⁸⁸ Plugging that figure, along with the refiling rates from the instant study, into Rasmussen and Thomas's formula and assuming a relatively high discount rate of 30% to favor Delaware, we get for Delaware:

$$c_d = .94 + (.3 \times .42 \times .94) = 1.06$$

and for Other Courts:

$$c_o = 1 + (.3 \times .04 \times 1) = 1.01$$

The direct total costs of Delaware reorganization are 1.06, 5% higher than the direct total costs of Other Court reorganization, 1.01. Because the total direct costs of Delaware reorganization actually exceed those of Other Court reorganizations, they provide no offset.

6. From Savings on the Indirect Costs of Bankruptcy

As is discussed further below, the Delaware reorganizations studied were significantly faster than the other reorganizations studied.⁸⁹ The magnitude of the difference is shown in Table 12.

87. *Id.*

88. Theodore Eisenberg & Lynn M. LoPucki, Attorney Fee Study/Current Data (unpublished spreadsheet, on file with the author).

89. *See infra* Part VI.D.-E.

Table 12: Average Days in Reorganization

	Delaware	New York	Other Courts	Total
Prepackaged cases	14 cases 48 days	3 cases 55 days	10 cases 75 days	27 cases
Nonprepackaged cases	12 cases 454 days	13 cases 956 days	46 cases 675 days	71 cases
All cases	26 cases 236 days	16 cases 787 days	56 cases 568 days	98 cases

The indirect costs of bankruptcy are generally understood to be the reductions in earnings resulting from two types of harm. First, persons who have been dealing with the firm—including customers, employees, suppliers, and financiers—become concerned about its future. They may refuse to continue dealing. That may in turn reduce earnings directly, through increase in costs or loss of revenues, or indirectly, by disrupting firm operations. Second, the time and attention of management is diverted from firm operations to dealing with those disruptions and with legal matters arising from the bankruptcy, thereby reducing management's effectiveness. One might reasonably suppose that the longer the bankruptcy case continues, the greater these indirect costs would be.

The speed of Delaware reorganization probably tends to reduce these two kinds of harm and thus to provide some offset against refiling losses. But that offset is probably considerably less than Table 12 suggests. First, the period of embarrassment and disruption associated with bankruptcy does not begin or end with the bankruptcy case. The period of embarrassment and disruption begins when the firm's financial problems become public—typically a few months to a few years before filing. Unless Delaware has as great a speed advantage during this prebankruptcy period as it has during bankruptcy, the effect will be to dilute the gains suggested by the Table 12 data. Nor do the indirect costs of reorganization end with the confirmation of a plan. Customers, employees, suppliers, and financiers may still have their doubts about the reliability of the firm. In light of Delaware's higher failure rates, those doubts may be greater with respect to Delaware-reorganized firms.

Second, much of Delaware's speed advantage results from its greater proportion of prepackaged cases. Prepackaged cases do not begin with the filing of the petition. They begin with the preparation and submission of a plan of reorganization to a vote of the creditors in the period *before* the filing of the petition. This same process takes

place *during* a nonprepackaged case. Because the voting on prepackaged plans is both public and expressly in contemplation of a possible bankruptcy, the indirect costs associated with the prefiling negotiation and voting are probably nearly as great as those associated with actually being in bankruptcy. Prior research comparing the length of the reorganization *process* found the prepackaged process to be 25% shorter than the nonprepackaged process.⁹⁰ Thus, while shorter cases in Delaware imply lower indirect costs in Delaware reorganization, Delaware's advantage in this regard is probably far less than its disadvantage in refiling costs.

C. Conclusions

Part III of this Article showed that Delaware reorganizations failed more frequently than Other Court reorganizations. Part IV showed that the difference in outcomes did not merely reflect a difference in the filing firms. Before bankruptcy, the Delaware-reorganizing firms were not measurably different from Other Court-reorganizing firms. Those two propositions alone, however, do not prove Delaware reorganization inefficient. Delaware reorganization might nevertheless have yielded some benefit for which our methodology did not account.

This part considered six possible Delaware advantages that would not have been evident in our data. A combination of our data and data from other studies negates the existence of three of the six. First, the effects of Delaware's higher failure rates cannot be offset by Delaware's reorganization of a greater proportion of its cases, because Delaware, in fact, reorganizes a smaller proportion of its cases. Second, LoPucki and Kalin's data substantially refute the possibility that Delaware better reorganizes firms that emerge as private firms. Third, our data, combined with Eisenberg and LoPucki's attorney-fee data and Rasmussen and Thomas's formulae, show that the direct costs of Delaware filing and refiling exceed the direct costs of Other Court filing and refiling.

Because our study did not include complete liquidation cases, we do not know whether Delaware has a comparative advantage in processing them. If such an advantage indeed exists, it exists in different cases than the reorganization cases we studied and so is independent of them. It cannot explain or justify Delaware's poor performance in reorganization cases.

90. Elizabeth Tashjian et al., *Prepacks: An Empirical Analysis of Prepackaged Bankruptcies*, 40 J. FIN. ECON. 135, 142 (1996).

Because our data do not cover partial liquidations that occurred during the firms' initial bankruptcies, our data do not negate the possibility that Delaware outperformed Other Courts in partially liquidating assets. Our data do, however, indicate that substantially fewer assets were liquidated than were reorganized in the cases studied, making it highly unlikely that even a great performance in the small partial liquidations could offset Delaware's poor performance in large reorganizations.

Lastly, the speed of Delaware reorganizations probably does give Delaware a comparative advantage with respect to the indirect costs of bankruptcy. But here also, it is unlikely that advantage could be great enough to offset the Delaware-reorganized firms' greater losses in the postbankruptcy period. On the whole, we think it is fair to conclude that Delaware's failure rates were probably higher than efficient during the period studied.

VI. POSSIBLE FAILURE CAUSES ENDOGENOUS TO DELAWARE

If, as we concluded in Part IV, Delaware did not get more difficult cases and, as we concluded in Part III, Delaware got worse results from its cases, the problem must be with some aspect of Delaware's reorganization process. In this part, we report on our efforts to identify the ways in which Delaware's process differs from that of Other Courts and to determine the mechanisms by which those differences might lead to failure.

A. Postbankruptcy Earnings

In Part III.C, we described our data on the earnings of the reorganized firms during the five years after reorganization. Throughout this Article, we have employed postbankruptcy earnings as a measure of success and failure. In this section, postbankruptcy earnings take on a second role, as a mechanism that helps to explain how reorganizations fail. In this regard, our empirical findings track the conventional wisdom. Firms with lower postbankruptcy earnings were more likely to fail.⁹¹ To illustrate, refiling firms had average annual losses equal to 18% of company size, while nonrefiling firms had average annual profits equal to 1% of company size. When operating profits are used as the measure, the corresponding figures were losses equal to 3% of company size for refilers and gains equal to

91. See, e.g., Kahl, *supra* note 48, at 25 ("To summarize, operating performance has a statistically and economically significant and positive effect on survival.")

6% of company size for nonrefilers (Table 13). The differences are statistically significant with respect to both profits and operating profits.

Table 13: Average Annual Profits During Five Years After Emerging, for Refilers and Nonrefilers

	Operating Profits			Profits		
	Average	Median	Cases	Average	Median	Cases
Refilers	-3%	-3%	15	-18%	-12%	15
Nonrefilers	6%	5%	74	1%	0%	80
All	5%	4%	89	-2%	0%	95

F = 23.148, df = 1, p < .000

F = 50.756, df = 1, p < .000

Not surprisingly, refilers tend to be firms that have been suffering substantial postbankruptcy losses.⁹² Low postbankruptcy earnings probably lead to failure, because unexpectedly low earnings leave the firm with insufficient funds to make payments under the plan or perhaps even to continue in business.

As noted in Part III.C (Table 5), firms reorganizing in Delaware have significantly lower *postbankruptcy* earnings than firms reorganizing in Other Courts. Yet, as noted in Part IV.B, firms reorganizing in Delaware did not have significantly lower *prebankruptcy* earnings than firms reorganizing in Other Courts. The lack of a significant difference in the firms entering Delaware and Other Court reorganization, combined with the presence of a significant difference in the firms emerging from the two, suggests that some difference between Delaware's and Other Courts' reorganization processes causes the difference in postbankruptcy earnings. We conclude that the Delaware reorganization process is less effective in dealing with debtors' business problems than are Other Courts' reorganization processes. Delaware's process fails to fix the business.

92. The results were similar using plan failure as the measure of success, but they are tainted by the fact that postbankruptcy earnings were used to determine which mergers should be regarded as "failures" in the calculation of plan failure. Thus, the relationship between postbankruptcy earnings and plan failure is in some part tautological.

B. Postbankruptcy Leverage

The conventional wisdom holds that excessive postbankruptcy leverage causes reorganizations to fail. Our data are consistent with that wisdom but only weakly so. Refilers tend to be firms that emerged from bankruptcy with higher leverage (Table 14),⁹³ but the difference between refilers and nonrefilers is not at a level conventionally considered significant.⁹⁴ Our plan failure variable is more strongly related to leverage. The findings trend the same way (failures have higher leverage), and the differences are significant.⁹⁵

Table 14: Postbankruptcy Leverage by Plan Success or Failure

	Failure Measure			
	Refiling	N	Plan Failure	N
Successful reorganizations	78%	82	77%	71
Failed reorganizations	87%	16	86%	27
Total	79%	98	79%	98

F = 2.468, df = 1, p = .119

F = 3.807, df = 1, p = .054

As noted earlier, average firm leverage varies by industry.⁹⁶ When we control for leverage differences among industries, we see that refilers tend to have higher abnormal postbankruptcy leverage, but the difference is not significant (Table 15). Nor is abnormal postbankruptcy leverage related significantly to plan failure.⁹⁷

93. We define leverage as total liabilities divided by total assets.

94. p = .119.

95. p = .054.

96. See *supra* text accompanying notes 37-38.

97. p = .271.

Table 15: Abnormal Postbankruptcy Leverage by Plan Success or Failure

	Failure Measure			
	Refiling	N	Plan Failure	N
Successful reorganizations	17%	82	16%	71
Failed reorganizations	21%	16	22%	27
Total	18%	98	18%	98

F = .385, df = 1, p = .537

F = 1.225, df = 1, p = .271

Our other measure of success, postbankruptcy earnings, is also related to postbankruptcy leverage. Unadjusted postbankruptcy leverage is negatively correlated with postbankruptcy earnings.⁹⁸ Abnormal postbankruptcy leverage is negatively correlated with postbankruptcy earnings.⁹⁹ Firms with high postbankruptcy leverage tend to be firms with low postbankruptcy earnings. Thus, while the relationship between postbankruptcy leverage and postbankruptcy failure may not be strong, postbankruptcy leverage does appear to contribute to low postbankruptcy earnings.

Delaware-reorganizing firms had higher postbankruptcy leverage than firms reorganizing in New York or Other Courts. Debt averaged 86% of assets among Delaware firms, compared to 77% in Other Courts and 78% in New York (Table 16). A similar relationship existed among the courts with regard to abnormal postbankruptcy leverage, but these differences are not statistically significant. The only difference that approaches significance is the one between Delaware and Other Courts (excluding New York),¹⁰⁰ but when leverage is adjusted for industry, the significance of this difference evaporates.¹⁰¹

98. Pearson's R = -.186, p = .070.

99. Pearson's R = -.193, p = .061.

100. p = .080.

101. p = .466.

Table 16: Postbankruptcy Leverage by Court

	Leverage After Emerging	Abnormal Leverage After Emerging	Cases
Delaware	86%	21%	26
New York	78%	18%	16
Other Courts	77%	16%	56
Total	79%	18%	98

F = 1.540, df = 1, p = .220 F = .276, df = 1, p = .759

Thus, while the Delaware firms studied had higher postbankruptcy leverage, we cannot reject the possibility that the difference resulted from chance.

The apparent weakness of the correlation between high postbankruptcy leverage and failure may reflect a weakness in the accounting data employed. Most firms elect "fresh-start accounting" upon emerging from bankruptcy. This method gives them wide discretion in fixing the postbankruptcy value of their assets. The firm fixes that value knowing the firm's debt level and, hence, knowing what leverage a particular assets value implies. Firms with the highest debt levels and therefore the greatest likelihood of failure may be the firms most likely to exaggerate their assets, obscuring the true disparities in postbankruptcy leverage.¹⁰²

C. Reduction in Firm Size

Reorganization typically reduces the size of the firm. As part of their reorganizations, firms close divisions, discontinue product lines, sell assets, and lay off employees. Often, the strategy is to retain and continue to operate the most successful parts of the business.¹⁰³ One might plausibly suppose that reorganizations involving greater reductions in firm size would succeed more often.

102. Earlier research provides some support for this possibility. Michel, Shaked, and McHugh found refilers more likely than nonrefilers to make overly positive financial projections. Allen Michel et al., *Chapter 22s: Lessons of Two-Time Bankruptcies*, 6 FINANCIER 10 (1999).

103. That is not invariably true. In its 1982 reorganization, Lionel Corporation sold the most successful part of its business—Dale Electronics—and attempted to reorganize around the remainder. *Committee of Equity Security Holders v. Lionel Corp. (In re Lionel Corp.)*, 722 F.2d 1063, 1065 (2d Cir. 1983) ("Dale is Lionel's most valuable single asset. Unlike Lionel's toy retailing operation, Dale is profitable."); *Lionel Corp. v. Dynamics of America (In re Lionel Corp.)*, 38 B.R. 679 (Bankr. S.D.N.Y. 1984) (explaining that Dale was sold as a part of plan of reorganization). Lionel refiled in 1991. LoPucki, *supra* note 2, at <http://lopucki.law-lib.ucla.edu>.

In testing that hypothesis, we employed three measures of reduction in size: reduction in assets, reduction in sales, and reduction in numbers of employees. In each measure, we used the last-available figure for a period prior to filing and the first-available figure for a period after confirmation. We expressed the reduction as a percentage of the pre-filing figure. Thus, a firm that shrank from one hundred to sixty had a 40% reduction in size by that measure. In our calculations, we ignored firms with fewer than ten employees.¹⁰⁴

None of the relationships between shrinkage and plan failure is significant. Reductions in assets, sales, or employees do not predict refiling or plan failure. Nor are they correlated with postbankruptcy earnings.

D. Prepackaging

We considered a bankruptcy case "prepackaged" if the debtor proposed its plan to creditors, solicited their votes, and received the necessary acceptances prior to filing the bankruptcy case. We grouped all remaining cases—including those "pre-negotiated" with some or all creditors before filing—together as "nonprepackaged."

We found that debtors reorganized in prepackaged cases had lower postbankruptcy earnings than debtors reorganized in nonprepackaged cases.¹⁰⁵ By this measure, prepackaged reorganizations are more likely to fail than nonprepackaged reorganizations.

One might argue that this difference could be explained, in whole or in part, by speed instead of failure.¹⁰⁶ To understand how that could occur, imagine two debtors whose financial conditions are identical and who, at the moment of the filings of their petitions, have taken identical steps to improve them. Further assume that the improvements resulting from the steps will not appear in earnings until the second year after implementation. If one of the debtors files a prepackaged case, one year of unimproved earnings would be included in our calculation of the debtor's average annual earnings for the five years after bankruptcy. If the other debtor files a nonprepackaged

104. As a result, we ignored two firms: Commonwealth Equity increased its number of employees from 1 to 440, and EUA Power increased its number of employees from 1 to 2. For neither firm was the number of employees indicative of firm size. Both firms were operated principally by persons employed by others and "rented" to the firm. Commonwealth's sharp increase was merely the transfer of employees from the books of an outside contractor to Commonwealth's own books.

105. $N = 94$, $F = 8.053$, $df = 1$, $p = .006$.

106. Other researchers have noted the correlation between the speed and failure of reorganizations. Michel et al., *supra* note 102 (finding that the median length of time in Chapter 11 is more than twice as long for one-time filers than for the first Chapter 11 of two-time filers).

case and remains in bankruptcy for a year, that debtor's year of unimproved earnings would not be included in our calculation because it occurred prior to confirmation.

This argument, however, is not convincing. Prepackaged reorganizations do not begin at the filing of the bankruptcy case. They are negotiated and voted upon, just as are nonprepackaged reorganizations. The difference is that the prepackaged bankruptcy is filed after the negotiation and voting have taken place, while the nonprepackaged bankruptcy is filed before the negotiation and voting taken place. Professors Tashjian, Lease, and McConnell found that from the initial restructuring announcement to the resolution of financial distress, prepackaged cases (at 21.6 months) were only 25% shorter than traditional Chapter 11 cases (at 28.5 months).¹⁰⁷

If steps are taken in conjunction with reorganization to improve earnings, in prepackaged cases those steps would occur before or during the period of plan formulation, just as they would in nonprepackaged cases. Thus, improvements in a prepackaged case would yield results at about the same time (in relation to plan confirmation) as would the improvements in a nonprepackaged case.

We also tested the relationship between prepackaging and success by two other measures of success—refiling and plan failures. Neither of those measures would be sensitive to the problem of timing just discussed. We found that 26% of the twenty-seven prepackaged reorganizations led to refiling within five years, as compared to 13% of the seventy-one nonprepackaged reorganizations. The difference is not statistically significant.¹⁰⁸ But using plan failure as the measure, 44% of the prepackaged bankruptcies failed, compared to 21% of the nonprepackaged bankruptcies. This difference is highly significant.¹⁰⁹ We conclude that prepackaged reorganizations are more prone to failure than nonprepackaged reorganizations.

107. Tashjian et al., *supra* note 90, at 142.

108. $F = 2.527$, $df = 1$, $p = .115$.

109. $F = 5.520$, $df = 1$, $p = .021$.

Table 17: Prepackaged Cases by Court

	Delaware	New York	Other Courts	Total
Nonprepackaged	46%	81%	82%	72%
Prepackaged	54%	19%	18%	28%
N	26	16	56	98

Pearson chi-square = 12.264, p = .002

Table 17 shows that Delaware received a greater proportion of prepackaged cases than did New York or Other Courts. Because prepackaging occurs before the case is filed, some might consider prepackaging to be exogenous to the court in which the case is filed. We consider prepackaging endogenous partly on the basis of anecdotal evidence that cases are prepackaged with particular courts in mind. From the beginning—long before filing—the reorganization process is linked to the culture and procedures of the Delaware bankruptcy court.

Delaware's prepackaged reorganizations fail at a much higher rate than prepackaged reorganizations in other courts (Table 18). Except in Delaware, prepackaged cases did not result in refilings at all. Moreover, the rate of plan failure in Delaware among prepackaged cases is very high (64%), nearly twice that of New York and more than three times the rate in Other Courts.

Nonprepackaged cases also fail at higher rates in Delaware than in Other Courts, but the difference in rates is not as great as the difference for prepackaged cases. Measured by refiling or plan failure, Delaware and New York have roughly equivalent failure rates in nonprepackaged cases, and those rates are significantly higher than the failure rates in Other Courts.

Table 18: Failure Rates by Court and by Prepackaged Status

Court	Prepackaged			Nonprepackaged		
	Refilings	Plan Failures	Cases	Refilings	Plan Failures	Cases
Delaware	7 50%	9 64%	14	4 33%	5 42%	12
New York	0 0%	1 33%	3	3 23%	4 31%	13
Other Courts	0 0%	2 20%	10	2 4%	6 13%	46
Total	7 26%	12 44%	27 100%	9 13%	15 21%	71 100%

Cell entries are numbers and percentages of cases in each court that failed (p-values relate to differences between courts within columns).

p = .009

p = .095

p = .011

p = .062

That Delaware's difference from Other Courts is not as great with respect to nonprepackaged cases as with respect to prepackaged cases, together with the very low rates of prepackaged case failure in Other Courts, lends support to our decision to treat prepackaging as endogenous to the court. If prepackaging rather than association with Delaware were driving Delaware's high failure rates, we would expect to see more prepackaged case failures in Other Courts. We conclude that something about the manner in which Delaware processes prepackaged cases is contributing to Delaware's high failure rates.

E. Speed

The conventional wisdom holds that Delaware processes reorganization cases faster than other courts and that debtors seeking quick reorganization choose Delaware for that reason.¹¹⁰ Examining a universe of cases very similar to that examined in the instant study,¹¹¹

110. *E.g.*, David A. Skeel, Jr., *Bankruptcy Judges and Bankruptcy Venue: Some Thoughts on Delaware*, 1 DEL. L. REV. 1, 20 (1998) ("Rather than lengthy cases, Delaware is known for its speedy confirmation of reorganization plans."); *id.* at 27 ("Delaware's judges also tend to confirm traditional Chapter 11 cases much more quickly than judges in other districts. Venue shopping in bankruptcy has thus produced a clientele effect, with Delaware attracting firms that seek to reorganize quickly."); *id.* at 28 (stating that "Delaware has successfully addressed the single biggest problem with Chapter 11 in recent years—the inordinate time and expense of the reorganization process").

111. Eisenberg & LoPucki, *supra* note 4, at 973-75. Both studies examined universes of cases drawn from the same source, Lynn M. LoPucki's Bankruptcy Research Database, *see supra* note

Eisenberg and LoPucki found that Delaware did have slightly lower mean and median case-processing times than Other Courts.¹¹² But after controlling for whether the cases were prepackaged, the differences were not significant.¹¹³

Prepackaged cases are quick and fail at a higher rate. To determine whether the speed of reorganizations—apart from the speed achieved by prepackaging—affects the failure rate, we began by calculating the number of days from filing to confirmation in each of the ninety-eight cases. We then tested this variable against our three measures of success, controlling for prepackaged status.

Table 19: Effect of the Speed of Reorganization on Plan Failure, Controlling for Prepackaged Bankruptcies

Predictor Variables	Dependent Variables			
	Plan Failure		Refile	
	I (Speed)	II (Speed and Prepack)	III (Speed)	IV (Speed and Prepack)
Days (natural log) <i>Mean = 5.641, sd = 1.262</i>	-.5384** (.1876)	-.7898* (.3996)	-.4164* (.2164)	-.5790 (.4699)
Prepack <i>Mean = .276</i>		-.7452 (1.0295)		-.4789 (1.2158)
Constant	1.9757* (1.0236)	3.5805 (2.4574)	.6228 (1.1599)	1.6622 (2.8916)
Nagelkerke R ²	.124	.131	.064	.067
N	98	98	98	98

Cells include logit coefficients (standard errors in parentheses).

**p < .01, *p < .05

We found that speed of reorganization is significantly correlated with both plan failure and refiling (Table 19). The relationship to plan failure is the stronger of the two; it remains highly significant even when controlling for the influence of prepackaged cases (Column II). Faster reorganizations are significantly more likely to fail than slower ones, and this relationship holds irrespective of whether the cases were prepackaged. In practical

2. Eisenberg and LoPucki's study examined cases filed after 1989, Eisenberg & LoPucki, *supra* note 4, at 989, and before 1998, *id.* at 978, while the instant study examines cases confirmed from 1991 through 1996.

112. Eisenberg & LoPucki, *supra* note 4, at 989.

113. *Id.*

terms, the regression model predicts that a firm whose bankruptcy process lasts 100 days has a 44% chance of failing, a bankruptcy that lasts 200 days has a 31% chance of failing, and a bankruptcy that lasts 500 days has an 18% chance of failing, controlling for prepackaging.

When success is measured by refiling, speed of reorganization and prepackaging are correlated, and the inclusion of both in the same model leaves neither of them individually significant (Column IV). The unchanged Nagelkerke R-squared indicates that the two variables in tandem provide some explanatory power for the incidence of refiling.

F. Plan Complexity

As discussed in Part IV.A.2.b, we collected data on the number of classes of claims and interests receiving separate distributions under each reorganization plan. We collected these “plan classes” data in the belief that they would reflect the complexity of the firms’ capital structures. We found that the number of plan classes was related to success and that the relationship ran in seemingly the wrong direction: the “easier” reorganizations—those involving fewer classes—failed more often.¹¹⁴

The relationship of number of plan classes to court is even stronger. Delaware and New York cases averaged 12.6 and 15.5 classes per plan respectively, while Other Court cases averaged 17.7 classes per plan. The difference is significant.¹¹⁵

Separation of the plan class data by prepackaged status reveals two striking aspects. First, for all courts combined, the average number of classes in nonprepackaged cases is considerably higher than the average number in prepackaged cases (Table 20). This difference is significant and not surprising.¹¹⁶ Prepackaged plans typically target shareholders and subordinate bondholders while paying other classes in full. Because those other classes are paid in full, many differences among them can be ignored. The most striking aspect of these data, however, is that in Delaware the average number of classes in a nonprepackaged plan is no larger than the number of classes in a prepackaged plan. Delaware nonprepackaged plans are as simple as Delaware prepackaged plans.

114. See *supra* notes 58-59 and accompanying text.

115. $N = 95$, $F = 5.132$, $df = 1$, $p = .008$.

116. $p = .026$.

Table 20: Plan Classes in Prepackaged and Nonprepackaged Cases by Court

Court	Average Number of Plan Classes			
	Nonprepackaged Cases	N	Prepackaged Cases	N
Delaware	12.4	12	12.8	14
New York	15.7	13	14.9	3
Other Courts	18.8	44	13.7	10
Total	16.9	69	13.4	27

$F = 4.085, df = 2, p = .021$

$F = .214, df = 2, p = .809$

We consider it implausible that these data could reflect differences in capital structure. If they did, the slightly larger firms reorganizing in Delaware and New York would have much simpler capital structures than the smaller firms reorganizing in Other Courts, and in Other Courts (but not in Delaware), firms would be choosing whether to prepackage their cases on the basis of the complexity of their capital structures. We can think of no explanation that fits the data in these regards.

Rather, we think that Delaware's and New York's smaller number of plan classes reflects a difference in reorganization practices in those two courts. The firms have similar arrays of creditors and shareholders, but in Delaware and New York the plans divide them into fewer classes. That practice may reflect some other variable that contributes to the higher refiling rates in Delaware and New York.

Another possibility is that division of the creditors and shareholders among more classes results in more thoughtful consideration of the plan. If all claims are placed in a single class, that class must approve the plan by a majority in number of claims and two-thirds in amount of claims.¹¹⁷ Under that arrangement, one type of claim may outvote another. If each type of claim is placed in a different class, each class must approve the plan by a majority in number of claims and two-thirds in amount of claims.¹¹⁸ Types of claims that could have been outvoted under a one-class plan may effectively have veto power under a multiclass plan.¹¹⁹ This veto power

117. 11 U.S.C. § 1126(c) (2000).

118. See § 1129(a)(8)(A) (requiring that the court confirm a plan only if each class of impaired claims has accepted the plan).

119. This veto power is not absolute, because the court can employ cramdown against a dissenting plan in particular circumstances. See § 1129(b)(2) (specifying the requirements for

may result in the inclusion of more parties in plan negotiations and the consideration of more points of view.¹²⁰ The result may be better plans.

G. Multiple Regression Analysis

Table 21: Multiple Regression Analysis of Plan Failure and Refiling with Endogenous Factors

	Plan Failure		Refiling		
	I	II	III	IV	V
Leverage After Filing (adjusted for industry)	.407 (1.172)	.364 (1.196)	.178 (1.381)	.651 (1.450)	1.617 (1.968)
Firm Shrinkage	.047 (.111)	-.003 (.113)	.120 (.131)	.049 (.135)	-.088 (.186)
Days in Bankruptcy (natural log)	-.814† (.479)	-.652 (.491)	-.748 (.596)	-.185 (.619)	-.061 (.804)
Number of Plan Classes (natural log)	-.857 (.676)	-.614 (.714)	-.801 (.821)	-.323 (.907)	.705 (1.235)
Prepackaged Bankruptcy	-.776 (1.149)	-.745 (1.185)	-.546 (1.380)	-.182 (1.447)	-.368 (1.717)
Delaware		1.391* (.630)		2.559** (.921)	2.628* (1.298)
New York		1.007 (.765)		.598 (1.283)	.501 (1.586)
Postbankruptcy Earnings (adjusted for firm size)					-19.879** (6.287)
Constant	5.918* (2.921)	3.722 (3.145)	4.620 (3.569)	-1.216 (4.068)	5.374 (5.590)

cramdown). But cramdown is uncommon, and when it occurs the cramdown process itself will assure careful consideration of the plan.

120. See also Ernst Maug & Bilge Yilmaz, Two-Class Voting: A Mechanism for Conflict Resolution? (1999) (unpublished manuscript, on file with author) (arguing that when classes have differing interests and information, two-class voting is superior to one-class voting, because classes reveal more information through voting).

	Plan Failure		Refiling		
	I	II	III	IV	V
N	90	90	87	87	87
Nagelkerke R ²	0.21	0.28	0.16	0.33	0.63
Block Goodness of Fit	$\chi^2 = 14.09$ df = 5 p = .015	$\chi^2 = 5.431$ df = 2 p = .066	$\chi^2 = 8.303$ df = 5 p = .140	$\chi^2 = 10.26$ df = 2 p = .006	$\chi^2 = 21.62$ df = 1 p = .000
Hosmer & Lemeshow Goodness of Fit	$\chi^2 = 6.086$ df = 8 p = .638	$\chi^2 = 10.416$ df = 8 p = .237	$\chi^2 = 9.869$ df = 8 p = .274	$\chi^2 = 8.286$ df = 8 p = .406	$\chi^2 = 7.898$ df = 8 p = .444

Cell entries are logistic regression coefficients (standard errors in parentheses).

**p < .01, *p < .05, †p < .10

Table 21 reports a multivariate analysis of the factors we consider endogenous to the bankruptcy process. These include factors addressed above in this section plus court location. (We include postbankruptcy earnings in the analysis of refilings, but not in the analysis of plan failure.¹²¹) The regression is designed to test the following proposition: *Certain factors endogenous to the bankruptcy process increase the likelihood that the firm will fail again within five years. Delaware's high failure rate can be explained by the presence of these factors in Delaware cases, but the presence of these factors in cases outside of Delaware will increase the likelihood of plan failure there as well.* To test this proposition we built a model that estimates the influence of the endogenous factors that we consider the most likely causes of emerging company failure: postbankruptcy leverage (adjusted for industry), firm shrinkage,¹²² the number of days between bankruptcy filing and plan confirmation, the complexity of the reorganization (here represented by the number of plan classes), whether or not the bankruptcy was prepackaged, and postconfirmation income (for the refiling models only).

If the proposition is true, we should find statistically significant relationships between the endogenous factors and the two measures of failure. That is, if the factors are independent of court location, they will remain significant when the model controls for court location.

121. Postconfirmation income is used to compute the dependent variable "plan failure," and to include it in the model would be to confirm a tautology.

122. Firm shrinkage is an index constructed from three variables: asset shrinkage, employee shrinkage, and sales shrinkage. These were standardized using Z-scores and subjected to reliability analysis to determine the suitability of their inclusion in an index (Cronbach's alpha = .85) before they were added together to create a single variable.

The regression analysis suggests that the proposition is false with respect to plan failure. The endogenous factors, as a block, explain some of the variance in plan outcomes.¹²³ While three factors were found to be significant in bivariate analyses—days in bankruptcy, number of plan classes, and prepackaging—only days in bankruptcy approaches statistical significance in the regression. This finding suggests that the three variables are correlated with each other and that, of the three, days in bankruptcy bear the strongest relationship to plan failure.

The addition of court location improves the model fit (Model II),¹²⁴ but not significantly.¹²⁵ Court location is the lone significant factor in the regression, which suggests that court location is correlated with the other factors and is a better predictor of plan failure than the other factors. In other words, the relationship between the endogenous variables and plan failure is not independent of court location.¹²⁶ Location of the case in Delaware appears to be the cause of plan failure.¹²⁷

Models III and IV present a similar analysis of refiling. The relationship between endogenous factors and refiling does not support the proposition above. While days in bankruptcy and number of plan classes were both significant in bivariate analysis, none of the five individual variables in the block has a statistically significant relationship to refiling. The entire block of endogenous variables cannot be said to be correlated with refiling at conventionally acceptable levels of significance (Model III).¹²⁸

Delaware court location was significantly related to refiling in a bivariate analysis, and the relationship between Delaware court location and refiling remains significant after controlling for the block of endogenous factors (Model IV). Since none of the factors is significantly related to refiling, we conclude that there is no support

123. Model I: Nagelkerke $R^2 = .21$, Block Goodness of Fit $p = .015$.

124. Nagelkerke $R^2 = .28$.

125. Block Goodness of Fit $p = .066$.

126. To put it another way, the number of failures outside Delaware is insufficient to establish that any of the variables tested is a cause of failure independent of Delaware.

127. Another way to analyze these is to reverse the model-building process by inserting court location into Model I, and adding the endogenous factors into Model II. This procedure would test whether the endogenous variables improve the fit of the model after controlling for court location. We ran that test, and the block of endogenous variables did not improve the fit significantly ($\chi^2 = 6.305$, $df = 5$, $p = .278$).

128. $p = .140$.

for the proposition; none of the endogenous factors have independent explanatory power after controlling for court location.¹²⁹

When postbankruptcy earnings are added to the model, they are highly correlated with the probability of refiling (Model V). Firms with relatively poor earnings after they emerge from bankruptcy are more likely to refile than firms with relatively good earnings.¹³⁰ Poor earnings are an apparent cause of refilings, and the presence of this factor outside of Delaware increases the likelihood of refiling there as well. Delaware court location remains significant in Model V, indicating that firms reorganizing in Delaware are more likely to refile, even controlling for postbankruptcy earnings and the block of endogenous factors. The significance of the refiling rate in Delaware becomes apparent when the logistic regression coefficients are converted into probabilities. Controlling for the independent effect of the other variables, Delaware bankruptcies were three times more likely to refile (29% probability) than either New York (10% probability) or Other Court (8% probability) bankruptcies. We conclude that poor postbankruptcy earnings operate independently of Delaware to cause refilings—hardly a startling proposition. More interestingly, Delaware court location operates independently of postbankruptcy earnings and the block of endogenous variables to cause refilings. That suggests that as-yet-untested characteristics of Delaware reorganization also contribute significantly to Delaware's high refiling and failure rates.

H. Conclusions

Commentators seeking to explain the failure of bankruptcy reorganizations focus on two problems. The firms, they say, emerged with too much leverage or without correcting the problems that made the firms' businesses unprofitable. Our findings are consistent with those explanations. The data we gathered regarding leverage and profitability show that the problems of leverage and losses are more often present in firms emerging from Delaware reorganization than in firms emerging from reorganization in Other Courts. The data also

129. One should not conclude from our model that these factors do not operate independently of court location. The numbers of non-Delaware failures may simply have been too small to document the factors' independent operation.

130. It might be argued that high leverage leads to lower postbankruptcy earnings, and that leverage is therefore an equal culprit when it comes to refiling. There is some support for this proposition in the data. The correlation between postbankruptcy earnings and leverage is nearly significant by conventional standards (Pearson's $R = -.19$, $p = .06$). On the other hand, this relationship is so weak that high leverage should be skeptically viewed (except for extreme cases) as a secondary or tertiary causal factor in refiling, not a primary one.

suggest that the cause of these differences lies not in the kinds of cases coming to Delaware, but in the effect that Delaware has on those cases. Before bankruptcy, the firms that file in Delaware were indistinguishable from those that file in Other Courts. By the time they emerged, however, they had slightly higher leverage and significantly lower earnings.

The data also show two other differences between the Delaware process and the processes of Other Courts that may help to explain Delaware's higher failure rates. First, prepackaged cases failed at much higher rates in Delaware than they did in Other Courts. Because Delaware also gets a higher proportion of prepackaged cases than Other Courts, prepackaged cases contributed substantially to Delaware's higher failure rates.

Second, nonprepackaged Delaware plans divide creditors and shareholders into fewer classes than do nonprepackaged Other Court plans, and it appears that plans with fewer classes fail more often. We doubt something so superficial as the number of plan classes could contribute significantly to plan failure. As a result, we think the causal relationship probably runs in another direction: some aspect of the Delaware process that contributes to failure also causes simplicity in Delaware plans.

Two additional conclusions can be drawn from the results in Table 21. First, controlling for Delaware court location, the measure of postbankruptcy earnings is the only endogenous factor that contributes significantly to failure independent of court location. This finding is consistent with the thesis that Delaware has higher failure rates because Delaware fails more often to fix the debtor's business. Second, Delaware court location is a better predictor of failure than the block of endogenous variables that were correlated with failure in bivariate testing. Something more is going on in Delaware than the variables we identified and tested.

VII. CONCLUSIONS, SPECULATIONS, AND DIRECTIONS FOR FUTURE RESEARCH

The data on failure show that Delaware reorganizations fail more often. The data on leverage and earnings show that the financial condition of Delaware-reorganizing firms is similar to that of Other Court-reorganizing firms when they enter bankruptcy but significantly worse when they exit. These findings suggest it is the Delaware process rather than the condition of the firms entering that process that causes Delaware's higher failure rate.

To be sure, these findings do not prove that either the Delaware court or the Delaware process is responsible. Skeptics can still posit the existence of an "Omitted Variable that Would Save Delaware."¹³¹ For example, they might posit some defect disproportionately present in Delaware-reorganizing firms that makes them more difficult to reorganize successfully, but which is latent. That is, the defect is one that would not increase pre-filing leverage or depress pre-filing earnings. But as the data accumulate, the putative omitted variables must become increasingly complex and implausible to sustain such a view.

The data alone are not yet sufficient to tell us what caused Delaware's higher failure rates. But when combined with data from other studies and anecdotal evidence, they do provide support for the following speculations.

Delaware's bankruptcy court operates on an unabashedly laissez-faire philosophy. If the parties are in agreement on a plan, the court will confirm it. This statement is generally true for Other Courts as well. Plans considered at a confirmation hearing are almost invariably confirmed in all courts. But even though Other Courts confirm plans at substantially the same high rate as Delaware, the manner in which they confirm them may nevertheless be more effective.¹³²

The Bankruptcy Code requires that the courts make findings that plans are feasible before confirming them.¹³³ In response, virtually all courts require expert testimony of plan feasibility. Plan proponents are usually under great pressure to succeed at the confirmation hearing. As a result, they may take the issue of feasibility more seriously in courts they know to be more demanding—or, perhaps more to the point, in courts about which they know nothing—than in the high-volume, pro-confirmation, laissez-faire courts of Delaware and New York. Other Courts' reorganization processes may require greater feasibility than Delaware's, even if Other Courts' judges do not.

Several other factors suggest that the Delaware reorganization process is less thorough than that of Other Courts. Our data show that the Delaware process is quicker. Unpublished data show that the

131. See LoPucki, *supra* note 71, at 341-44 (discussing possible omitted variables).

132. LoPucki and Kalin found that Delaware confirmed plans in 37 of 38 cases (97%), while Other Courts confirmed plans in 111 of 117 cases (95%). LoPucki & Kalin, *supra* note 1, at 256. The intensity of the court's scrutiny of plans is probably more important to the process than is the likelihood that the plan will ultimately be confirmed.

133. See 11 U.S.C. § 1129(a)(11) (2000) (requiring that confirmation of the plan is not likely to be followed by liquidation or further reorganization).

Delaware process is slightly less expensive than that of Other Courts—even though professionals appear to be paid at higher rates in Delaware and Delaware requires local counsel in every case.¹³⁴ Some bankruptcy lawyers and judges have told us that the Delaware Bankruptcy Court discourages adversary proceedings and objections to claims.

The same as-yet-unpublished professional fee data also show a provocative difference in fee distributions between Delaware and Other Courts. In Delaware, approximately 60% of the fees go to financial advisers; in Other Courts, the proportion is approximately 40%.

Together, these data suggest that broad-brush investment bankers rather than meticulous lawyers may dominate Delaware reorganization. They may spend less time, pay less attention to detail, and therefore finish more quickly. This possibility is consistent with the greater simplicity of Delaware plans.

The cause of Delaware's higher failure rates appears to lie in Delaware's less effective reorganization procedures. Assuming that is the case, the challenge for future researchers is to discover and document the source of this market failure. The question future researchers must answer is why so many sophisticated parties with even more sophisticated advisers choose to take their cases to the court least likely to reorganize their firms successfully.

We speculate that at the core of this market failure is the parties' desire to appear to reorganize without in fact doing so. Effective reorganization is unpleasant. Managers must at least acknowledge their past failures and perhaps also resign their positions. Creditors must accept substantial reductions in the amounts owed to them. The interests of shareholders must be finally and permanently extinguished. All parties hope to benefit from the bankruptcy court's certification that the firm has faced up to its problems and resolved them, but no party wants the firm to actually face up to its problems. So far, the Delaware bankruptcy court's certification has not only been cheap, quick, and easy to obtain, but it has also had even greater credibility than the certification of other courts. The issue now may be whether it can retain that credibility in the face of the evidence accumulating against it.

134. See *supra* note 88 and accompanying text.

* * *