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Cover Page Footnote

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ABSTRACT

Among the collective wisdom about large corporate bankruptcy cases, the following points are almost undisputed: Longer chapter 11 cases cost more; prepackaged chapter 11 cases cost less; cases filed in New York or Delaware cost more; and fee examiners control the costs of big chapter 11 cases. But each of these points is wrong, and in most cases entirely backward. This Article provides empirical evidence to show why. Ultimately, I argue that the complexity of the bankruptcy and the compensation structure of the professionals retained (which may itself reflect further aspects of complexity) are the key determinants of cost. The key questions of chapter 11 cost are subtle and difficult to tease out; and I end this paper urging more subtlety and modesty going forward.

TABLE OF CONTENTS

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INTRODUCTION

Among the collective wisdom about large corporate bankruptcy cases, the following points are almost undisputed:

- Longer chapter 11 cases cost more[1]
- Prepackaged chapter 11 cases cost less[2]
- Cases filed in New York and Delaware cost more.[3]

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1. Lynn M. LoPucki & Joseph W. Doherty, *The Determinants of Professional Fees in Large Bankruptcy Reorganization Cases*, 1 J. EMP. L. STUD. 111, 120 (2004) [hereinafter *Determinants of Professional Fees*]; *see also* Edward I. Altman, *Evaluating the chapter 11 Bankruptcy-Reorganization Process*, 1993 COLUM. BUS. L. REV. 1, 2-4 (1993); Julian R. Franks & Walter N. Torous, *An Empirical Investigation of U.S. Firms in Reorganization*, 44 J. FIN. 747, 747-48, 751 (1989); Robert K. Rasmussen & Randall S. Thomas, *Whither the Race? A Comment on the Effects of the Delawarization of Corporate Reorganizations*, 54 VAND. L. REV. 283, 295 (2001) (theorizing that "fees may be correlated roughly with the length of the bankruptcy proceeding. The longer the proceeding, the greater the fees."); James J. White, *Harvey's Silence*, 69 AM. BANKR. L.J. 467, 473-74 (1995) ("[T]he largest and most palpable costs of chapter 11 arise from delay.").

2. Elizabeth Tashjian et al., *Prepacks: An Empirical Analysis of Prepackaged Bankruptcies*, 40 J. FIN. ECON. 135, 155 (1996) (finding that "the average direct cost of resolving financial distress as a fraction of total assets is less in a prepack than in a traditional chapter 11."); *cf.* Stuart C. Gilson et al., *Troubled Debt Restructurings: An Empirical Study of Private Reorganization of Firms in Default*, 27 J. FIN. ECON. 315 (1990) (finding that out of court restructurings are cheaper than chapter 11 cases).

3. *See* Lynn M. LoPucki, *Courting Failure: How Competition for Big Cases is Corrupting the Bankruptcy Courts* 141, 141-42 (2005) [hereinafter *Courting Failure*] (arguing that Delaware and New York have fostered a culture of high fees that is spreading to other courts); Lynn M. LoPucki & Joseph W. Doherty, *Professional Overcharging in Large Bankruptcy Reorganization Cases*, 5 J. EMP. L. STUD. 983, 985 (2008) [hereinafter *Professional Overcharging*] (reporting that professional fees are "32 percent higher in forum-shopped cases."); *Determinants of Professional Fees, supra* note 1, at 113 (arguing that under some measures, chapter 11 cost is higher in Delaware); *see also* Theodore Eisenberg & Lynn M. LoPucki, *Shopping for Judges: An Empirical Analysis of Venue Choice in Large chapter 11 Reorganizations*, 84 CORNELL

- Fee examiners control the costs of big chapter 11 cases.[4]

However, each of these points is wrong, and in most cases entirely backward. This Article provides empirical evidence to show why.

Engaging these myths is important not only for the sake of accuracy, but because of the present economic climate. In particular, in the midst of an economic crisis, particularly one as severe as recently experienced, bankruptcy becomes of interest to a wider range of people. The press inevitably trots out the same group of articles seen in the prior recession, noting how the only beneficiaries of the current climate are bankruptcy attorneys.[5] At a point when bankruptcy is in the spotlight, and important policy decisions are to be made, an accurate picture of which tools may solve the financial crisis becomes all the more important.

Most importantly, too much of the debate about chapter 11 costs rests on a false premise. Beyond the specific issues addressed by this Article, the general theme of the debate is that professional fees in bankruptcy represent nothing more than wealth transfers, taking value

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L. REV. 967, 970, 996 (1999) (discussing the costs that may be associated with filing in New York or Delaware); Alexander L. Paskay & Frances Pilaro Wolstenholme, *chapter 11: A Growing Cash Cow, Some Thoughts on How To Rein in the System*, 1 AM. BANKR. INST. L. REV. 331, 334-36 (1993) (discussing the high cost of chapter 11 "mega cases").

4. Zach Lowe, *Bankruptcy Fees: How Much Is Too Much?*, AMLAW DAILY.COM (Jan. 14, 2010, 12:25 PM), http://amlawdaily.typepad.com/amlawdaily/2010/01/fees thornburg.html; *see also* Stipulation and Order with Respect to Appointment of a Fee Examiner at 2, *In re* Motors Liquidation Co., No. 09-50026-REG (Bankr. S.D.N.Y. Dec. 23, 2009) (In the chapter 11 case of the former General Motors, the United States Trustee argued that "in light of the size and complexity of the chapter 11 cases and the potential costs and expenses of the professionals" in the case, a fee examiner should be appointed and the court ordered the appointment).

5. Recent examples include, Julie Creswell & Nelson D. Schwartz, *Bankruptcy Fees Add Up in Cases Like Lehman's*, N.Y. TIMES, May 1, 2010; William-Arthur Haynes, *Bankruptcy Lawyers Work Overtime to Keep Up*, SILICONE VALLEY/SAN JOSE BUS. J., Jan. 31, 2010, http://www.bizjournals.com/sanjose/stories/2010 /02/01/story5.html?b=1265000400^2810591&ana=e_vert; Robert Snell, *Old GM Legal Fees Targeted*, THE DETROIT NEWS, Apr. 29, 2010, *available at* http://www.detnews. com/article/20100429/AUTO01/4290352/1148/auto01/Old-GM-legal-fees-targeted; Linda Sandler, *Lehman Liquidator Fees Top a Quarter-Billion Dollars*, Apr. 23, 2010, BLOOMBERG NEWS, http://www.businessweek.com/news/2010-04-22/lehman liquidator-fees-top-a-quarter-billion-dollars-update1-.html.

from creditors and giving it to bankruptcy professionals.[6] This notion is particularly evident in the claims that professionals actively attempt to extend the length of cases in order to facilitate more billing, and in Lynn LoPucki's recent claims that professionals expend substantial effort in conniving to extract unwarranted fees out of bankruptcy estates.[7]

The wealth transfer argument depends on the odd belief that bankruptcy professionals would otherwise be sitting at home on the couch if it were not for chapter 11. But most who work on large chapter 11 cases are very talented, quite employable, and could otherwise be working on mergers, bond offerings or loan agreements. These alternative tasks have real economic value, and professionals are routinely compensated for their work on such tasks, typically without much press or academic disparagement. Working on bankruptcy and chapter 11 matters means that bankruptcy professionals forgo the opportunity to work on other projects of this sort, and their time spent on chapter 11 must therefore have a value at least equivalent to these forgone projects.

Being in chapter 11 means that creditors' recovery on their claims becomes higher than zero.[8] The professional fees are the cost of moving to that higher recovery. The notion that money paid to professionals belongs to creditors is true only if the creditors could realize that value without the professionals.

But even liquidation does not happen by itself.[9] Indeed, only abandonment of a distressed firm might be costless, if we limit our

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6. *See* Lynn M. LoPucki & Joseph W. Doherty, *Routine Illegality in Bankruptcy Court Fee Practices*, 83 AM. BANKR. L.J. 423, 424 (2009) [hereinafter *Routine Illegality*] ("[I]n large, public-company cases, the managers rarely have significant interests in the estates. When they spend money on professionals they spend other people's money - usually creditors' money."); *see also* Cynthia A. Baker, *Other People's Money: The Problem of Professional Fees in Bankruptcy*, 38 ARIZ. L. REV. 35 (1996). The basic point is not new. *Bankruptcy*, 18 BULL. COM. L. LEAGUE AM., Nov. 1913, at 25 ("These attorneys do this . . . so that the trustee will select them as his attorney, and thus enable them to seek large fees which come out of the pockets of the creditors for this representation.").

7. The theme implicitly runs through many of his recent works, but is most evident in *Professional Overcharging, supra* text accompanying note 3.

8. Stephen J. Lubben, *Business Liquidation*, 81 AM. BANKR. L.J. 65, 81 (2007) (arguing that the average chapter 7 pays unsecured creditors no more than a "token amount").

9. *See* Donald R. Korobkin, *The Unwarranted Case Against Corporate Reorganization: A Reply to Bradley and Rosenzweig*, 78 IOWA L. REV. 669, 720 (1993)

conception of cost to actual "out of pocket" expenditures by the debtor-firm;[10] but that obviously ignores the larger social costs.

The cost paid to chapter 11 professionals is an example of the old truism that sometimes you have to spend money to make money. In chapter 11, creditors have to spend some money to recover some of what is due to them. In the main, the value of chapter 11 professionals' time was never a value that creditors could capture. Pretending that fees paid to professionals represents a real loss to the creditors demonstrates little more than muddled thinking.[11]

The real policy question then is whether creditors are paying too much to go from a 0% recovery in chapter 7 to a 40% recovery in chapter 11. This is a question about the efficiency of the market for bankruptcy professionals, because if the market is efficient the professionals are limited in their ability to overcharge. Even if the market is somewhat inefficient, we have to ask if the market is any more inefficient than the larger market for corporate professionals. Bankruptcy professionals seem to be easy to pick on, because their fees are disclosed in open court. However, one might suspect that this same fact may also make them more conservative in their billing.

Overheated rhetoric about the hourly rates of the professionals in question and the millions of dollars requested in fee applications does nothing to advance our understanding of these key issues. It is equally foolish to suggest that bankruptcy professionals would work for little or substantially reduced compensation, or that artificially capping bankruptcy costs would not have an effect on how chapter 11 cases play out.[12] For example, if a debtor could find cheaper bankruptcy counsel, are we sure that creditor recoveries would go up, as the conventional wisdom often implies, or will recoveries go down, because the cheaper

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[hereinafter *Reply to Bradley & Rosenzweig*] (noting that even an automated bankruptcy system would have to provide a procedure for transferring ownership of the debtors assets).

10. *See generally* Stephen J. Lubben & Stephanie Ben-Ishai, *Involuntary Creditors and Corporate Bankruptcy,* (October 4, 2011), *available at* http://ssrn.com/abstract=1938599 [hereinafter *Involuntary Creditors and Corporate Bankruptcy*] (citing to the idea that there are societal costs to even abandonment of contaminated property).

11. *See* Ronald J. Mann, *Bankruptcy and the Entitlements of the Government: Whose Money is it Anyway?*, 70 N.Y.U. L. REV. 993, 1043-44 (1995) (noting that collection under any system—state or federal—involves cost to creditors).

12. *See* Jay Lawrence Westbrook, *Fees and Inherent Conflicts of Interest*, 1 AM. BANKR. INST. L. REV. 287, 288-89 (1993).

firm is too inexperienced or too small to handle the case? Sometimes you get what you pay for.

Instead, our focus must be on: identifying how much chapter 11 costs, how much overall value chapter 11 generates and how those figures compare to the available alternatives, such as state debtor-creditor law, corporate insolvency systems used in other jurisdictions, and theoretical alternatives to chapter 11. Simply declaring that chapter 11 costs are "outrageous" is no more helpful from a policy perspective than any other soapbox declaration of one's personal beliefs. The important question is "why?"

In short, the wealth transfer argument is one of easy rhetorical appeal, but little intellectual rigor. The goal of this Article is to begin a more careful, considerate examination of the chapter 11 system.

Part I of this Article begins by briefly reviewing recent studies of chapter 11 costs. Part II then introduces the dataset used in the present Article. Based on the dataset I first created for the ABI chapter 11 Fee study,[13] now augmented with additional data, this database consists of 97 large chapter 11 cases, all filed in 2004.[14] Finally, Part III develops a regression model of chapter 11 cost. Set forth on Table 8, my model explains more than 85% of the variance associated with chapter 11 costs.

As noted at the outset, this model also challenges several key assumptions about the way chapter 11 works, and how chapter 11 costs are incurred. In particular, I find that:

- Time spent in chapter 11 has no relationship with cost, once a fully specified model is considered;
- Prepackaged chapter 11 cases are not significantly cheaper than regular chapter 11 cases;
- Cases filed in New York or Delaware do not cost more—in fact, these jurisdictions seem to actually reduce chapter 11 costs;
- Fee examiners do not reduce the costs of large chapter 11 cases;

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13. Stephen J. Lubben, *Chapter 11 Professional Fee Study*, AMERICAN BANKRUPTCY INSTITUTE (Nov. 1, 2007) [hereinafter *ABI chapter 11 Fee Study*], *available at* http://ssrn.com/abstract=1020477.

14. *Cf. Determinants of Professional Fees*, *supra* note 1, at 112-13 (describing their study of 48 cases).

- The complexity of the bankruptcy and the compensation structure for the professionals retained (which may itself reflect further aspects of complexity) are the key determinants of cost. Debtor size is only a loose proxy for these factors, and is itself of lesser relevance once a fuller model is developed.

Complex cases are cheaper than a linear model of chapter 11 costs would predict. That is, there are economies of scale with regard to the largest cases, even if those cases receive the most criticism.

I thus hope that this paper serves as the beginning of a more subtle, less combative, examination of chapter 11 and the cost thereof. Particularly given the current economic reality, the debate is of special import.

I. DEVELOPMENT OF CONVENTIONAL WISDOM

The costs of corporate reorganization are compelling in any recession, and particularly so in a financial crisis, such as the one we are currently experiencing.[15] To the casual reader of the *Wall Street Journal* who still thinks of bankruptcy as the equivalent to corporate death, the millions of dollars paid by "bankrupt" or "insolvent" firms like Lehman Brothers, or Enron before it, often seems quite extreme.[16]

A similar phenomenon can be seen in academic literature, dating back to Modigliani and Miller in 1958, and the notion that a firm's capital structure amounts to little more than slices in a pie.[17] In this world, debtor-firms are typically discussed relative to a backdrop of complete contracts and zero transaction costs.[18] Accordingly, firms that encounter financial distress—that is, having liquid assets insufficient to meet current fixed claims—simply renegotiate their obligations and

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15. For example, even the Sports section of the New York Times has included coverage of the issue. *See* Richard Sandomir, *To Dodgers, Bankruptcy Incurs Cost by the Hour*, N.Y. TIMES, Sept. 3, 2011, at D7.

16. *See* Liz Moyer, *Lehman Bankruptcy Fees Top $1 Billion*, WALL ST. J., Nov. 22, 2010.

17. *See* Merton H. Miller, *The Modigliani-Miller Propositions After Thirty Years*, 2 J. ECON. PERSP. 99, 99 (1988). *See generally* John D. Ayer, *The Role of Finance Theory in Shaping Bankruptcy Policy*, 3 AM. BANKR. INST. L. REV. 53 (1995) ("Modigliani and Miller argue . . . that under defined assumptions *it makes no difference* what the debt-equity structure might be--the value of the firm remains the same in any event.").

18. *See* Robert A. Haugen & Lemma W. Senbet, *The Insignificance of Bankruptcy Costs to the Theory of Optimal Capital Structure,* 33 J. FIN. 383, 386 (1978).

proceed accordingly.[19] Slight deviations from the background assumptions can be assumed and then addressed by neatly automated contractual responses.[20] That Kmart, a large discount store chain, would pay more than $134 million to professionals to do so is inconsistent with this idealized understanding of the world, and thus each dollar spent is evidence of inefficiency.[21]

Of course, both views of "bankruptcy" are based on basic misunderstanding or oversimplification. Both assume that financial distress is costless, whereas even liquidation does not happen by itself.[22] Indeed, only abandonment of a distressed firm might be costless – if we limit our conception of cost to actual "out of pocket" expenditures by the debtor-firm.[23]

More broadly, understanding the cost of a corporate reorganization system is important because debtor-firms face the reality of a world with incomplete contracts, incomplete information, uncertain asset values, and complex capital structures that highlight the many ways in which assumptions about capital structure irrelevance or managerial rationality, or both, fail.[24] Given these truths, and the added reality of asset market

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19. *See, e.g.*, Barry E. Adler, *Finance's Theoretical Divide and the Proper Role of Insolvency Rules*, 67 S. CAL. L. REV. 1107, 1119-20 (1994) [hereafter *Finance's Theoretical Divide*].

20. *See, e.g.,* Barry E. Adler, *A Theory of Corporate Insolvency*, 72 N.Y.U. L. REV. 343, 353 (1997) ("The contractual, Chameleon Equity structure has an important potential advantage over current bankruptcy reorganization law. Automatic conversion of the lowest-priority fixed-obligation class to common equity, and the survival of higher-priority classes, would accomplish a reorganization of an insolvent firm without the expensive imbroglio that is often a consequence of the current bankruptcy reorganization process."); Lucian Arye Bebchuk, *A New Approach to Corporate Reorganizations*, 101 HARV. L. REV. 775, 785-89, 804 (1988) (arguing for an auction of the debtor based on options, and that "[u]nder the method, once the size and relative priority of the participants' claims are determined, the division of the reorganization pie will be resolved quickly and efficiently—and in perfect consistency with the entitlements of all the participants.").

21. *See* Greta Guest, *Bill for Kmart's Lawyers, Consultants Exceeds $138 Million*, DETROIT FREE PRESS, Oct. 3, 2003, at 1A.

22. *See Reply to Bradley & Rosenzweig*, *supra* note 9, at 720.

23. *See Involuntary Creditors and Corporate Bankruptcy, supra* note 10, at 16-17.

24. *See, e.g.*, Andrei Shleifer & Robert W. Vishny, *Liquidation Values and Debt Capacity: A Market Equilibrium Approach*, 47 J. FIN. 1343 (1992); *see also* Douglas G. Baird & Donald S. Bernstein, *Absolute Priority, Valuation Uncertainty, and the Reorganization Bargain*, 115 YALE L.J. 1930 (2006); Lynn M. LoPucki & William C. Whitford, *Bargaining Over Equity's Share in the Bankruptcy Reorganization of Large,*

disruptions,[25] it is generally thought that reorganization structures are important tools to avoid excessive and economically disruptive liquidation of assets.[26] If given a choice of possible approaches to reorganization, the cost of any particular system, weighed against its benefits, provides an obvious metric for evaluation.

While much of the conventional wisdom about chapter 11 is non-empirical,[27] there have been several empirical studies of chapter 11 cost that have lent support to the larger "folklore."[28]

For example, in 1996, Elizabeth Tashjian, Ronald C. Lease, and John J. McConnell published a study of prepackaged[29] chapter 11 cases, utilizing a sample of forty-nine firms that filed prepackaged chapter 11

Publicly Held Companies, 139 U. PA. L. REV. 125, 126 (1990) ("Current law provides a complex legal environment in which representatives of thousands of creditors and shareholders bargain over the disposition of billions of dollars in assets.").

25. Todd C. Pulvino, *Do Asset Fire Sales Exist? An Empirical Investigation of Commercial Aircraft Transactions*, 53 J. FIN. 939 (1998).

26. United States v. Whiting Pools, Inc., 462 U.S. 198, 203 (1983) ("In proceedings under the reorganization provisions of the Bankruptcy Code, a troubled enterprise may be restructured to enable it to operate successfully in the future . . . . Congress presumed that the assets of the debtor would be more valuable if used in a rehabilitated business than if 'sold for scrap.'"). *See* Frank H. Easterbrook, *Is Corporate Bankruptcy Efficient?*, 27 J. FIN. ECON. 411 (1990); Elizabeth Warren, *Bankruptcy Policymaking in an Imperfect World*, 92 MICH. L. REV. 336 (1993); Elizabeth Warren & Jay Lawrence Westbrook, *Contracting Out of Bankruptcy: An Empirical Intervention*, 118 HARV. L. REV. 1197 (2005).

27. *E.g.,* Barry E. Adler, *Bankruptcy and Risk Allocation*, 77 CORNELL L. REV. 439, 465 n.107 (1992) ("It appears that firm size is inversely related to the proportion of firm value lost [as a result of direct and indirect costs]."); White, *supra* note 1, at 470.

28. *See*, *e.g.*, Lubben 2008, *infra* note 45.

29. This is explained in Stephen J. Lubben, *The Direct Costs of Corporate Reorganization: An Empirical Examination of Professional Fees in Large chapter 11 Cases*, 74 AM. BANKR. L.J. 509, 516 (2000) [hereinafter Lubben (2000)] ("A true prepack involves a prepetition solicitation of votes on a plan. A partial prepack involves both a prepetition solicitation (e.g., of bondholders) and a postpetition solicitation (e.g., of equity). Partial prepacks are usually done to avoid having to conduct a 'registered prepack,' which is subject to review and comment by the SEC, and takes substantially longer than a nonregistered prepack. A prearranged or prenegotiated case involves no prepetition solicitation, and thus is little different from a traditional chapter 11 case, save for the fact that a proposed plan and disclosure statement are fully drafted on the first day of the case.").

cases between 1986 and the first six months of 1993.[30] The authors found that prepackaged cases fall between out-of-court and chapter 11 restructurings in terms of time, direct costs, recovery rates, and violations of absolute priority.[31] Overall, the authors reported direct costs of 1.85% of assets.[32]

Unfortunately, the authors only considered the "in bankruptcy" costs of prepackaged cases, and failed to consider that the negotiation of a plan without court oversight may be responsible for the apparent cost difference.

In 2004, Lynn LoPucki and Joseph Doherty reported on "one of the most extensive studies to date of the professional fees and expenses awarded by U.S. bankruptcy courts in the reorganization of large, public companies."[33] LoPucki and Doherty studied the professional fees and expenses awarded by U.S. bankruptcy courts in 48 chapter 11 cases involving large, public companies whose plans were confirmed between 1998 and 2002.[34]

The authors constructed a regression model of the principal determinants of fees and expenses applied for and awarded to the professionals involved in the sample's reorganizations, in order to test the impact of different variables on such awards.[35] They tested a number of different variables, including the size of the firm, the length of the case, the court of the bankruptcy proceeding, the number of professional firms involved in the case, the firm's solvency, the type of reorganization plan being confirmed, the firm's industry, the amounts of fee cuts imposed by the court, whether the firm was liquidated during the bankruptcy proceeding, whether the debtor's lawyers were from New York, Delaware or another jurisdiction, whether the firm ultimately liquidated or reorganized, and whether the debtor's lawyers were local to the court.[36] However, LoPucki and Doherty ultimately settled on only using four variables in their regression: firm size (measured by the assets reported on the bankruptcy petition), case duration, the number of

30. Elizabeth Tashjian et al., *supra* note 2, at 135-36. As noted in Lubben (2000), *supra* note 29, the definition of "prepackaged" used in this paper likely also includes pre-negotiated chapter 11 cases.

31. *Id.* at 142-43.

32. *Id.* at 143.

33. *Determinants of Professional Fees*, *supra* note 1, at 111.

34. *Id.* at 115.

35. *Id.* at 120-21

36. *Id.* at 122-37

professional firms seeking fees, and the location of the bankruptcy proceeding.[37]

Using this model, LoPucki and Doherty concluded that firm size and length of time between filing and confirmation were the strongest determinants of professional fees awarded.[38] Further, the number of professional firms seeking reimbursement also impacted the overall amount of professional fees awarded, albeit causing a smaller effect than the first two variables.[39] Using only those three factors in their regression analysis, LoPucki and Doherty were able to explain 77% of the variance of fees.[40] Additionally, by controlling for those three variables, the authors found that fees were significantly higher for bankruptcy case proceedings in Delaware—approximately 32% higher than cases in all other states.[41]

In 2008, three major empirical legal studies of chapter 11 costs were published. First, LoPucki and Doherty returned to their original model and compared it with a new model, which they asserted better represented pure case complexity.[42] Describing the difference between the two regression models as the "billing opportunity" presented by a case, the authors asserted that professionals routinely overcharged for chapter 11 work.[43]

Next, I produced the American Bankruptcy Institute chapter 11 Fee Study,[44] and published a related article setting forth the results of that study.[45] The study examined a total sample of 1,044 cases filed in 2004, as 945 chapter 11 cases were pooled into a "random" sample and 99 cases were considered in a "big case" dataset. The average firm in the dataset had scheduled assets of $423.4 million and scheduled liabilities of nearly $776 million, while the average firm in the random sample had scheduled assets of $21.2 million and scheduled liabilities of more than

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37. *Id.* at 120.

38. *Id.*

39. *Id.*

40. *Id.*

41. *Id.* at 130-31.

42. *Professional Overcharging, supra* note 3.

43. *Id.* at 983, 994.

44. Stephen J. Lubben, *chapter 11 Professional Fee Study*, AM. BANKR. INS. (Nov. 1, 2007) [hereinafter *ABI chapter 11 Fee Study*], *available at* http://ssrn.com/abstract =1020477.

45. Stephen J. Lubben, *Corporate Reorganization & Professional Fees*, 82 AM. BANKR. L.J. 77 (2008) [hereinafter Lubben (2008)].

$37 million.[46] Lubben (2008) found that, for both samples, professional fees totaled 4 to 4.5 percent of the bankrupt firms' assets and liabilities, but cautioned against reporting cost in relation to size, since the data evidenced significant economies of scale.[47]

While partially confirming prior studies, such as LoPucki and Doherty (2004), Lubben (2008) also found that time spent in chapter 11 was not a significant predictor of overall cost once case complexity was fully modeled.[48] Lubben (2008) found the addition of other variables, such as looking at a bankrupt firm's assets and debts, presence of official committees and whether there were "first day motions" filed in a case, were better predictors of the costs involved in a chapter 11 case.[49] The study also found no indications that filing in Delaware or New York resulted in greater costs.[50]

Also in 2008, LoPucki and Doherty examined the growing role of investment bankers in modern chapter 11 practice and constructed regression models for specific bankruptcy professionals.[51] The primary findings of this paper largely track those of its earlier companion papers, although the authors did note that "the fees of financial advisors grew at the rate of about 25% per year, whereas all professional fees and expenses as a whole grew only about 9% per year."[52] They also separately modeled the costs of lead debtor's attorneys, finding that Skadden, Arps, Slate, Meagher & Flom LLP, a leading New York corporate law firm, was substantially more expensive than other debtor's firms.[53] They concluded that "Skadden Arps representation cost more in these cases because Skadden Arps billed more hours."[54]

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46. *Id.* at 93-95.

47. *Id.* at 102-04.

48. *Id.* at 110.

49. *Id.*

50. *Id.* at 109.

51. Lynn M. LoPucki & Joseph W. Doherty, *Rise of the Financial Advisors: An Empirical Study of the Division of Professional Fees in Large Bankruptcies*, 82 AM. BANKR. L.J. 141 (2008) [hereinafter *Rise of the Financial Advisors*].

52. *Id.* at 142.

53. In the interest of full disclosure, I should note that I worked for this firm before becoming an academic.

54. *Rise of the Financial Advisors*, *supra* note 51, at 152-53.

II. THE DATASET

I begin with the dataset I collected for the American Bankruptcy Institute's chapter 11 Fee Study.[55] This dataset includes cases that were originally filed in 2004, and the data within each dataset comes from publicly available court filings that were primarily collected from PACER.[56]

The dataset is non-random, comprising all 2004 bankruptcy cases listed in the "Major Bankruptcies" database on www.bankruptcydata.com (published by New Generation Research, Inc.), except for cases initially filed under chapter 7 and not converted to chapter 11, and cases filed under former section 304 of the Bankruptcy Code.[57]

Two broad types of professional fee data were collected: debtor professional expenses and committee professional expenses. In particular, under section 330 of the Bankruptcy Code, all professionals retained by either the debtor or an official committee, most often a creditor's committee, must file fee applications with the court before they can be paid from estate funds.[58] A similar rule applies to professionals retained by examiners or trustees, and the datasets also include that information.[59] Bankruptcy-related professional fees incurred in the days just before the bankruptcy filing are reported on the debtor's statement of financial affairs,[60] and thus are also included in the present study. Professional fees incurred by creditors who have a contractual right to charge such fees to the debtor—such as secured lenders–are not

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55. *ABI chapter 11 Fee Study*, *supra* note 44; Lubben (2008), *supra* note 45. The ABI chapter 11 Fee Study is available online at http://ssrn.com/abstract=1020477 and is extensively discussed in Lubben (2008), *supra* note 45.

56. PUBLIC ACCESS TO COURT ELECTRONIC RECORDS, http://pacer.psc.uscourts.gov/. *See generally* Jay Lawrence Westbrook, *Empirical Research in Consumer Bankruptcy*, 80 TEX. L. REV. 2123, 2148 (2002) (discussing the role of PACER in modern scholarship).

57. Section 304 was repealed in 2005 as part of the enactment of new chapter 15. Both section 304 and new chapter 15 deal with the recognition of foreign bankruptcy proceedings in the United States. *See* Jay Lawrence Westbrook, *Chapter 15 at Last*, 79 AM. BANKR. L.J. 713 (2005).

58. 11 U.S.C. § 330 (2006).

59. *Id.*

60. *Statement of Financial Affairs*, U.S. BANKR. CT., *available at* http://www.uscourts.gov/uscourts/RulesAndPolicies/rules/BK_Forms_Official_2010/B_007_0410.pdf.

included in this study, inasmuch as these sorts of reimbursement obligations are not subject to section 330 and are therefore not subject to express disclosure.[61]

The datasets also include a wealth of related information about the debtors' cases: more than 700 variables were coded in each case.

* * *

The present study modifies the original ABI dataset in several key respects. For example, in the original study, cases were followed for two years or until they ceased to be in chapter 11 because either a plan was confirmed, the case was converted to chapter 7, or the case was dismissed.[62] This approach to the data was necessitated by the required timeline for producing the final report under the ABI chapter 11 Fee Study.

To examine whether this censoring had any effects on the data, I revisited the cases that were still pending in chapter 11 when the original study was completed and recoded them to include their final resolution and all professional expenses incurred through that resolution.

Additionally, I revamped my approach to measuring the debtor's assets and liabilities in the dataset. First, asset and liability information was taken from Bloomberg. Typically this information comes from the most recent pre-bankruptcy Securities and Exchange Commission ("SEC") filings, but Bloomberg also provides financial information for certain larger privately held companies in the sample (e.g., Tower Records). Then, only if financial information on the debtor was unavailable on Bloomberg, would assets and liability information be taken from the debtor's schedules. This change was done for a variety of reasons, most notably to reduce the risk that debtor size—a key factor in this study—would be misspecified for the corporate groups in the dataset. This is because schedules are often filed on a corporation by a corporation basis, whereas chapter 11 costs are typically paid by the group as a whole, and only afterwards allocated to specific corporate entities for accounting purposes.

Following these changes to the datasets, the dataset is comprised solely of 97 chapter 11 cases filed in 2004. As would be expected, Table 1 reveals that Delaware and New York are the most prevalent

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61. Lynn M. LoPucki & Joseph W. Doherty, *Professional Fees in Corporate Bankruptcies: Data, Analysis, and Evaluation* (2011) [hereinafter *Professional Fees*].

62. The study captured professional fees incurred during the study period, even if approved or requested outside of the study period.

jurisdictions in the sample, each representing approximately 14% of the dataset.

In this paper, all data analysis was done using Stata64/SE version 10.1 for OSX. Add-on modules for Stata were also used, and are discussed when appropriate.

Figure 1

Table 1: Case Frequencies by District

District	*Freq.*	*Plot of freq.*
C.D. Cal.	4	****
Colorado	1	*
D. Ariz.	1	*
D. Del.	13	**********
D. Mass.	2	**
D. Me.	1	*
D. Minn.	1	*
D. Nev.	1	*
D. Vt.	1	*
D. N.H.	1	*
D. N.J.	3	***
E.D. La.	1	*
E.D. Mich.	3	***
E.D. Mo.	1	*
E.D. Tex.	1	*
E.D. Va.	1	*
E.D. Wash.	1	*
M.D. Pa.	1	*
M.D. Florida	3	***
N.D. Cal.	3	***
N.D. Tex.	4	****
N.D. N.Y.	1	*
N.D. Alabama	1	*
N.D. Georgia	3	***
N.D. Illinois	4	****
S.D. Fla.	5	*****
S.D. Ind.	2	**
S.D. N.Y.	14	**********
S.D. Ohio	4	****
S.D. Texas	3	***
W.D. La	4	****
W.D. Pa.	1	*
W.D. Tex.	2	**
W.D. Va.	1	*
W.D. Wash.	1	*
W.D. N.Y.	1	*
W.D. Missouri	2	**
	97	

A. DESCRIPTIVE STATISTICS

Figure 2 illustrates the basic financial characteristics of the debtors in the dataset.[63]

Figure 2

In Figure 2, and many of the figures that follow, the data has been transformed using a log base 10 transformation. This is done to account for the extreme skew of the underlying data, which would otherwise make many of the graphs unusable.[64] The logged numbers are easily interpreted as 1 followed by the number of zeros in the logged value—so that "6" in Figure 2 is the equivalent of $1,000,000. That is, "1" followed by six zeros.

63. Operating income is taken from Question 1 of the debtor's Statement of Financial Affairs, which requires the debtor to report "the gross amount of income the debtor has received . . . from operation of the debtor's business." Official Form B7, http://www.uscourts.gov/uscourts/RulesAndPolicies/rules/Bk%20Forms%20Dir%20 1209/Form_7_Stmt_Financial_Affairs_INSTRUCTIONS_1209.pdf. The phrasing of this question is somewhat ambiguous, and might lead to inclusion of something more than operating income. For example, if the emphasis is on "received," the debtor might report all sales proceeds or revenues in this field, without deducting the cost of such sales.

64. *See infra* Figure 9.

Table 2B sets forth descriptive statistics for the dataset. The prototypical case is one filed by the debtor. Involuntary cases account for about 2% of all cases. The cases in the dataset are, on average, solvent. This highlights a relatively unique aspect of chapter 11—there is no formal solvency requirement to file a case, and simple cash flow problems or anticipated insolvency can be enough to justify a petition. More than 55% of the cases in the dataset are publicly traded firms required to file reports with the SEC.

These cases are likely to involve creditors committees, as 77% had at least one committee and about 27% of the cases involved sales of most of the debtor's assets, typically before confirmation of a plan.[65] Similarly, the average debtor saw more than 236 claims filed against it. This in turn leads to the retention of a claims agent in 51% of the dataset cases.[66]

Table 2B: Descriptive Statistics

	Mean	*SE of mean*	*Median*	*N*
Assets	706,000,000	213,000,000	91,700,000	94
Debts	623,000,000	170,000,000	80,000,000	94
Op. Income	242,000,000	102,000,000	7,573,344	77
Publicly Traded	0.567	0.051	1.000	97
Involuntary	0.021	0.015	0.000	97
Prepackaged	0.041	0.020	0.000	97
DIP Loan	0.433	0.051	0.000	97
# Lawsuits	52.635	21.440	9.000	74
Trustee	0.082	0.028	0.000	97
Examiner	0.062	0.025	0.000	97
Monthly Comp.	0.474	0.051	0.000	97
Ord. Course Prof.	0.402	0.050	0.000	97

65. These quick "363 sales," named after the relevant section of the Bankruptcy Code, were recently the subject of much controversy when used by General Motors and Chrysler, but the present datasets show that 363 sales are very much a big case phenomenon. *See generally* Stephanie Ben-Ishai & Stephen J. Lubben, *Sales or Plans: A Comparative Account of the "New" Corporate Reorganization,* 56 MCGILL L.J. 591 (2011).

66. A claims agent is a data-management company that takes over the job of receiving and organizing claims filed in a chapter 11 case. Often, a large debtor will want such an agent because they can provide a more sophisticated analysis of the claims, and have the facilities to integrate the claims management process with the debtor's financial reports, as well as the claims objections process. The debtor pays the expense of hiring such a firm.

Claims Agent	0.474	0.051	0.000	97
363 Motion	0.268	0.045	0.000	97
Committee	0.773	0.043	1.000	97
Plan Filed	0.763	0.043	1.000	97
# Classes in Plan	8.776	0.856	8.000	58
Sub-debt Class	0.291	0.062	0.000	55
Exit Fin.	0.204	0.055	0.000	54.
Fraud	0.093	0.030	0.000	97
# Claims	236.705	120.011	44.000	78
First Day Papers	0.515	0.051	1.000	97
# Lift Stay Motions	1.788	0.304	1.000	85
# C/D Motions	0.632	0.095	0.000	87
# Trustee Motions	0.500	0.120	0.000	88
Ret. Bonus Motion	0.361	0.049	0.000	97
3+ Extra Debtor Profs.	0.598	0.050	1.000	97
Fin. Adv. In Case	0.588	0.050	1.000	97
Days in chapter 11	410.856	33.626	317.000	97

More information on the variables can be found in Appendix 2B, at the end of the section.

In these cases, more than 43% of debtors utilized post-bankruptcy ("DIP") financing and 40% of the debtors sought court authorization to pay certain non-bankruptcy professionals outside of the normal bankruptcy process.[67]

The typical case dataset debtor took just over 410 days (1.13 years) to travel through chapter 11.[68] As shown in Figure 3, confirmed plans are quite common among these cases.[69]

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67. Professor LoPucki has recently argued that these "Ordinary Course Professional" motions are "illegal." *Routine Illegality, supra* note 6, at 427, 434. The thesis of the LoPucki article is contested and criticized in Martin J. Bienenstock et al., *Response to Routine Illegality in Bankruptcy Court, Big-Case Fee Practices*, 83 AM. BANKR. L.J. 549 (2009) [hereafter *Response to Routine Illegality*].

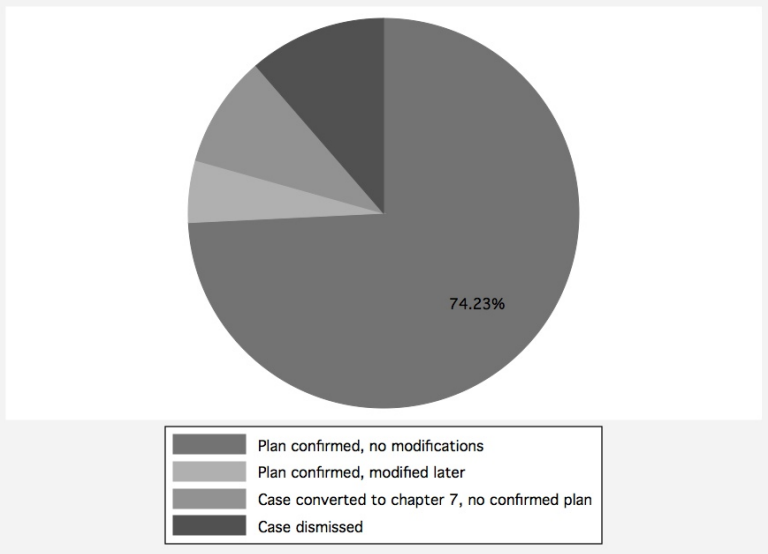
68. Contrasted with Warner's classic study of railroad bankruptcies, which found an average length of 13 years, it appears that chapter 11, despite its reputation, is a significant improvement over its predecessors. *See* Jerold B. Warner, *Bankruptcy Costs: Some Evidence*, 32 J. FIN. 337, 340 (1977).

69. *See* Lynn M. LoPucki & William C. Whitford, *Patterns in the Bankruptcy Reorganization of Large, Publicly Held Companies*, 78 CORNELL L. REV. 597, 600-01 (1993) (reporting 96% confirmation rate for bankruptcies of large public companies). A dismissed case leaves the federal bankruptcy system, leaving creditors to their rights under state debtor-creditor law. Typically this involves individual creditor-by-creditor collection of the debts.

Of ultimate importance for this study, is that the cases in the dataset involve many professionals. 59% of the cases involve at least one retained financial adviser, and more than half of the cases employed at least three additional professionals, beyond their primary bankruptcy counsel, to help them navigate chapter 11.

B. DEFINING DEBTOR SIZE

Figure 3
Case Outcomes



Given the importance of debtor size to any examination of chapter 11, it is remarkable that the question of how to measure size is so infrequently addressed.[70] In many of the early studies of professional fees, the debtor's asset or market value was used without further discussion.[71] Of course, even if one settles on asset size as the measure of debtor size, the next question is which measure of asset size? Assets are often reported several different ways through the course of a chapter 11 case, depending on the particular context and the relevant legal and accounting rules.[72]

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70. *See Finance's Theoretical Divide*, *supra* note 19.

71. *See, e.g.*, *id*. at 1131; Robert A. Haugen & Lemma W. Senbet, *The Insignificance of Bankruptcy Costs to the Theory of Optimal Capital Structure,* 33 J. FIN. 383, 386 (1978); *Reply to Bradley & Rosenzweig, supra* note 9, at 720.

72. *Professional Fees*, *supra* note 61, at 10-13.

Lynn LoPucki is one of the few scholars to address the issue directly, and he has typically settled on assets listed on the petition as the best measure of debtor size.[73] This measure only works for publicly traded debtors, which are the focus of his studies, as other debtors are not required to complete Exhibit A to the petition.[74] Indeed, many of the routinely utilized measures of size, including equity or debt market values, cannot be generalized to the universe of debtor firms that are not required to disclose information and not subject to transparent market pricing.

In a more recent article, Professor LoPucki has turned to the number of debtor employees.[75] The latter measure would seem to treat certain industries as inherently bigger—such as retail and transportation firms—while discounting the size of debtors in areas that are less labor intensive. For example, while Lehman Brothers was among the largest recent chapter 11 cases by asset value, measuring size by number of employees would treat United Airlines as a larger chapter 11 case.[76]

In the past I have expressed concern that using assets alone tends to ignore cases in which debtors seek bankruptcy after a sudden drop in asset values[77]—are these firms better treated according to their new size, or the size when they created their businesses and capital structures?[78] In addition, a debtor's inability to value its assets upon bankruptcy can lead to understatement of size if the debtor reports a key asset's value as "unknown."[79]

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73. *Rise of the Financial Advisors*, *supra* note 51.

74. Exhibit A to the bankruptcy petition, only required of publicly traded firms, requires information regarding the debtor's publicly traded securities and basic balance sheet information. *See Exhibit "A" to Voluntary Petition*, U.S. BANKR. CT., *available at* http://www.uscourts.gov/rules/BK_Forms_1207/B_001A_0997f.pdf.

75. *Professional Overcharging*, *supra* note 3.

76. *See* Lynn M. LoPucki, BANKR. RES. DATABASE, *available at* http://lopucki.law.ucla.edu/ (last visited Jan. 17, 2012). When ranked by employees, United Airlines is the seventh largest case, Kmart was the largest and Lehman is not even among the top twenty-five. *Id.*

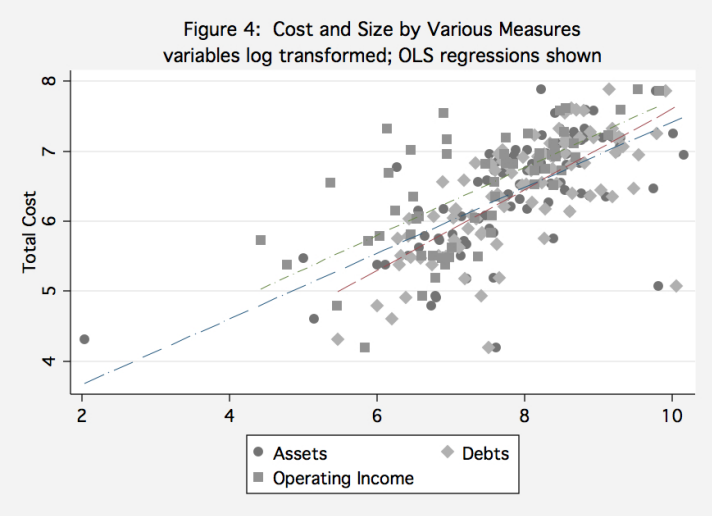
77. Lubben (2000), *supra* note 29, at 521.

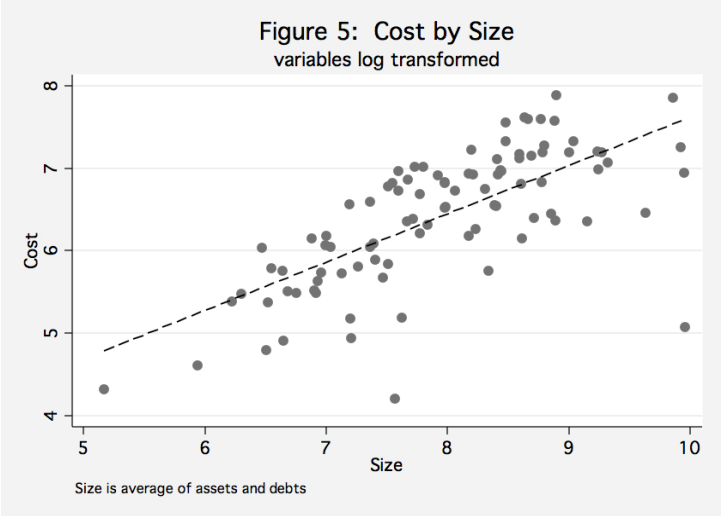
78. Warner, *supra* note 68, at 340-41, makes a similar point when he argues that firm size should be measured at the point of the financing decision, rather than at bankruptcy, when firm value has undoubtedly already fallen. Although Altman rightly notes that the extremely gradual decline in value that Warner found was undoubtedly a product of the specific industry Warner studied; *see also* Edward I. Altman, *A Further Empirical Investigation of the Bankruptcy Cost Question*, 39 J. FIN. 1067, 1070 (1984).

79. *See* Lubben (2000), *supra* note 29, at 521.

To address these concerns, I have, in the past, used the sum of the debtor's assets and debts to measure size. But doing so ostensibly inflates debtor size, and depresses costs relative to that size, occasionally resulting in confusion. It also makes my figures difficult to compare with prior articles that compare cost to asset value or similar measures of size. Consequently, to increase comprehension and comparability with prior works, I instead use the average of assets and debts.

Figure 5 shows the simple bivariate relationship between chapter 11 cost and this measure of debtor size, while Figure 4 shows the rough similarity between several obvious measures of debtor size.





Appendix 2B: Variable Descriptions

Assets	Debtor's total assets
Debts	Debtor's total debts
Op. Income	"Operating Income," as reported in Statement of Financing Affairs (SOFA). May not track "operating income" as understood by accountants because of wording of question in SOFA (i.e., might include all income received).
Publicly Traded	Dummy variable; yes indicates debtor files reports with SEC as of petition date
Involuntary	Dummy variable; yes indicates involuntary petition
Prepackaged	Dummy variable; yes indicates prepack case (pre-bankruptcy voting on plan)
DIP Loan	Dummy variable; yes indicates post-bankruptcy financing approved by court
# Lawsuits	Total number of lawsuits pending against debtor, as reported in SOFA
Trustee	Dummy variable; yes indicates trustee appointed
Examiner	Dummy variable; yes indicates examiner appointed
Monthly Comp.	Dummy variable; yes indicates court approved partial payment of professionals on monthly basis (often 80%), pending quarterly fee applications
Ord. Course Prof.	Dummy variable; yes indicates court approved abbreviated procedures for employment and retention of non-bankruptcy professionals billing under set amount.
Claims Agent	Dummy variable; yes indicates court approved use of claims agent to administer claims register
363 Motion	Dummy variable; yes indicates sale of all or substantially all assets before plan
Committee	Dummy variable; yes indicates appointment of at least one committee
Plan Filed	Dummy variable; yes indicates a plan was filed, whether or not confirmed by court
# Classes in Plan	Total number of classes in reorganization plan
Sub-debt Class	Dummy variable; yes indicates at least one class of subordinated debt (typically bond debt)
Exit Fin.	Dummy variable; yes indicates plan includes new financing for debtor
Fraud	Dummy variable; yes indicates evidence of fraud or breach of duty by management prebankruptcy
# Claims	Total number of claims filed in debtor's case
First Day Papers	Dummy variable; yes indicates "first day" motions were filed. First day motions request permission to deviate from the Bankruptcy Code or other regulations because compliance would undermine the going concern value of the debtor. For example, a typical motion requests permission to immediately pay employees their priority wage claims, instead of waiting for confirmation of a plan.
# Lift Stay Motions	Total number of motions to lift the automatic stay
# C/D Motions	Total number of motions to convert (to chapter 7) or dismiss the case
# Trustee Motions	Total number of motions to appoint a trustee
Ret. Bonus Motion	Dummy variable; yes indicates a motion to pay retention bonuses to management or employees during the case
3+ Extra Debtor Profs.	Dummy variable; yes indicates that the debtor retained three or more professionals beyond bankruptcy counsel
Fin. Adv. In Case	Dummy variable; yes indicates that at least one financial advisor was retained in the case (by debtor or committee)
Days in chapter 11	Total days spent in chapter 11 before conversion, dismissal, or confirmation of a plan

III. MODELING THE COST OF CHAPTER 11

In this section of the paper, I develop a general model of professional fees in chapter 11 cases, a model that I then extend to the specific case of attorneys and financial advisers in subsequent chapters.

A. MEASURING CHAPTER 11 COST

In a chapter 11 case, all professionals that are to be paid with estate funds are required to have their retention approved at the start of the case.[80] The bulk of those professionals[81] are also required to have their fees and expenses approved by the bankruptcy court before being paid from the estate.[82] In short, there is both *ex ante* and *ex post* oversight of most professionals by the bankruptcy court.

The debtor's bankruptcy estate is responsible for paying for all professionals it retained in the case.[83] In addition, the estate is responsible for paying the expenses of any professionals retained by official—that is, court appointed—committees in the case.[84] Finally, the estate is also responsible for paying any court appointed "neutrals," and their professionals, including trustees and examiners.[85] All of these expenses count as costs of administration of the estate, and are thus entitled to priority payment.[86]

The datasets used in this study capture the following fee information of each debtor in the sample:

- The fees and expenses of the debtor's lead bankruptcy counsel;
- The fees and expenses of the debtor's local counsel (if any);[87] and

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80. 11 U.S.C. § 327(a) (2006).

81. In larger cases, it has become common to excuse non-bankruptcy "ordinary course" professionals from the formal retention and fee approval system, although this practice is the subject of some controversy. *Routine Illegality*, *supra* note 6, at 436.

82. *See* 11 U.S.C. §§ 327, 330, 331.

83. *Id.* § 330.

84. *Id.*

85. *Id.*

86. *Id.* §§ 507(a)(2), 503(b)(2).

87. In the United States, attorneys are licensed to practice on a state-by-state basis. Large corporate debtors typically hire "lead" counsel from New York, Chicago, or Los Angeles. But if the debtor's bankruptcy case is filed in a different jurisdiction (e.g.,

- The fees and expenses of up to eight additional debtor professionals, beyond lead and local bankruptcy counsel.

The study also collects the following information for up to three official committees in each case:

- The fees and expenses of the committee's lead bankruptcy counsel;
- The fees and expenses of the committee's local bankruptcy counsel (if any); and
- The fees and expenses of up to two additional professionals for each committee, beyond lead and local bankruptcy counsel.

The number limitations on the "extra professional" fields are a result of the Excel data entry form, which was designed in consultation with various bankruptcy professionals. Although before the study it was widely felt that eight additional professional debtor fields were sufficient, and all eight fields were utilized in seventeen cases; it can be supposed that in some of these cases there were more than eight additional debtor professionals retained. The majority of cost will be captured in these cases, as the principal professionals will be captured.

The datasets also include information on the costs of trustees, examiners, and fee examiners, along with the costs of professionals retained by these parties.[88] The study also captures the pre-bankruptcy professional fees and expenses paid by the debtors and reported on their statements of financial affairs.

The sum of all these fees and expenses form the measure of chapter 11 costs used throughout this study.

In the dataset, the average case incurred over $8.4 million ($3.7 million median) in total professional costs.[89] Alternatively stated, the

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Delaware) the debtor will also have to hire "local" counsel admitted to the bar of that state, unless the firm in question has a local office in the state in question.

88. This does not include fees and expenses of claims agents or professionals retained under an "ordinary course professional" motion. Claims agents are typically paid in the "ordinary course" and thus do not file fee applications with the court.

89.

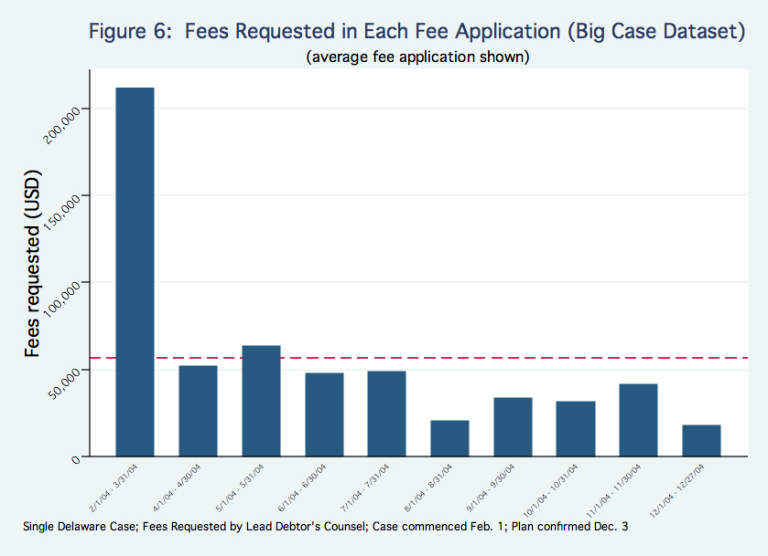
Dataset:

	Mean	Std. Err.	[95% Conf.	Interval]
Total cost	$8,408,187.00	$1,380,296.00	$5,667,953.00	$11,100,000.00
Cost per day	$33,708.62	$5,710.50	$22,371.84	$45,045.40

n=96

debtors in this dataset incurred almost $34,000 ($11,795) per day in chapter 11. However, costs are not incurred in a uniform manner, indeed the cost of a chapter 11 case seems to ebb and flow with certain key events (petition filing, plan confirmation), and in many cases it is heavily front-loaded. This latter effect may reflect the extra work involved in stabilizing the debtor's business after a chapter 11 filing.

Frequent references to a professional's "burn rate" are thus misleading, inasmuch as it implies a fixed or constant cost to chapter 11. The "lumpiness" of chapter 11 costs can be seen in Figure 6, which shows the month-by-month charges of lead bankruptcy counsel in a single Delaware chapter 11 case.[90]



Debtor professionals were, on average, responsible for 63.1% (64.7% median) of total cost.[91] Committee costs were 40.2% (32.3%) of debtor costs, or 22.5% (21.9%) of total chapter 11 costs.

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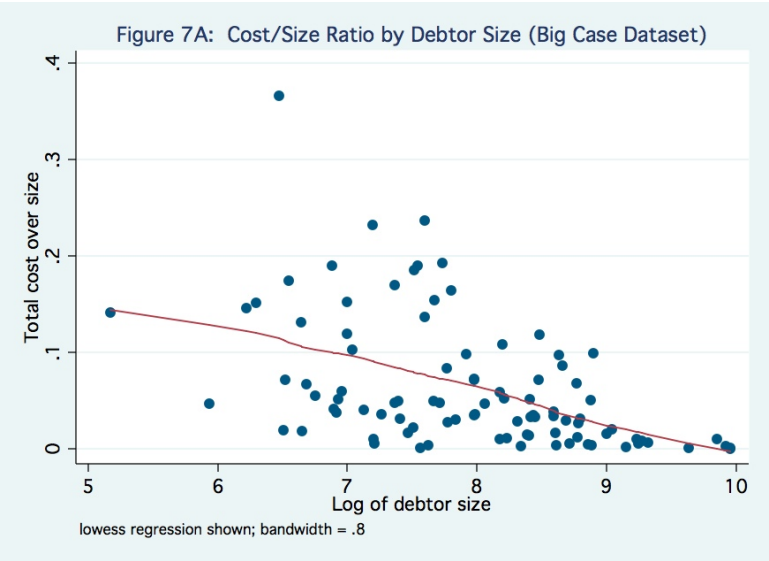
90. Note that the first fee application includes two months.

91.

Big case dataset:

	Mean	Std. Err.	[95% Conf.	Interval]
Comm. over Debtor (n=72)	0.402	0.032	0.338	0.466
Comm. over Total (n=72)	0.225	0.011	0.203	0.247
Debtor over Total (n=93)	0.631	0.021	0.589	0.672

Throughout bankruptcy literature, it has become common to report fees as a percentage of debtor size.[92] The advantage of such a measure is obvious – namely it provides an easy "rule of thumb" for considering whether a particular case is above or below the average cost. But as Professor LoPucki has noted, the relationship between debtor size and cost is highly sensitive to the size of the cases under study, meaning that use of such "rules of thumb" will often result in substantial errors.[93]



This same effect is evident in the present study, where the average cost of the smallest quartile of cases is 10% of size,[94] while in the largest cases cost is 2% of size. Based on the ratios of cost to size shown on Table 7B, it appears that there are substantial economies of scale to chapter 11 cases, a relationship that is also examined in Figure 7A.[95] The relationship between size and standardized cost demonstrates

92. *See, e.g.*, *Finance's Theoretical Divide*, *supra* note 19, at 1131, n.8 (citing studies).

93. *Professional Overcharging*, *supra* note 3, at 1003-04.

94. Defined as the average of assets and debts. *See supra* Part III.

95. The outlier at the top of the graph represents the chapter 11 case of Mid-State Raceway, Inc., the owner of a horse-racing track and affiliated hotel in northern New York State. *In re* Mid-State Raceway, Inc., No. 04-65746, 2006 WL 4050809 (Bankr. N.D.N.Y. Feb. 10, 2006) (opinion confirming chapter 11 plan). It is unclear from reviewing the case file why the case appears so relatively expensive, although gambling

a strong downward trend, further suggesting that there may be significant fixed costs to chapter 11, and thus a declining cost for the largest of debtors.

Table 7B: Standardized chapter 11 Cost by Size Quartiles (Big Case Dataset)

	Mean	*Std. Err.*	*[95% Conf.*	*Interval]*
Total cost over size				
1 (smallest)	0.101	0.017	0.067	0.135
2	0.089	0.015	0.059	0.119
3	0.042	0.006	0.029	0.055
4	0.021	0.006	0.01	0.033
Mean debtor size (USD)				
1	7,080,907.00	981,618.40	5,131,608.00	9,030,207.00
2	44,700,000.00	4,120,754.00	36,500,000.00	52,900,000.00
3	242,000,000.00	21,800,000.00	198,000,000.00	285,000,000.00
	2,410,000,000.00			
4	0.00	609,000,000.00	1,200,000,000.00	3,620,000,000.00

n=94

B. DETERMINANTS OF COST

Figure 8 begins the consideration of this topic by plotting the various factors that might influence the overall cost of chapter 11 on a graph that shows the bivariate relationship between cost and debtor size. A review of the graph suggests that cases with committees and 363 sales might be cheaper, while New York and Delaware cases might be more expensive. But because the relationships might be complex, it is hard to draw definitive conclusions from a simple review of bivariate relationships.

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is heavily regulated in the United States and it may be that this extra regulation resulted in additional cost.

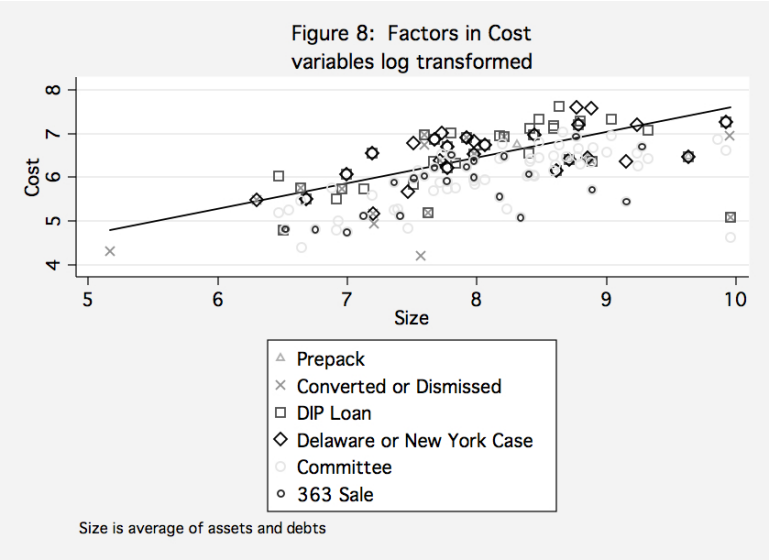

Figure 8 also shows that the bivariate relationship between size and cost is not linear—flattening out somewhat on the right side among the biggest cases. Almost every case larger than $1 billion (log 9) falls below the regression line, suggesting costs are lower than would be predicted by a direct linear relationship. As I show in the final models below, there is an element of complexity in these cases that is not captured by size alone. An oversimplified model ignores this non-linearity and puts too much stress on the size variable. By modeling complexity distinct from size, the models shown on Table 10 address this aspect of cost.

* * *

Debtor size is the most obvious determinant of the cost of chapter 11. All else equal, a larger firm will be more expensive to reorganize because it has more contracts, employees, assets and other issues to deal with in its bankruptcy case, and professionals typically charge clients based on either the actual or estimated amount of time a particular task will demand.

This might also suggest that the length of a chapter 11 case should determine its cost, although to some degree this conflates the total number of professional hours a particular case requires with the duration of the case. At least in larger chapter 11 cases, the total number of hours expended on a particular case is a function of how many hours a particular professional expends on that case, the hourly rates charged,

and the number of professionals working on the matter. Only the first factor is evidently affected by the case duration.[96]

Thus, I would hypothesize that debtor size should have a positive effect on cost, and, time should have little or no effect on cost. But we should also consider that size, like time, is a kind of "catch all" factor that probably acts as a proxy for factors that can be more clearly modeled. Thus, we should expect size to decrease in overall importance in more elaborate models.

Several prior studies have found that prepackaged chapter 11 cases incurred lower professional fees, although these studies typically do not consider professional fees incurred before the bankruptcy petition is filed with the court.[97] As noted in Lubben (2000), the design of these studies may capture nothing more than time shifting of professional fees in prepackaged cases.[98] And while this study captures pre-bankruptcy professional fees reported on the statement of financial affairs, that statement is often not filed in prepackaged cases, meaning that this study would suffer from a similar difficulty.[99]

But under the Bankruptcy Code,[100] attorneys are required to disclose compensation they received before the petition was filed, and as part of the additional data collection done for this study, I gathered this information for the attorneys' retention applications in prepackaged cases.[101] Thus, I hypothesize that filing a prepackaged case will have no effect on overall cost, but rather results in the shifting of costs, such as the cost of drafting a plan, to the pre-bankruptcy period.[102]

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96. In the ABI chapter 11 Fee Study, I found no relationship between time and total cost. But that study only covered large chapter 11 cases for two years, so there might have been a relationship that was hidden by the study design. Accordingly, I will re-examine case duration in the present model.

97. *See, e.g.*, Elizabeth Tashjian et al., *supra* note 2.

98. Lubben (2000), *supra* note 29, at 516-17.

99. Elizabeth Warren & Jay Lawrence Westbrook, *Financial Characteristics of Businesses in Bankruptcy*, 73 AM. BANKR. L.J. 499, 518-19 (1999).

100. 11 U.S.C. § 329(a) (2006).

101. This approach will still underestimate the total cost of prepackaged cases, inasmuch as it does not capture the costs of any "ad hoc" bondholder committees or financial advisers paid by the debtor before the case was commenced.

102. As it turns out, the conventional wisdom is not supported by this dataset even without inclusion of the prepetition fees. Rather, as discussed in connection with Table 10.1, *infra*, prepackaged cases only appear "cheaper" if the prepetition fees are omitted *and* intra-jurisdictional correlations are ignored.

Other similar factors that might reduce cost include 363 sales, which should somewhat reduce the difficulty of plan negotiations by converting the debtor's assets into cash, and conversion or dismissal of the chapter 11 case.[103] The latter two factors would bring the debtor's chapter 11 expenses to a quick end, albeit with uncertain effects on the debtor's total costs of financial distress, depending on the relative costs of state law collection and chapter 7 liquidation.[104] However, that is beyond the scope of the present study.

Additionally, the complexity of the chapter 11 case, distinct from the debtor's size, might influence cost. One indicator of complexity is the debtor's retention of additional professionals beyond bankruptcy counsel. In this paper, I use the debtor's retention of more than three additional professionals as an indicator of a particularly complex case. This complexity might come from the debtor's financial structure, or it might simply come from the scale of the debtor's business. For example, even a purely domestic debtor often needs to retain counsel familiar with the laws of the individual states in which it operates.

In addition, one might surmise that there is a group of extremely complex cases that are even more complex than the typical large chapter 11 case – that is, cases like United Airlines or Lehman Brothers might be different from large but simple chapter 11 cases.[105]

In this study, I utilize several dummy variables to capture these extremely complex cases. First, I use a variable that asks if the debtor implemented an "ordinary course professionals" ("OCP") process in the case. As previously discussed, these motions essentially ask for an exception to the usual rule that all debtor professionals must file formal retention and fee applications before they can be retained or paid.[106]

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103. *See generally* Harvey R. Miller, *Chapter 11 in Transition – From Boom to Bust and Into the Future*, 81 AM. BANKR. L.J. 375, 385 (2007).

104. 11 U.S.C. § 701 *et seq*.

105. There are two ways of looking at this aspect of extremely large chapter 11 cases: either one can consider it additional complexity, as I do in this study, or one can consider it an aspect of size that is not captured by simple balance-sheet measures of size. There is no obvious way of distinguishing between these two interpretations of the effects modeled herein.

106. Lubben (2008), *supra* note 45.

Instead, the debtor asks the court to approve abbreviated procedures for professionals who are largely exogenous to the chapter 11 process.[107]

It may seem that OCP motions should reduce the reported cost of a case, since an OCP system removes professionals from the total cost used as the dependent variable.[108] But the total cost of these professionals is small, averaging less than $100,000 per month.[109] In short, it is arguable that the presence or absence of an OPC motion will be of little import to the dependent variable.

I also consider the interaction of this variable with the prior variable that asks if the debtor retained three or more professionals beyond bankruptcy counsel. The interaction term captures those cases where the debtor both implemented an OCP system and hired three or more professionals. The interaction variable should capture those cases where the debtor has highly "professionalized" its chapter 11 case—if we assume that the non-bankruptcy professionals are largely removed from the dependent variable by means of the OCP system. This variable should also capture the non-linearity seen among the largest cases back on Figure 8.

I also include a dummy variable that indicates whether or not a committee was appointed in the case. Obviously the appointment of a committee almost directly leads to the retention of additional professionals, especially in larger cases.[110] Beyond simply capturing the number of professionals in a case, however, both the committee and additional debtor professionals' variables can also be seen as indicators of case complexity. This is especially true if we presume that the bankruptcy court exercises at least a minimal degree of oversight over the debtor's retention of additional professionals and the appointment of committees. The appointment of a committee also increases the number of key parties that debtor's counsel must consult, potentially increasing

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107. As might be expected, this variable is correlated with debtor size (0.439; $p<0.05$). But once size is separately accounted for in the following models, the presence of an OCP motion can be interpreted as a complexity measure.

108. Lubben (2008), *supra* note 45.

109. Total cost is based on the 32 cases with available data on this point. The median is just over $32,000 per month. The cost of filing full retention and compensation applications, if the professionals were not subject to the abbreviated procedures, might well equal or exceed the cost of their non-bankruptcy work, which raises the issue of whether OCP motions might not reduce the cost of chapter 11 cases.

110. Lubben (2008), *supra* note 45. In some smaller cases, committees do not retain professionals.

overall costs in a way that is not captured by simply counting the total number of professionals retained in a case.

I also consider if a claims agent has been appointed in the case. As my dependent variable does not include the cost of the claims agent, in this context the claims agent acts as a pure proxy for a complex chapter 11 process, where the debtor anticipates the need for extra "help" when reconciling the claims register.

In addition, Professor LoPucki has been extremely critical of the tendency to file large chapter 11 cases in New York and Delaware, jurisdictions that, in his view, are the sources of a large pattern of judicial "corruption."[111] As part of this criticism, he has suggested that these jurisdictions are associated with higher professional fees, as he asserts that the judges do not wish to drive large corporate bankruptcy cases to other courts.[112] Accordingly, I use dummy variables to indicate whether or not a case was filed in New York or Delaware. Under the thesis implied by Professor LoPucki's criticism, these variables should be positively related to cost.[113]

Moreover, the financial press has recently focused on the high hourly rates charged by some "big city" law firms in chapter 11 cases.[114] Under the implicit thesis of these articles—namely, that high rates translate into higher chapter 11 costs—these high hourly rates should correlate with higher chapter 11 costs. On the other hand, in prior work, I have noted that most of the cost of a chapter 11 case comes from the

111. *See generally Courting Failure*, *supra* note 3.

112. *Professional Fees*, *supra* note 61. In the United States, a large corporate debtor typically has a choice of where to file their bankruptcy case, because the case can be filed in any jurisdiction where any individual member of the corporate group might file a case (typically either the location of its headquarters or its state of incorporation).

113. Of course, LoPucki has also argued that the objectionable procedures in these jurisdictions have spread to other districts, which may make his thesis untestable. *See generally Courting Failure*, *supra* note 3. It should also imply that there is no longer any benefit from filing in New York or Delaware, yet debtors continue to seek out these jurisdictions (e.g., GM and Chrysler). *See generally* Stephen J. Lubben, *No Big Deal: The GM and Chrysler Cases In Context*, 83 AM. BANKR. L.J. 531 (2009) (discussing the bankruptcy cases of GM and Chrysler, both of which were filed in the S.D.N.Y. despite the debtors' obvious ties to Michigan).

114. Nelson D. Schwartz & Julie Creswell, *Who Knew Bankruptcy Paid so Well?*, N.Y. TIMES, May 1, 2010.

middle of the rate structure.[115] I input the highest hourly rate charged by debtor's counsel to examine both issues; the highest rate not only implicates the popular fascination with the top rate, but also addresses the mid-tier attorneys in that their hourly rates are likely to be highly correlated with the top rates, and high top rates are apt to indicate higher middle rates.

Finally, it should be expected that the presence of court appointed neutrals in a case will increase the cost, particularly when those neutrals are additional costs in the reorganization process.[116] Thus I consider all three types of neutrals—trustees, examiners, and fee examiners—that are coded in the datasets. Examiners, appointed to investigate and report on the debtor's or some creditor's conduct, should add to the costs of a case both directly and by indicating a case with a particular degree of tension between the debtor and its creditors.[117] The effects of appointment of a trustee should be similar, although the effects might be mitigated by the fact that the trustee typically usurps the debtor and its professionals,[118] meaning that a trustee might have a neutral effect on overall cost.

Fee examiners present a more complex state of affairs. Conventional wisdom suggests that fee examiners should reduce cost, after all the primary purpose of a fee examiner is to provide a kind of "audit" of professional fees in a chapter case.[119] But in previous work I found that the fee examiners actually seemed to increase cost, although the effect was not statistically significant.[120]

This is consistent with the suspicion that the cost of fee examiners exceeds their benefit, at least with regard to actual fee reduction. To be sure, fee examiners provide some administrative benefits to the bankruptcy court, which might be otherwise overwhelmed by the number of fee applications in a large chapter 11 case. Those benefits, however, and whether fee examiners are the proper solution to this problem, are hard to gauge. Thus I hypothesize that, contrary to

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115. Stephen J. Lubben, *The Microeconomics of chapter 11*, Part 1, 4 INT'L. CORP. RESCUE 31 (2007); Stephen J. Lubben, *The Microeconomics of chapter 11*, Part 2, 4 INT'L. CORP. RESCUE 87 (2007).

116. *See* Jonathan C. Lipson, *Understanding Failure: Examiners and The Bankruptcy Reorganization Of Large Public Companies*, 84 AM BANKR. L.J. 1 (2010).

117. *See id.*

118. *See* Collier on Bankruptcy ¶ 1104.02.

119. *See* Lowe, *supra* note 4.

120. Lubben (2008), *supra* note 45.

conventional wisdom, the appointment of a fee examiner should increase overall cost in the chapter 11 process.

* * *

Before addressing the model, I should note that I do not use three variables that many readers might consider especially relevant: the ratio of secured debt to total debt, the overall leverage of the debtor, and the number of classes in the debtor's plan. The solvency or leverage of the debtor intuitively seems to be related to chapter 11 cost, but that relationship is actually quite complex upon further examination.

For example, it may be that a debtor on the margin of solvency will incur more chapter 11 cost because the shareholders will have stronger incentives to argue about the valuation of the debtor. On the other hand, at some point of insolvency, further insolvency does not matter. This is provided it comes in the form of unsecured debt, in that the debtor likely does not care if its $100 million or $500 million of bond debt that gets discharged.

The ratio of secured debt to overall debt might be important for cost, in that secured creditors have a more robust set of legal rights and powers under American law.[121] But data on secured debt is often missing in the sample, driving the total number of cases down into the low 70s. Despite the foregoing, I did test both variables as final additions to the models presented here. The ratio of secured debt to overall debt was not significant in the model, albeit with a smaller sample size. And while the debtor's asset to debt ratio was significant, it added little to the overall model, increasing the R-squared by 0.02, while providing a host of interpretive problems outlined above.

Finally, I did not use the number of classes in the debtor's plan as a proxy for complexity of capital structure, because the number of classes can also reflect the plan proponent's manipulation of the chapter 11 voting rules.[122] Moreover, the capital structure of the multiple corporate entities that make up a single enterprise can often be classified in myriad

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121. *See* Claire A. Hill, *Is Secured Debt Efficient?*, 80 Tex. L. Rev. 1117, 1124-28 (2002); *see also* Stephanie Ben-Ishai & Stephen Lubben, *Sales or Plans: A Comparative Account of the "New" Corporate Reorganization*, 56 MCGILL L.J. 591, 596 (2011).

122. *See In re* Adelphia Communications Corp., 368 B.R. 140, 246-47 (Bankr. S.D.N.Y. 2007) (discussing the rules regarding classification of claims under chapter 11); *see also* Bruce A. Markell, *Clueless on Classification: Towards Removing Artificial Limits on chapter 11 Claim Classification*. 11 BANKR. DEV. J. 1, 2 (1995).

ways, making the variable more reflective of the attorney that drafted or negotiated the plan than anything else.[123]

* * *

Table 8.1, on the next page, examines the relationship among the variables used in the models. As shown, several of the "complexity" variables are correlated with debtor size. This provides an independent reason to control for debtor size, even if that variable itself is not significant, so that the complexity measures can capture complexity itself, without also measuring size.

Table 8.1: Pairwise Correlations of Variables in Models on Table 10

	Log of debtor size	Case converted to ch. 7	Case dismissed	Prepackaged case	363 motion	Log of days in ch. 11	3+ professionals	OCP system	Interaction OCP & 3+	Official committee	Claims agent	Case from SDNY	Delaware case	Highest hourly rate	Trustee	Examiner	Fee examiner
Log of debtor size	1																
Case converted to ch. 7	-0.1183	1															
Case dismissed	-0.0967	-0.1144	1														
Prepackaged case	0.2052*	-0.0663	-0.0742	1													
363 motion	-0.1043	0.1274	0.0038	-0.1255	1												
Log of days in ch. 11	-0.1419	-0.0472	0.1035	-0.5530*	0.2725*	1											
3+ professionals	0.3066*	-0.1001	-0.2372*	-0.0414	0.0215	0.2416*	1										
OCP system	0.4387*	-0.0448	-0.2933*	0.0414	-0.0215	-0.0412	0.2436*	1									
Interaction, OCP & 3+	0.4158*	-0.0536	-0.2336*	-0.0222	-0.0393	0.1294	0.5355*	0.7964*	1								
Official committee	0.2912*	0.0035	-0.2721*	-0.3829*	0.161	0.4248*	0.2588*	0.2935*	0.2999*	1							
Claims agent	0.5523*	-0.0902	-0.2745*	0.1145	-0.1086	-0.1268	0.3156*	0.4002*	0.3719*	0.2679*	1						
Case from SDNY	0.0068	-0.0302	0.0382	0.2099*	-0.1161	-0.1266	-0.0222	0.082	0.0522	-0.1979	0.2562*	1					
Delaware case	0.1403	-0.0215	-0.0453	0.0706	0.1035	-0.0672	0.0757	-0.014	-0.0586	0.0685	0.2324*	-0.1616	1				
Highest hourly rate	0.6043*	-0.0591	-0.205	0.2220*	-0.0695	-0.1126	0.2170*	0.4493*	0.3228*	0.1597	0.6873*	0.2476*	0.2093*	1			
Trustee	-0.155	0.2916*	0.011	-0.0622	-0.0968	0.1793	-0.1363	-0.093	-0.0321	0.0729	-0.0596	0.0902	-0.1179	-0.014	1		
Examiner	0.0526	0.0654	-0.0918	-0.0533	0.0379	0.1413	0.1233	0.0513	0.1128	0.0369	0.0133	-0.1055	-0.101	0.019	-0.077	1	
Fee examiner	0.1991	0.0654	-0.0918	-0.0533	0.1345	0.1028	0.2106*	0.1386	0.2062*	0.1391	0.2704*	0.0163	0.2758*	0.2264*	-0.077	-0.0659	1

** p < 0.05*

C. THE MODEL

To model the total cost of these large chapter 11 cases, I enter the foregoing variables in a series of blocks, grouping the variables by concept, as follows:

- Model 1: Debtor size;
- Model 2: Debtor size, time-related variables;
- Model 3: Debtor size, time-related variables, complexity variables;
- Model 4: Debtor size, time-related variables, complexity variables, mega case variables;
- Model 5: Debtor size, time-related variables, complexity variables, mega case variables, court-appointed neutrals.

Entering the variables in this manner facilitates an understanding of the work done by each group of explanatory factors in the larger model. The five models are set forth on Table 10, with descriptive statistics for

123. *See* Collier on Bankruptcy ¶ 1122.03.

the 87 cases used in the model set forth on Appendix 10A at the end of this section.

Because of extreme skewness and non-normal distributions, the three continuous variables—cost, size, and time—are transformed with a log base-10 transformation.[124] Figure 9 shows the results of the transformations.

Finally, throughout this study I account for the grouping of cases by judicial district and the potential correlation of cases on that basis by adjusting the standard errors to control for this effect.[125] While Stata automatically invokes robust standard errors in connection with clustered standard errors, pre-testing of the regressions indicated heteroskedasticity,[126] so robust standard errors would have been called for in any event.[127]

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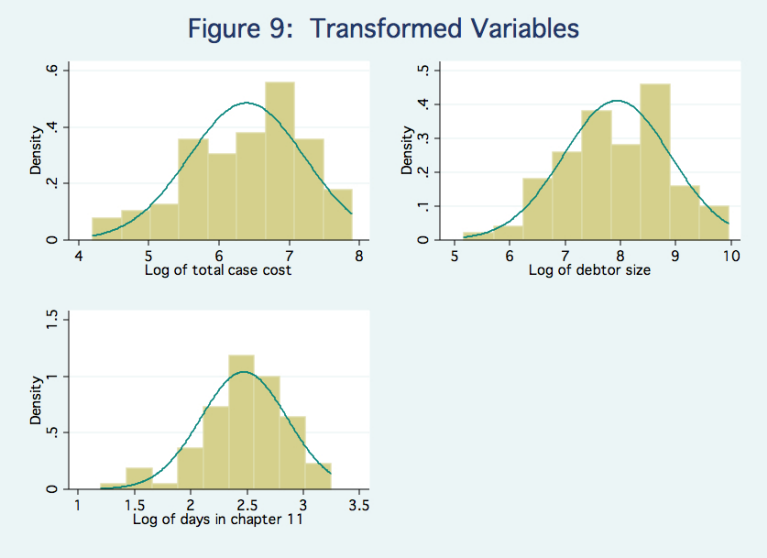
124. This same transformation can be seen in several of the Figures in Chapter 3.

125. In particular, I use the "cluster" option in Stata to produce standard errors that account for judicial district correlations. *See generally* David M. Primo et al., *Estimating the Impact of State Policies and Institutions with Mixed-Level Data*, 7 STATE & POLICY Q. 446 (2007).

126. One of the main assumptions of OLS regression is general similarity in the variance of the residuals—the error terms, or the bit not explained by the regression model itself. If this assumption is met, there should be no pattern to the residuals plotted against the fitted values. If the variance of the residuals shows a pattern then the residual variance is said to be "heteroskedastic." *See* ORLEY ASHENFELTER, ET AL., STATISTICS AND ECONOMETRICS: METHODS AND APPLICATIONS 204-05 (2003). The solution to the problem is to use "robust" standard errors that account for the issue. *See generally* Halbert White, *A Heteroskedasticity-Consistent Covariance Matrix Estimator and a Direct Test for Heteroskedasticity*, 48 ECONOMETRICA 817 (1980).

127. As shown, *infra*, Appendix 10C, these measures appear to have addressed the heteroskedasticity.



The first model considers the simple bivariate relationship between cost and size, a relationship that has already been shown graphically in several of the prior figures. As shown, just under half of the total variance in chapter 11 cost can be explained by the debtor's size alone.[128]

Model 2, which introduces the time-related variables into the model, explains an additional 10% of the variance in chapter 11 costs. Conversion of the case to chapter 7, case dismissal, and time spent in chapter 11 are not significant factors in determining the cost of chapter 11. Conversion of the case will be significant by Model 5, however.

128. Since version 5, when the clustering commands were updated, Stata has not provided adjusted R-squares with clustered standard errors. On Table 10, I have hand-calculated adjusted R-squares for those readers that would like to see them.

Table 10: Model of chapter 11 Costs

	(1) Log of total case cost	(2) Log of total case cost	(3) Log of total case cost	(4) Log of total case cost	(5) Log of total case cost
Log of debtor size	0.573***	0.575***	0.277*	0.213	0.232
	(0.0866)	(0.0874)	(0.112)	(0.120)	(0.122)
Case converted to ch. 7		-0.447	-0.341	-0.340	-0.454*
		(0.309)	(0.224)	(0.194)	(0.198)
Case dismissed		-0.607	0.0169	0.0338	0.0495
		(0.323)	(0.213)	(0.202)	(0.216)
Prepackaged Case		-0.114	0.0774	0.0318	-0.0289
		(0.257)	(0.296)	(0.345)	(0.340)
363 Motion		0.0224	0.0342	0.0463	0.0424
		(0.130)	(0.105)	(0.0999)	(0.0995)
Log of days in chapter 11		0.429	0.185	0.140	0.0948
		(0.211)	(0.182)	(0.163)	(0.189)
3+ professionals			0.591***	0.590***	0.629***
			(0.160)	(0.141)	(0.140)
OCP system			0.672***	0.545***	0.628***
			(0.160)	(0.147)	(0.149)
Interaction, OCP & 3+			-0.367*	-0.320*	-0.401*
			(0.159)	(0.156)	(0.169)
Official committee			0.250	0.290	0.237
			(0.181)	(0.164)	(0.174)
Claims agent			0.413**	0.274	0.293*
			(0.132)	(0.138)	(0.129)
Case from SDNY				-0.0960	-0.0855
				(0.0748)	(0.0764)
Delaware case				-0.212**	-0.179*
				(0.0715)	(0.0853)
Highest hourly rate				0.00110*	0.000923*
				(0.000469)	(0.000428)
Trustee					0.230
					(0.158)
Examiner					0.635**
					(0.194)
Fee examiner					0.0469
					(0.193)
Constant	1.876**	0.898	2.861**	2.979***	3.003**
	(0.656)	(1.064)	(0.886)	(0.788)	(0.859)
Observations	87	87	87	87	87
R^2	0.478	0.586**	0.800***	0.830***	0.851*
Adjusted R^2	0.471	0.555	0.771	0.797	0.815

Robust standard errors in parentheses; se adjusted for clustering by judicial district; mean VIF (Model 5) 2.06

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Throughout all of the models, prepackaged cases do not appear to be any cheaper than traditional chapter 11 cases, once we account for at least some of the cases' pre-bankruptcy costs. This is consistent with the hypothesis that prepackaged cases shift costs into the pre-bankruptcy period, but do not otherwise significantly reduce the costs of

reorganization. Prepackaged cases are only "cheaper" chapter 11 cases in the sense that the fees recorded after the petition is filed are lower.[129] Table 10.1, set forth next, shows the final model from Table 10, this time ran without inclusion of prepetition attorneys fees for the prepackaged cases. The prepackaged variable is still not significant.

Table 10.1: Model of chapter 11 Costs, Without Pre-bankruptcy Attorney Costs

	(1) Log of total case cost -- no prepack pre-bankruptcy attny fees
Log of debtor size	0.234
	(0.122)
Case converted to ch. 7	-0.457*
	(0.198)
Case dismissed	0.0553
	(0.216)
Prepackaged case	-0.572
	(0.377)
363 motion	0.0415
	(0.100)
Log of days in ch. 11	0.0911
	(0.191)
3+ professionals	0.643***
	(0.141)
OCP system	0.659***
	(0.155)
Interaction, OCP & 3+	-0.428*
	(0.176)
Official committee	0.231
	(0.175)
Claims agent	0.293*
	(0.131)
Case from SDNY	-0.0989
	(0.0816)
Delaware case	-0.176
	(0.0872)
Highest hourly rate	0.000879*
	(0.000429)
Trustee	0.242
	(0.159)
Examiner	0.642**
	(0.195)
Fee examiner	0.0524
	(0.194)
Constant	3.013**
	(0.864)
Observations	87
R^2	0.852

Robust standard errors in parentheses; se adjusted for clustering by district
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

129. Conceivably, prepackaged cases might also result in lower *indirect* costs of reorganization too.

Model 3 on Table 10 then introduces the case complexity variables to the model, and all of the variables are initially significant. Importantly, the interaction term—which captures cases that had both ordinary course professional systems and where the debtor retained three or more professionals beyond bankruptcy counsel—has a negative coefficient throughout the models. This suggests that subdividing bankruptcy work among several professionals is not itself a factor in increasing chapter 11 cost.

More importantly, and contrary to popular intuition, this coefficient demonstrates that at some point additional complexity is actually associated with reduced cost. To be sure, the overall effect of having both three or more professionals and an OCP system is positive, as the sum of all three coefficients is positive. But the negative sign on the interaction coefficient results in a lower total cost than the simple sum of the two other variables.

This comports with the effect seen in Figure 8, where the largest cases, on the extreme right side of the graph, are below the cost that would be predicted by a simple linear relationship. This points to economies of scale with regard to the largest cases, particularly those over $1 billion in size.

Three other indicators of case complexity are also significant in this model, and in the final model. Retention of three or more additional professionals, appointment of a claims agent and use of an OCP system are all indicative of higher chapter 11 costs. It should be noted that because of the inclusion of the interaction variable, when considered alone the OCP and three or more professional variables should be interpreted as indicating those cases where only one of these factors is present.

Model 3 now explains 80% of the total chapter 11 costs. Therefore, it presents a fairly simple model that explains the bulk of chapter 11 costs, using readily available data.[130]

Model 4 represents an incremental improvement over Model 3, but its results are extremely important, in that many defy conventional expectations. First, cases filed in the Southern District of New York or Delaware are not more expensive than cases filed in other jurisdictions. Indeed, while only the Delaware variable is independently significant,

130. The question of why the larger debtors need the additional professionals, and whether these professionals are part of the bankruptcy process or exogenous non-bankruptcy actors, is something that is not easily answered with the present dataset.

their negative signs suggest that cases filed in these jurisdictions are actually less expensive than cases in other jurisdictions. This might reflect the benefit that comes from the familiarity these courts have with large chapter 11 cases.

Moreover, the highest hourly rate charged by the debtor's lead counsel is also significant. Based on my prior work, I interpret this as an indication that, holding all else equal, a higher hourly rate structure results in a higher cost. On one level this is self-evident, but it might also indicate an additional element of complexity that was missed by my prior variables, if more expensive bankruptcy counsel is hired in more complicated cases. Even if this is true, one would have to worry that the effect might be at least partially confounded by the agency problems inherent in large corporations, which give managers incentives to retain better professionals than the debtor might actually need.

To further examine the complex relationship between size, complexity, and jurisdiction, I considered several additional variations on the final model shown on Table 10. First, I removed the complexity related variables (i.e., all variables added in Model 3 on Table 10). The sign on both jurisdictional variables remained negative, although the jurisdictional variables were no longer significant and the size variable became significant ($p=0.006$). The R-squared for this model was 0.708. This suggests that complexity is hidden in size, and probably confounds the jurisdictional issues too, as so many large cases are in Delaware and New York. Only when complexity is unpacked from size do we see the distinct jurisdictional effects.

But removing the complexity variables not only puts extra stress on size, it also increases the likelihood that the highest hourly rate variable will begin to do the work of the now removed complexity variables. Indeed, the high hourly rate coefficient gets substantially larger in this altered model.

Removing this variable from the model has several predictable effects. First, the coefficient on the size variable increased. Second, the R-squared dropped by approximately 0.10. And finally, the sign on the jurisdictional variables switched, as these variables themselves start to pick up a confused mix of jurisdictional and complexity factors that are not captured by any other variables in the altered model.

As a final investigation of this important issue, I returned the complexity variables to the model, but removed the jurisdictional variables. The R-squared for this model was 84.7. All of the same

variables that are significant in Model 5 on Table 10 remained significant in this revised model.

* * *

In Model 5, I then consider the effect of court-appointed neutrals. Only the appointment of an examiner is significant. This result itself is unsurprising, as the appointment of an examiner, who conducts an investigation at the expense of the bankruptcy estate, not only reflects the direct expense of the investigation but also the conflict that resulted in that investigation.

However, the results for fee examiners again challenge the conventional wisdom of the financial press and the bankruptcy community. Appointment of a fee examiner does not significantly influence chapter 11 costs. Although they provide administrative assistance to courts, perhaps reducing the burden represented by fee applications; fee examiners do not reduce costs. Indeed, the positive sign on this coefficient is suggestive of the opposite relationship.

Debtor size remains a significant determinant of cost throughout the early models, although as predicted its importance in the model declines as further factors are introduced. By the final model, size is not significant (p=0.066).[131] I suggest that prior papers that relied on size were in fact modeling a bundle of size-related concepts, like complexity of the chapter 11 case.

This should not be taken to mean that size has no relationship to cost. Rather, size included alone captures something more than size alone.[132] Only by unpacking the various size related concepts, and separately modeling the same, can the determinants of chapter 11 cost be fully understood.

131. Throughout I use p=0.05 as my standard of statistical significance.

132. As shown on Appendix 10B, *infra*, the effect is not the result of collinearity between size and the newly introduced variables, despite the bivariate correlation between the variables shown on Table 8.1.

Figure 10.2

Table 10.2: Revised Models of chapter 11 Costs

	(1) Log of total case cost	(2) Log of total case cost
Case converted to chapter 7	-0.441***	-0.423**
	(0.119)	(0.132)
3+ professionals	0.709***	0.663***
	(0.154)	(0.140)
OCP system	0.662***	0.621***
	(0.169)	(0.128)
Interaction, OCP & 3+	-0.301	-0.342*
	(0.218)	(0.154)
Claims agent	0.372**	0.299*
	(0.109)	(0.111)
Delaware case	-0.134*	-0.157**
	(0.0586)	(0.0488)
Highest hourly rate	0.00130***	0.000770
	(0.000290)	(0.000401)
Examiner	0.663**	0.701**
	(0.191)	(0.199)
Log of debtor size		0.249*
		(0.109)
Constant	4.938***	3.349***
	(0.175)	(0.652)
Observations	87	87
R^2	0.765	0.817*

Robust standard errors in parentheses; se adjusted for clustering by district; mean VIF (model 2) 2.11

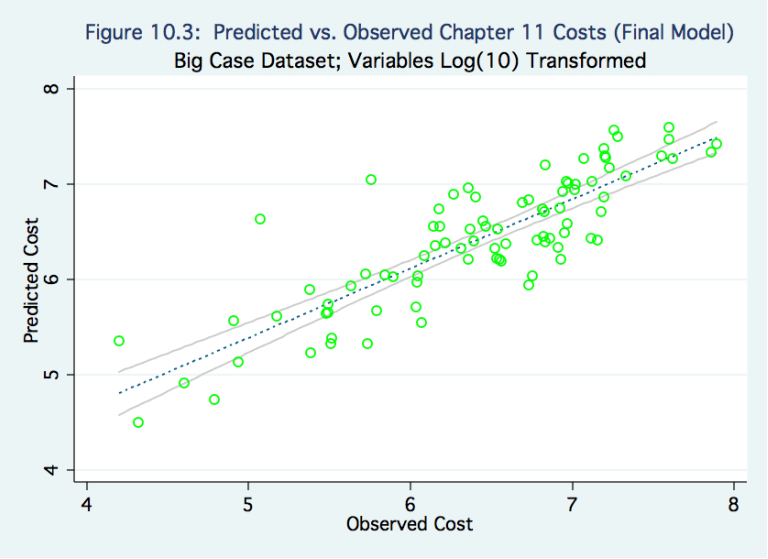
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

The limited independent effect of debtor size can be seen on Table 10.2. The first model includes all variables that were significant ($p<0.05$) from Model 5 on Figure 9. With just this handful of variables—*not* including debtor size—we can explain more than 75% of the variance in chapter 11 costs. Model 2 adds debtor size. The increase in r-squared is significant ($p=0.0293$) and explains an additional five percent of the variance in cost.

Interestingly, only in Model 2 does the interaction term, of three or more professionals with an OCP motion, become significant, which may suggest a previously unexplained joint effect. It perhaps reflects an element of complexity that the interaction term does not capture alone. The highest hourly rate variable also becomes insignificant in the second model, which may support the earlier suggestion that higher hourly rates are associated with larger, more complex debtors.

Finally, note that in all models time spent in chapter 11 is not a significant determinant of cost in any of the models on Table 10.[133] The conventional wisdom that long, drawn out chapter 11 cases are directly linked to higher chapter 11 costs ignores the ways in which modern American corporate law firms are unlike the solicitors in *Bleak House*.[134] While the latter clearly benefited from extending the length of a case, the former would achieve the same end by either extending the case or heavily staffing the case.[135] That is, chapter 11 costs are a bit like an American football or British rugby ball, whose overall volume does not change even if its width varies depending on which side is measured.

Figure 10.3 shows the overall performance of the final model—in a model that perfectly predicted cost, all of the individual cases (represented as circles) would line up on the regression line, or within the confidence intervals that are also shown on Figure 10.3. In sum, the graph suggests that Model 5 performs reasonably well, with no obvious group of deviant cases.



133. Time spent in chapter 11 does not influence the professional fees associated with the case. Of course, the creditors experience losses related to the time value of money if the case takes longer to pay out recoveries.

134. CHARLES DICKENS, BLEAK HOUSE (1853).

135. Of course, all of this turns on a degree of cynicism about lawyers that I do not share, and supposes that the debtor's management and creditors have no ability to prevent evident manipulation of a case's length or overstaffing.

Appendix 10A: Descriptive Statistics for Models on Table 10

Number of obs. = 87	*Mean*	*Std. Dev.*	*Min*	*Max*
Dependent (Log of total costs)	6.418	0.805	4.200	7.891
Log of debtor size	7.931	0.972	5.171	9.954
Case converted to ch. 7	0.092	0.291	0.000	1.000
Case dismissed	0.103	0.306	0.000	1.000
Pre-packaged case	0.046	0.211	0.000	1.000
363 motion	0.299	0.460	0.000	1.000
Log of days in ch. 11	2.466	0.383	1.204	3.242
3+ professionals	0.609	0.491	0.000	1.000
OCP system	0.402	0.493	0.000	1.000
Interaction, OCP & 3+	0.287	0.455	0.000	1.000
Official committee	0.782	0.416	0.000	1.000
Claims agent	0.483	0.503	0.000	1.000
Case from SDNY	0.149	0.359	0.000	1.000
Delaware case	0.138	0.347	0.000	1.000
Highest hourly rate	555.908	185.696	215.000	950.000
Trustee	0.080	0.274	0.000	1.000
Examiner	0.034	0.184	0.000	1.000
Fee examiner	0.069	0.255	0.000	1.000

Std. Dev. not adjusted for clustering

Appendix 10B: Collinearity Diagnostics for Final Model on Table 10 (Big Case Sample)

Pairwise Correlation with Size		*VIF*	*Tolerance*
1.0000	Log of debtor size	4.500	0.222
-0.1183	Case converted to ch. 7	4.050	0.247
-0.0967	Case dismissed	2.790	0.359
0.2052*	Pre-packaged case	2.570	0.389
-0.1043	363 motion	2.520	0.397
-0.1419	Log of days in ch. 11	2.190	0.456
0.3066*	3+ professionals	2.190	0.458
0.4387*	OCP system	1.990	0.503
0.4158*	Interaction, OCP & 3+	1.920	0.522
0.2912*	Official committee	1.460	0.684
0.5523*	Claims agent	1.410	0.707
0.0068	Case from SDNY	1.330	0.750
0.1403	Delaware case	1.280	0.781
0.6043*	Highest hourly rate	1.270	0.784
-0.1550	Trustee	1.260	0.796
0.0526	Examiner	1.230	0.815
0.1991	Fee examiner	1.120	0.897
** p < 0.05*	*Mean VIF*	2.060	

CONCLUSION

Much of the rhetoric about chapter 11 professionals' fees is in desperate need of a cold shower. Barring a government subsidy to creditors, bankruptcy systems will always involve the imposition of some costs on creditors—either directly or in the form of reduced recoveries from the estate. Presumably, the cost imposed on creditors is offset by the increase in recoveries creditors obtain in bankruptcy, as compared with state law collection actions. Whether there might not be a better alternative to these two extremes remains an open question, but critics who would demand below market professional fees in bankruptcy have to date neglected to consider how the operation of bankruptcy systems might be affected by such a move and whether such a move might not do more harm than good. Moreover, as I noted at the outset, this rhetoric tends to obscure the truly important questions.

In this paper, I have made a small contribution toward moving the discussion to the key issue, namely explaining how much chapter 11

costs in absolute terms, while at the same time confronting long-accepted myths.