

AN EMPIRICAL INVESTIGATION OF LIQUIDATION CHOICES OF FAILED HIGH TECH FIRMS

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Perhaps it is merely a reflection of my interests, but to my mind, empirical research requires a certain risk-preferent boldness. I like projects that explore how and why particular businesses make important decisions. After I identify a topic, I typically try to gather as much qualitative and quantitative information about it as I can, with the expectation that when I have learned a great deal about the topic something interesting will emerge that relates in some important way to an ongoing academic debate. Those projects usually do not begin with a specific hypothesis to prove or disprove—often either answer will produce a publishable result. The hypothesis I wish to test often emerges only after considerable work has been done, which creates a considerable risk that much effort will be invested to no productive end.

The success of that type of inquiry obviously is in the eye of the beholder, and I certainly am biased in thinking that I rarely have undertaken such a project without finding *something* that is interesting. It is common, however, that the results of such projects will be far removed from my expectations. Specifically, I often begin a project expecting that it will address a particular question, but finish the project emphasizing a question that was not on my initial list of inquiries. That is particularly true in interview-based projects, where the knowledge base I gain frequently alters my perspective so substantially that my views at the beginning of the project seem unsophisticated or even odd by the time the project is complete. A common pattern is to begin with a rough idea of what the data suggest, do some interviews that generate plausible hypotheses, and then examine those hypotheses in light of a relatively targeted data collection.

This is just such a project. Dan Keating asked me to speak at the F. Hodge O’Neal Symposium to discuss a topic related to IP and bankruptcy. I responded that I had a data set of failed high-tech companies, together with data about their patent portfolios that should allow me to investigate the role of a patent portfolio in determining whether bankruptcy is the most effective method of liquidating the company. As discussed below, my research on that topic is inconclusive. Rather, the focus of my paper is on two topics only loosely related to my original inquiry. The first is a topic about which I knew almost nothing when I began this work: the use of a privately arranged assignment for the benefit of creditors (“ABC”) as

a substitute for bankruptcy. In its most unqualified form, my argument is that California high-tech firms—an important group given the role of California in high-tech industries—systematically use bankruptcy less than firms in other states, and that this practice follows directly from California legal rules that make the process for ABCs more streamlined in California than it is in other states.

The second, with potentially broader significance, is that data gathered from the files of the bankrupt firms in the data set provides a unique glimpse of the capital structure of mid-size business bankruptcies,¹ which shows a startling amount of assets and debt both secured and unsecured. Contrary to the idea that venture-backed firms have simple capital structures with few claimants,² and that they have substantially no valuable assets when they fail, the average bankrupt firm in the data set reported tangible assets of more than \$20 million, claims of secured creditors of about \$14 million, and claims of unsecured creditors of about \$34 million. That data, together with the results of my interviews about why those firms seek relief in bankruptcy, supports a much-improved understanding of exactly what benefits the bankruptcy system provides that firms could not obtain by contracts among themselves.

The paper proceeds in three steps: a description of the quantitative data and interviews collected for this paper; statistical analysis of the quantitative data, informed by the results of the interviews; and discussion of the theoretical and policy implications of my findings.

I. COLLECTING THE DATA

At the highest level of generality, the purpose of this project is to contribute to an understanding of how managers of a failing firm choose among the various options that confront them: When do they file for bankruptcy? When do they suffer a foreclosure instead of filing for

1. As is evident from the literature surveyed in *infra* note 3, much of the existing literature focuses either on very large cases or on a complete sample of cases from a particular district or districts, a procedure that tends to produce cases much smaller than the cases in the data set I examine here. See, e.g., Elizabeth Warren & Jay Lawrence Westbrook, *Financial Characteristics of Businesses in Bankruptcy*, 73 AM. BANKR. L.J. 499, 520–21 (1999) (reporting mean assets of business bankruptcy cases of about \$700,000, compared to files here with mean tangible assets of about \$22 million).

2. Douglas G. Baird & Robert K. Rasmussen, *Control Rights, Priority Rights, and the Conceptual Foundations of Corporate Reorganizations*, 87 VA. L. REV. 921, 956 (2001) [hereinafter Baird & Rasmussen, *Control Rights*] (arguing that “debt rarely appears in the capital structure” of a venture-backed firm and such a firm thus “is not eligible for bankruptcy”); Douglas G. Baird & Robert K. Rasmussen, *The End of Bankruptcy*, 55 STAN. L. REV. 751, 781 (2002) [hereinafter Baird & Rasmussen, *The End*] (“High-tech . . . startups have very little debt.”).

bankruptcy? When do they simply turn the assets over to a lender or equity investor? When do they voluntarily sell the company to a third party because they are unable to continue operations? There is of course a considerable body of empirical literature dealing with what happens to firms when they file for bankruptcy.³ There also is a smaller, though well-defined, body of business and finance literature that attempts to build a model that predicts what firms are likely to file for bankruptcy in the future.⁴ There is not, however, any significant work that looks at a data set of failed firms and analyzes, among a universe of firms that have failed, which firms choose to file for bankruptcy and which firms choose to use other mechanisms for dealing with financial distress.⁵ Although this work

3. There is a great deal of this work by law professors. For example, Lynn LoPucki has written on small businesses in the early days of Chapter 11. See Lynn M. LoPucki, *The Debtor in Full Control—Systems Failure Under Chapter 11 of the Bankruptcy Code?*, 57 AM. BANKR. L.J. 99 (1983) (Part I); Lynn M. LoPucki, *The Debtor in Full Control—Systems Failure Under Chapter 11 of the Bankruptcy Code?*, 57 AM. BANKR. L.J. 247 (1983) (Part II) [hereinafter LoPucki, *Debtor in Full Control* (Parts I & II)]. In addition, he has authored a series of papers with William C. Whitford regarding large-firm bankruptcies in the 1980s. See Lynn M. LoPucki & William C. Whitford, *Bargaining Over Equity's Share in the Bankruptcy Reorganization of Large, Publicly Held Companies*, 139 U. PA. L. REV. 125 (1990); Lynn M. LoPucki & William C. Whitford, *Corporate Governance in the Bankruptcy Reorganization of Large, Publicly Held Companies*, 141 U. PA. L. REV. 669 (1993); Lynn M. LoPucki & William C. Whitford, *Patterns in the Bankruptcy Reorganization of Large, Publicly Held Companies*, 78 CORNELL L. REV. 597 (1993); Lynn M. LoPucki & William C. Whitford, *Venue Choice and Forum Shopping in the Bankruptcy Reorganization of Large, Publicly Held Companies*, 1991 WIS. L. REV. 11 (1991). Bob Rasmussen and Douglas Baird have done some recent work about business bankruptcies. E.g., Douglas G. Baird & Robert K. Rasmussen, *Chapter 11 at Twilight*, 56 STAN. L. REV. 673 (2003) [hereinafter Baird & Rasmussen, *Twilight*]. Work by Elizabeth Warren and Jay Lawrence Westbrook reports results from their large ongoing empirical study with Terry Sullivan of business bankruptcies. Elizabeth Warren & Jay Lawrence Westbrook, *Contracting out of Bankruptcy: An Empirical Intervention*, 118 HARV. L. REV. (forthcoming 2004) [hereinafter Warren & Westbrook, *Empirical Intervention*]; Elizabeth Warren & Jay Lawrence Westbrook, *supra* note 1; Elizabeth Warren & Jay Lawrence Westbrook, *Searching for Reorganization Realities*, 72 WASH. U. L.Q. 1257 (1994). Edward R. Morrison also has written recently with Douglas Baird about business bankruptcies in Chicago. See Douglas Baird & Edward R. Morrison, *Bankruptcy Decision Making*, 17 J.L. ECON. & ORG. 356 (2001); Edward R. Morrison, *Bankruptcy Decision-Making: An Empirical Study of Small Business Bankruptcies* (2003) (unpublished manuscript, available at www.ssrn.com). There is a more general body of work by scholars in other disciplines. E.g., Sandeep Dahiya et al., *Debtor-in-Possession Financing and Bankruptcy Resolution: Empirical Evidence*, 69 J. FIN. ECON. 259 (2003); David C. Smith & Per Strömberg, *Maximizing the Value of Distressed Assets: Bankruptcy Law and the Efficient Reorganization of Firms* (2004) (unpublished manuscript, available at www.ssrn.com).

4. E.g., Paul Asquith, et al., *Anatomy of Financial Distress: An Examination of Junk-Bond Issuers*, 109 Q.J. ECON. 625 (1994); Harlan D. Platt & Marjorie B. Platt, *Predicting Corporate Financial Distress: Reflections on Choice-Based Sample Bias*, 26 J. ECON. & FIN. 184 (2002); Edward I. Altman, *Predicting Financial Distress of Companies: Revisiting the Z-Score and Zeta Models* (July 2000) (working paper, available at <http://pages.stern.nyu.edu/~ealtman/Zscores.pdf>); Matthias Kahl, *Financial Distress as a Selection Mechanism: Evidence from the United States* (Oct. 2002) (working paper, available at <http://repositories.cdlib.org/anderson/fin/16-01/>).

5. The closest paper with which I am familiar is Julian Franks & Oren Sussman, *Resolving*

looks more broadly at pre-bankruptcy firms, it provides a valuable perspective on the theories of the existing literature, largely because it provides a rare opportunity to see precisely what firms can do *without* resorting to bankruptcy.

In related work addressing patenting and venture capital investments,⁶ I used a data set that includes a considerable amount of information about a specific and important group of failed high-tech firms. Specifically, my research uses the VentureSource database operated by VentureOne to collect information about venture-backed firms.⁷ That database includes a variety of pieces of information about firms that have received financing from venture-capital investors. The data are collected by quarterly surveys of venture-capital investors, supplemented by frequent contacts with executives at the venture-backed firms.⁸ Although the literature makes it clear that the data are not entirely accurate, they are reasonably complete⁹ and commonly used in papers examining the venture-capital industry.¹⁰ Moreover, I can think of no reason why the inaccuracies in that data would introduce any particular bias with respect to the questions I address.¹¹

For this project, the most important data point is an indicator of the status of the company. One of the status possibilities is that the company is “out of business.”¹² Recognizing the significance of that data point for the

Financial Distress by Way of a Contract: An Empirical Study of Small UK Companies (2000) (unpublished manuscript, *available at* http://papers.ssrn.com/sol3/papers.cfm?abstract_id=236098).

6. Ronald J. Mann, Do Patents Facilitate Financing in the Software Industry? (2004) (unpublished manuscript, on file with author).

7. That database is proprietary, but Venture Source kindly has granted me complimentary access for the purposes of this research.

8. See Dow Jones Venture One, *Industry Information: Research Methodology*, at www.ventureone.com (last visited Feb. 11, 2005). For a published description, see PAUL GOMPERS & JOSH LERNER, *THE VENTURE CAPITAL CYCLE* 335–37 (1999).

9. See Steven N. Kaplan et al., How Well Do Venture Capital Databases Reflect Actual Investments (Sept. 2002) (unpublished manuscript, *available at* <http://gsbwww.uchico.edu/fac/steven.kaplan/research/kss1.pdf>).

10. E.g., GOMPERS & LERNER, *supra* note 8, at 95–124; Antonio Davila et al., *Venture-Capital Financing and the Growth of Startup Firms* (Aug. 2002) (working paper, *available at* http://news-info.wustl.edu/pdf/gupta_venture_capital.pdf) (last visited Mar. 29, 2004); Sridhar Seshadri et al., *Venture Capital Investing and the “Calcutta Auction”* (2003) (paper prepared for XII International Torvergata Conference on Banking and Finance, *available at* http://www.ceistorvergata.it/conferenze&convegni/banking&finance/XII_conference/10DICEMBRE/tucci_uniroma2.pdf).

11. The basic problem seems to be that the data set omits a substantial share of the actual investments. It is not clear what the reason for the omissions is, but given the method by which the data are collected, it is probably simply a matter of oversight by the persons responding to the questionnaires.

12. The other options are “acquired/merged,” “private and independent,” and “publicly held.” The “out of business” category I select for my data set includes firms that have voluntarily sold their assets in a liquidation context, filed for bankruptcy, or otherwise ceased to exist, but it does *not* include firms that have done some form of private workout that leaves the firm intact. In the venture capital

gap in the literature discussed above, I collected a data set of all the firms that had three characteristics: (a) they received a venture-capital investment between January 1, 2000 and December 31, 2002; (b) they were shown as “out of business” in the fall of 2003 when I collected my data; and (c) they fall within the software, biopharmaceutical, or communications sectors.¹³ I limited my analysis to firms that received financing since 2000 because of the concern that it would be more difficult to collect information about firms that failed before that time. I selected those sectors because they are the three largest sectors and the sectors most closely associated with the “high tech” label. I hoped that by using large sectors I would be able to investigate the possibility (confirmed in some ways below) that the attractiveness of bankruptcy differs in significant ways in different types of businesses.

After I determined the universe of firms that I would study, I collected from VentureSource various pieces of information about each firm, including the geographic location of the firm, any former names the firm may have operated under, the year in which each firm was founded, more detailed information about each firm’s line of business, and two proxies for the firm’s size (employees and total amount of financing received by the firm). I then supplemented that data with information from Delphion about the size of each firm’s patent portfolio.¹⁴

Next, I turned to the most difficult part of the data collection. Because the purpose of the project was to understand how firms choose among the

context, for example, it is common for a firm to receive “restart” funding that substantially alters the direction of the firm. A restart round occurs when a firm’s valuation is significantly reduced and the current investors’ stakes are diluted. Restarts have become increasingly common. In years past, they comprised 1% or less of all deal flow, but in recent years that figure has risen substantially: to 3% in 2002 and 6% in 2003. See VentureOne, *Equity Financings for US Venture-Backed Companies*, by Industry Group (1997–4Q’2003), at www.ventureone.com/ii/4Q03_Financing_Release.xls (Microsoft Excel spreadsheet) (last visited Feb. 11, 2005). Functionally, they operate much like a reorganization in bankruptcy, in the sense that the claims of existing debt claimants often are completely removed and that the claims of equity claimants that do not contribute new value are likely to be depressed substantially. See Telephone Interview with Third California Lender (Apr. 5, 2004); Telephone Interview with Venture Investor (Apr. 16, 2004). For a thorough analysis of that analogy, see Smith & Strömberg, *supra* note 3.

13. I collected the data in December 2003. Because the data set is updated continuously, it would be difficult to replicate the exact search. I have downloaded, however, an electronic copy of the entire VentureSource record for each firm listed as “out of business” as of December 2003.

14. I recorded the total number of patents assigned to each firm as of December 31, 2003. In doing the search, I used the present name and any former names provided by VentureOne. My experience suggests that such a search does not capture all of the patents assigned to any particular entity, particularly where a firm has changed names frequently or where the firm acquires a patent at some time after the issuance of that patent. For purposes of this research, however, those errors are likely to be unimportant. More importantly, it is not clear that a more replicable method exists for defining a universe of patents that belong to particular firms.

alternative methods of liquidation, the basic problem that I faced was how to categorize the various alternatives to bankruptcy and determine how often each is used. When the project began, I hoped to produce quantitative data as to how many firms in the database used various methods such as a foreclosure, voluntary cessation of business, ABC, or bankruptcy. Several factors complicated that task.

First, to the extent that the non-bankruptcy methods involve filings, the filings typically are not easily retrievable or searchable. For example, the filings for ABCs generally are not in the Secretary of State's Office, but rather in the offices of city and county clerks. That significantly increases the number of places at which searches must be conducted. Moreover, many of those offices do not maintain their records online; in many cases, they will not respond to search inquiries by telephone or email; in some cases, they will not even respond to inquiries by conventional mail. Also, because the filings are made so rarely, office staff have so little familiarity with them that they typically deny the possibility of such a filing: it is of course difficult to conduct a search for something in a public office that denies that it is obligated to accept such filings. Finally, and most importantly, many of the alternatives do not require public filings; there is no public filing, for example, associated with a foreclosure under UCC Article 9. The combination of those problems makes it impractical to rely on public records.

Similarly, in some states there is no public filing for an ABC.¹⁵ Other liquidation methods—a hibernation¹⁶ or a voluntary surrender of assets to creditors or investors—might not involve the kind of discrete event that could be captured in a filing. That problem is complicated by the overlap between methods—even methods like bankruptcy or a foreclosure that involve discrete objective events. Thus, it is common for a secured creditor to foreclose and conduct an auction of some assets, while the firm's managers might auction personal property through DoveBid.¹⁷ Another possibility is that the firm might sell different portions of the assets to different companies by negotiated sales that occur at different times. Finally, and most commonly, the firm might file for bankruptcy

15. California is the obvious example.

16. A hibernation is a process suitable for a firm with technology that is functional but thought to be "ahead of its time." The hibernating firm lays off its employees and ceases operations, hoping that the market will improve. For details, see Sherwood Partners, Business Continuity Advisors, at <http://shrwood.com/hibernation.html> (last visited Jan. 30, 2005).

17. For background on that alternative, see Dovebid, at <http://www.dovebid.com> (last visited Jan. 30, 2005). In my data set, 2d Century, Broadband Office, Darwin Networks, and Napster used Dovebid to conduct auctions while they were in bankruptcy.

after engaging in one or more of the other possible options. That overlap problem makes it particularly difficult to obtain reliable information from interviews. For example, a lender might tell me which firms on the list are firms to which she has advanced funds,¹⁸ and how many of those firms suffered foreclosure, but she might have no recollection of a bankruptcy or other disposition that occurred months or years after a foreclosure in which the lender was paid much of its outstanding indebtedness. Collecting information directly from the failed firms would be even more problematic because of the difficulty of locating knowledgeable executives years after a firm has failed.

Another possibility would be to rely on the VentureSource data to describe the particular type of liquidation event. That data has much to be said for it: it is updated regularly (by quarterly interviews with executives), relies on direct connections with knowledgeable firm insiders, and includes good financial information about private firms.¹⁹ Thus, I think it is quite reliable with respect to the point discussed above—the collection of a universe of firms that have failed. It is less useful, however, with respect to information about the various alternatives. For example, the descriptive information in the data set reports that most firms “ceased operations,”²⁰ which does not distinguish in a useful way among the various options of interest to me. Similarly, there are a large number of firms (107, about 15% of 742) for which the descriptive information is missing entirely, either because VentureSource “lost contact” with the firm or because the entry is simply blank.²¹ Similarly, the data grossly under-report bankruptcy filings, for which I have an objective third-party source (discussed below): VentureSource shows only 11 bankruptcy filings, while my searches found 161.²²

One final possibility would have been to rely on media reports, which are readily available on the Internet for many of the firms. Unfortunately, it became clear that I would not be able to obtain complete coverage through media reports. More troubling, it became equally clear to me that press reports were not reliable; none, for example, reported an ABC

18. That information would be useful because the market for institutional lending to venture-backed firms is, as my interviews generally suggest, quite concentrated.

19. Dow Jones Venture One, *Dow Jones Venture Source*, at <http://ventureone.com> (last visited Feb. 11, 2005).

20. *Id.* VentureSource used that designation for 28 of the 31 biopharmaceutical firms for which it reported an outcome, 148 of the 198 telecommunication firms for which it reported an outcome, and 252 of the 351 software firms for which it reported an outcome.

21. *See Dow Jones Venture Source*, *supra* note 19.

22. *Id.*

(despite data I have collected indicating ABCs for a large number of specifically identified firms in the data set) and few reported auctions or foreclosures (despite anecdotal evidence from the interviews and Internet sites suggesting that those events are common). I also considered the possibility of supplementing media reports with targeted surveys sent to firms not discussed in the media. The poor results of the VentureSource surveys, however, convinced me that such an inquiry would not produce reliable information. The basic problem, I think, is that responsible business executives at these firms often do not have a concrete understanding of the legal choices that their attorneys or creditors have made, particularly when there is no bankruptcy filing.

In the end, then, I decided to limit my quantitative inquiries to two relatively objective events: bankruptcy and ABC filings. On the first, I used Internet searches of PACER and individual federal-court Websites to collect basic information about any bankruptcy filings by the firms.²³ In cases in which the schedules were not available on PACER, I obtained photocopies of the schedules from the relevant courts. With respect to ABC filings, I collected information for the four largest states in the data set (California, Massachusetts, New York, and Texas). For California (where there are no public filings), I relied on confidential interviews with the four largest firms that facilitate ABCs. For the other three states, which do require such filings, I conducted searches in the relevant public offices.²⁴

To supplement that quantitative data, I conducted 23 interviews (predominantly by telephone, although occasionally in person) with individuals who have useful information about the choices I am examining: ten lawyers who work in the area,²⁵ four lenders to high-technology firms,²⁶ five executives at turnaround firms (who typically

23. Using the U.S. Party/Case index in PACER, I collected information on all bankruptcies filed as of December 31, 2003. With respect to the courts that are not listed on that index (N.D. Ala., S.D. Ga., Idaho, S.D. Ind., E.D.N.C., M.D. Tenn., Virgin Islands, and E.D. Wash), I searched in individual court databases in the state in which the firm resides. Of course, that may have resulted in some under-reporting of bankruptcies, either because of discrepancies between the names used in bankruptcy filings and the names used in VentureOne (e.g., I did not search for any natural persons) or because of the possibility that some non-local firms filed in the districts that are not included in the index. I concluded that the latter possibility is insignificant, because most of the non-index districts have an insubstantial number of business filings. I found *no* cases in any of the non-index districts other than E.D.N.C.

24. As discussed above, the decentralized nature of those filings made that task complicated, which is why I limited it to the three largest states in the data set outside of California.

25. This group includes five lawyers from California, three from Massachusetts, and two from Texas.

26. All of the lenders were from institutions with a national presence. Three of the executives

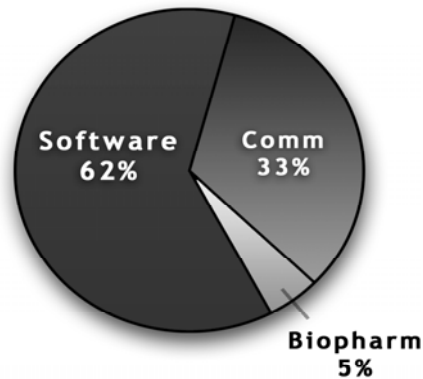
handle not only turnarounds but also liquidations),²⁷ three California bankruptcy judges, and one venture capital investor with experience in the area. As is typical for my work, the interviews were relatively open-ended. Suitably redacted transcripts of the interviews will appear on my Website when this paper is published.²⁸

II. ANALYZING THE DATA

A. Summary Data

The total data set includes 742 firms: 40 in the biopharmaceutical (“biopharm”) sector,²⁹ 244 in the communications sector,³⁰ and 458 in the software sector.³¹

Figure 1: Breakdown of Dataset by Industry



were located in California, one in Texas.

27. One of the turnaround firms had a national presence. Of the five individuals, four were located in California and one in Massachusetts.

28. The posted transcripts will not include material from the interviews with judges and two of the attorneys, which were conducted on the basis that I would keep my notes of those conversations confidential.

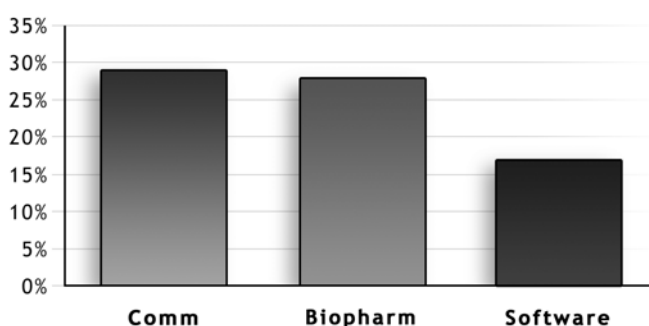
29. This sector is comprised primarily of firms engaged in the drug discovery and drug delivery subsectors, with a few firms in the biotechnology and pharmaceutical subsectors.

30. In addition to internet, wireless and telecommunications service providers, this sector includes firms that sell connectivity products, fiber optic equipment, and wireless communications equipment.

31. This sector is probably the most diverse, with firms that develop business applications software, communications and connectivity tools, database software, educational software, games, graphics and publishing software, multimedia networking software, and many different types of vertical market applications software.

Out of the entire population, the total number of bankruptcy filings was 161, only 22% of all of the failed firms.³² The bankruptcy rates by sector ranged from 17% in the software sector to 28% in the biopharm sector and 29% in the communications sector. Out of the 161 bankruptcy filings, there were 68 firms (42%) in Chapter 11 at some point in the process and 93 firms (58%) that were exclusively in Chapter 7.³³ Although I do not examine the question in detail in this paper, the regression models reported below suggest, as the raw data imply, that bankruptcy filings in the software sector are significantly lower than the filings in the biopharm and communications sectors, even controlling for firm location and size.³⁴

Figure 2: Bankruptcy Rates by Industry



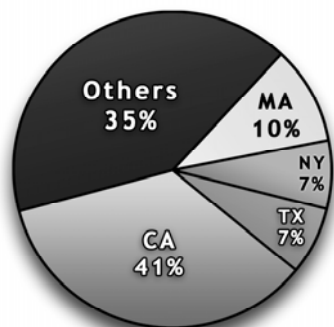
The firms were located in thirty-three states and the District of Columbia. Not surprisingly, however, most of the firms were concentrated in a small number of states. Thus, the four most populated states included almost two-thirds (65%) of the firms.

32. I say “only” because some readers might expect that the majority of failing firms would make use of the bankruptcy system. That expectation is not, however, universal. In particular, recent literature about venture-backed firms has suggested that those firms do not use bankruptcy at all, relying on contracts to “opt out” of the state-provided bankruptcy system. Baird & Rasmussen, *Control Rights*, *supra* note 2, at 956; Smith & Strömberg, *supra* note 3. The data set I analyze here is direct evidence that a significant group of venture-backed companies do use the bankruptcy system to facilitate an effective liquidation of their assets.

33. Two of the 68 initially were filed in Chapter 7 and later converted to Chapter 11. For purposes of this paper, I treat any firm that was ever in Chapter 11 as being a “Chapter 11 case.” Unlike the biopharmaceutical and software sectors where Chapter 7 cases predominated (8 out of 11 in biopharmaceutical and 60 out of 80 in software), Chapter 11 cases were predominant in the communications sector (45 out of 70).

34. Understanding the role that a firm’s industry plays in the decision to file for bankruptcy is an important part of the analysis that I have yet to explore fully. However, I do offer some tentative hypotheses related to the role of a firm’s industry that relate to my explanation in Part III of the issues that motivate firms to use bankruptcy in liquidation.

Figure 3: Breakdown of Dataset by Location



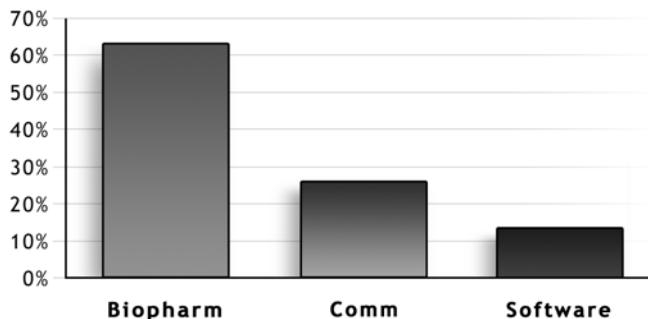
The final data points that I collected from VentureSource are two different proxies for the size of the firm: number of employees and total amount raised. Both proxies indicated that the communications firms were larger than firms in the other sectors. The median number of employees ranged from 18 (biopharm) to 30 (software) to 55 (communications). The median amount raised ranged from \$9 million (software) to \$9.5 million (biopharm) to \$28 million (communications). Table 1 provides summary data about the size of the firms.

Table 1: Capitalization of Dataset by Industry

	Biopharm N=40	Software N=458	Telecom N=244	Aggregate N=742
<u>Amount Raised (\$M)</u>				
Mean	19	19	55.2	30.9
1st Quarter	4.0	4.4	10.25	
Median	9.5	9.0	29.0	
3rd Quarter	27.0	20.3	69.0	
St. Dev.	20.3	37.5	81.4	
<u>Rounds</u>				
Mean	3	2	3	2
Median	3	2	2	
<u>Investors</u>				
Mean	5	5	7	5
Median	4	4	5	

The share of firms that obtained patents differed sharply by sector, from 63% (25/40) in biopharm to 26% (64/244) in communications to 14% (63/458) in software.³⁵ The number of patents per firm differed similarly. Overall, those numbers ranged from 3.9 patents per biopharm firm, to 1.4 patents per communications firm, to 0.5 patents per software firm. Among firms with patents, the respective rates were 6.2 patents per patenting biopharm firm, 5.4 patents per patenting communications firm, and 3.5 patents per patenting software firm.

Figure 4: Share of Patenting Firms by Industry



B. Intellectual Property and Bankruptcy

The first hypothesis I investigated was that firms with patents would be less likely to file for bankruptcy because of the inadequacies of the bankruptcy process as a device for maximizing the value of sophisticated intellectual property. For example, one attorney explained:

[T]he more sophisticated the assets and the more intellectual property involved, the more important it is to have the person who has a sophistication about them trying to dispose of that. And, again that would be an ABC where you get to hand pick [the trustee, so that you can use a sophisticated liquidator] as opposed to a bankruptcy trustee.³⁶

35. This sectoral difference resembles the data I report from a slightly different data set in Mann, *supra* note 6.

36. Telephone Interview with Third California Attorney (Nov. 3, 2003); *see also* Telephone Interview with First California Lender (Feb. 5, 2004).

As it happens, however, the data do not support that hypothesis. By each of the measures that I tested, the relation between a patent portfolio and the likelihood that the failed firm will choose to file for bankruptcy is essentially random.

On reflection, bolstered by discussion in a number of interviews, this makes sense. Many of the interview subjects insisted that firms with strong IP assets would be deterred from filing for bankruptcy, but on questioning it became clear that what they meant by strong IP assets was any type of asset that was “high-tech,” whether or not a patent protected it.³⁷ The loose relation between patents and valuable technologies aggravates that problem: not all valuable technology is patented and not all patented technology is valuable.³⁸ Thus, because the population is by definition a set of firms with predominantly high-technology assets, the existence of patents does not directly address the relevant question. In the end, those interviews suggest that I would find a significant effect, inversely related to bankruptcy filings, between high-technology industries and other industries. At this time, however, I do not have data with which to investigate that question.³⁹

37. See Telephone Interview with First California Attorney (Oct. 27, 2003); Telephone Interview with First Turnaround Professional (Dec. 9, 2003); Telephone Interview with Second Turnaround Professional (Dec. 17 & 19, 2003).

38. For example, sophisticated companies will protect many valuable innovations as trade secrets, without patents. See, e.g., Dan L. Burk, *Intellectual Property and the Firm*, 71 U. CHI. L. REV. 3, 9–10 (2004); Edmund W. Kitch, *The Law and Economics of Rights in Valuable Information*, 9 J. LEGAL STUD. 683, 709 (1980). Conversely, the great majority of patents plainly have little commercial value. See, e.g., Jean O. Lanjouw & Mark Schankerman, *Characteristics of Patent Litigation: A Window on Competition*, 32 RAND J. ECON. 129 (2001); Mark A. Lemley, *Rational Ignorance at the Patent Office*, 95 NW. U. L. REV. 1495 (2001); John R. Allison et al., *Valuable Patents* (2003) (unpublished manuscript, available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=426020) (last visited Sept. 29, 2004).

39. At least in recent years, most venture capital investments have been made in high-tech industries. Thus, the various databases of venture capital investments are not useful for constructing a data set of failed firms in industries with hard-core tangible assets. Moreover, I am not aware of any other data set of failed firms. Although secretaries of state have records on firms whose charters have been suspended, revoked, or forfeited, my experience suggests that information about firm charters does not say much about what actually happened to the firm or the time at which a firm actually ceases to exist. Among other things, firms often will fail to dissolve formally at the time they cease to do business, often because of the fee the state requires for formal dissolution. Interview with Second Texas Attorney (Sept. 23, 2004). In some states, there also might be data about charters revoked for failure to pay franchise taxes. Those data, however, are likely to differ substantially from state to state based on differences in local tax systems. *Id.* Thus, they provide little basis for a national study such as this. There is also some census data and data collected by the Small Business Administration about firm failures, but those data do not include any specific information about particular firms.

C. Location and Bankruptcy

1. The Basic Hypothesis: Location and Bankruptcy

a. Formulating the Basic Hypothesis

The most productive hypothesis that I investigated was one that was not apparent to me when I began this project, but quickly emerged in interviews. This is the notion that bankruptcies of high-technology firms should be relatively less common in California because of the common use in that state of the ABC procedure.⁴⁰ The process is governed for the most part by provisions of the California Code of Civil Procedure.⁴¹ Among other things, those provisions require the assignee to provide written notice to all creditors and equity holders within 30 days of the assignment.⁴² The notice must include a “bar date,” between 150 and 180 days after the date of the notice, by which creditors must file claims against the estate.⁴³ The statute also permits the assignee to recover preferences in a provision modeled on Bankruptcy Code § 547.⁴⁴ Finally,

40. The best general introduction to an ABC is an American Bankruptcy Institute publication written by a California professional in the industry: GEOFFREY L. BERMAN, *GENERAL ASSIGNMENTS FOR THE BENEFIT OF CREDITORS: A PRACTICAL GUIDE* (2000). See also Geoffrey L. Berman, *Common Law Assignments for the Benefit of Creditors: The Reemergence of the Non-Bankruptcy Alternative*, 21 CAL. BANKR. J. 357 (1993) (describing specifically the California ABC); Mike C. Buckley & Gregory Sterling, *What Banks Need to Know About ABCs*, 120 BANKING L.J. 48 (2003); David S. Kupetz, Note, *Assignment for the Benefit of Creditors: Exit Vehicle of Choice for Many Dot-Com, Technology, and Other Troubled Enterprises*, 11 J. BANKR. L. & PRAC. 71 (2001).

41. CAL. CIV. PROC. CODE §§ 1800–1802 (West Supp. 2005).

42. CAL. CIV. PROC. CODE § 1802(a) (West Supp. 2005). The assignor is obligated to provide the assignee a complete list, with addresses, of the parties entitled to notice. CAL. CIV. PROC. CODE § 1802(c) (West Supp. 2005). That of course leaves open the possibility that the assignor either intentionally or inadvertently will omit some creditors from the list. The statute does not address the significance of omission from the list, but presumably omission from the list and consequent lack of notice would raise the possibility that the proceeding did not bind the creditor in question. *E.g.*, *Int'l Shoe Co. v. Pinkus*, 278 U.S. 261 (1929) (analyzing that aspect of a similar Arkansas law). My interview subjects report that assignees are careful to notify tax creditors, fearing that they would be personally liable for tax claims that would have been entitled to payment if they had received notice and presented a claim. See 31 U.S.C. § 3713 (2000) (providing for such a priority for federal tax claims); Kupetz, *supra* note 40, at 80; Telephone Interview with Fourth California Attorney (Sept. 23, 2004) (discussing likelihood that an assignee would face a similar liability to unnotified state tax creditors).

43. CAL. CIV. PROC. CODE § 1802(b) (West Supp. 2005).

44. CAL. CIV. PROC. CODE § 1800 (West Supp. 2005). That statute is not unique. As David Skeel notes, almost half (22 at the time that he wrote) of the states have provisions for the avoidance of preferences. David A. Skeel, Jr., *Rethinking the Line Between Corporate Law and Corporate Bankruptcy*, 72 TEX. L. REV. 471, 556 (1994). The statutes appear to be historical relics of the time before Congress adopted a permanent federal bankruptcy law, when only the states were attending to the problems of insolvency.

it includes some statutory priorities modeled on Bankruptcy Code § 502(b).⁴⁵

The interviews with lawyers and turnaround professionals in California reflect a consistent understanding that an ABC often is superior to bankruptcy as a mechanism for liquidating a failed high-tech company. The basic point is that an experienced assignee is superior to a Chapter 7 trustee because of three advantages the assignee has over the trustee in Chapter 7: the assignee can act more quickly; the assignee is likely to be more experienced at dealing with technology-related assets; and the use of an assignee involves lower transaction costs.⁴⁶

On the first point, the assignee often can dispose of the assets within just a few days of the assignment, if the assignee is satisfied that it already has located the best buyer for the assets.⁴⁷ Surprisingly, the interviews suggested that the optimal buyer often is so obvious that the assignor identifies the ultimate buyer in the earliest conversations with the potential assignee.⁴⁸ A trustee in bankruptcy, in contrast, rarely would be able to sell an entire business so quickly after a bankruptcy filing.⁴⁹

The second point is related to the first. In California, at least, the assignee is likely to be one of a handful of companies that specialize in serving as an assignee in these circumstances. Because these companies exist largely to extract value from the assets of failed companies, it is plausible that their experience—if only the “bigger rolodex” of contacts from past transactions⁵⁰—would produce greater returns than a trustee.⁵¹

45. CAL. CIV. PROC. CODE §§ 1204–1204.5 (West 1982 & Supp. 2005).

46. Nobody would suggest that an ABC is always superior. There are a variety of transaction-specific financial reasons why bankruptcy might be preferable, such as cases in which bankruptcy priorities would be lower than the priorities under the state statute and cases in which bankruptcy tax benefits are important. *See* Interview with Fifth California Attorney (Jan. 7, 2005).

47. *See* Telephone Interview with Second California Attorney (Oct. 28, 2003); Telephone Interview with Third California Attorney (Nov. 3, 2003).

48. *See* Telephone Interview with Second California Attorney (Oct. 28, 2003); Telephone Interview with Third Turnaround Professional (Mar. 12, 2004).

49. *See* Telephone Interview with First California Attorney (Oct. 27, 2003).

50. *See* Telephone Interview with Third California Lender (Apr. 5, 2004).

51. *See* Telephone Interview with First California Attorney (Oct. 27, 2003) (explaining that “the trustees that you get in a Chapter 7 case aren’t very good at selling intellectual property” and that an ABC gives a firm access to “someone who will actually do a better job selling the intellectual property than the trustee would”); Telephone Interview with Second California Attorney (Oct. 28, 2003) (explaining that ABCs can produce the “highest and best price” for the assets of a failed firm); Telephone Interview with Third California Attorney (Nov. 3, 2003) (“[T]he assignee in an ABC is just more likely to be more sophisticated than a bankruptcy trustee—will do a better job maximizing the value of the assets and will do it in a quick way so that creditors of the company will generally come out ahead.”); Telephone Interview with First Turnaround Professional (Dec. 9, 2003) (“[B]ankruptcy trustees typically are not good at or willing to invest the effort to sell intellectual property. . . . Bankruptcy trustees are usually lawyers, they’re not IP experts, they don’t have a staff of people who

That is true not simply because of a variation in expertise, but also because of the undoubtedly excessive workload that faces the typical bankruptcy trustee.⁵² The fact that experienced creditors commonly consent to the process suggests that the returns are higher than returns in a bankruptcy.⁵³

A related point is the ready ability of the assignee to use the services of employees with knowledge of the technology that is useful in maximizing the sales price.⁵⁴ Although it is not impossible for a business in Chapter 7 to continue paying employees, it is not easy:

go in and deal with the nuance of something like an intellectual property asset. Patents, trademarks, copyrights, software, operating systems, biotechnology assets, communications assets, they're just not experts in it."); Telephone Interview with Fourth California Attorney (Dec. 16, 2003) ("[O]ne of the really great benefits that I think is perceived frequently by the directors and officers of these tech companies, is here they can go out and they can select who the assignee is, they can meet with the assignee upfront, and can be comfortable that the assignee really does have the expertise and experience to try to maximize value. . . . They don't have to encounter an unknown trustee like they would if they were to file a Chapter 7."); Telephone Interview with Second Turnaround Professional (Dec. 17 & 19, 2003) (suggesting that an assignment is preferable "if the goal is to maximize value and put the assets back in the economic stream, quickly and efficiently"); Telephone Interview with Third California Lender (Apr. 5, 2004) ("I do think that nine times out of ten, you're better off having a Sherwood Partners or a Diablo Management or some other turnaround assignee looking to liquidate the assets than handing it over to a Chapter 7 trustee."); Telephone Interview with Venture Investor (Apr. 16, 2004) ("[W]hen you have the ABC option, you get 98% of the benefits of bankruptcy for about one-tenth the cost.").

52. See Telephone Interview with Third California Attorney (Nov. 3, 2003). The creditors do have the right under Bankruptcy Code § 702 to appoint their own trustee even in a Chapter 7 bankruptcy. But because such an appointment probably would not occur for about a month after the bankruptcy it would be a poor substitute for an ABC procedure that can complete a transfer in a matter of days.

53. Although my interviews do not suggest it, another possibility suggested by a reader of an early draft is that insiders prefer the ABC process because they have greater control over the ABC professional than they would have over a trustee. The interviews with lenders suggest, however, that lenders actually worry about an ABC process because they have *less* control than they would have in the more formal bankruptcy process. Thus, lenders tend to view the lack of control in an ABC as a counterbalance to a perceived greater monetary recovery. As one California Lender stated:

I think from a creditor's perspective the one negative is that you don't necessarily have all of the checks and balances that a bankruptcy court trustee might add to the process. And so, there's an accounting. They kind of get comfortable with the folks who are doing it because you know there have been some decent outcomes, but in the back of my mind I'm always thinking, the one drawback [sic] here is there's probably not as much control, or creditors don't feel as if there's as much control in the process.

Telephone Interview with Third California Lender (Apr. 5, 2004); see also Interview with Second California Lender (Apr. 5, 2004) (similar perspective).

54. See First California Attorney (Oct. 27, 2003); Telephone Interview with Second California Attorney (Oct. 28, 2003); Telephone Interview with Third Turnaround Professional (Mar. 12, 2004); Telephone Interview with First California Lender (Feb. 5, 2004) ("One thing that we've found is, you get more value out of that technology or the intellectual property if you can keep the people around it who can actually explain it, make it work, and help whoever wants to purchase it or use it, help them make it successful.").

[W]hen was the last time you saw a Chapter 7 trustee want to operate a company? He can get special authority to do so. It takes an order of the court to do so. To do it you need cash collateral steps . . . You need notice and all that other stuff to do it. So the Chapter 7 trustee almost never runs a company pending a sale.⁵⁵

By contrast, it is relatively simple for an assignee to complete a sale without first having to close the business. In a typical arrangement, the assignor might approach the assignee with a potential purchaser. The assignee would conduct due diligence about the sale before taking an assignment. If the assignee concluded that the sale was appropriate, it then would take an assignment and complete the sale almost simultaneously, sending notice to creditors promptly *after* the assignment and sale.⁵⁶ Several months later, after receiving and examining all of the relevant claims, funds would be distributed.⁵⁷ As one attorney who described that process to me remarked, “[N]o bankruptcy trustee can do that.”⁵⁸

Finally, and perhaps least important, the net cost of the process seems to be less than a bankruptcy proceeding.⁵⁹ This is thought to be true, even though the assignee charges a fee that seems to be much higher than the typical fee a trustee would charge,⁶⁰ because liquidation through an ABC

55. Telephone Interview with Second California Attorney (Oct. 28, 2003).

56. *See id.*; Telephone Interview with Third Turnaround Professional (Mar. 12, 2004).

57. Telephone Interview with Third Turnaround Professional (Mar. 12, 2004). Indeed, secured creditors and priority creditors often would be paid earlier, whenever funds were available for such claims. *Id.*

58. Telephone Interview with Second California Attorney (Oct. 28, 2003); *see also* Telephone Interview with Third California Attorney (Nov. 3, 2003) (describing a similar scenario).

59. There is of course a substantial amount of literature, much of it empirical, documenting the transaction costs of business bankruptcies. *See, e.g.*, Stephen P. Ferris & Robert M. Lawless, *Professional Fees and Other Direct Costs in Chapter 7 Bankruptcies*, 75 WASH. U. L.Q. 1207 (1997); Stephen P. Ferris et al., *A Glimpse at Professional Fees and Other Direct Costs in Small-Firm Bankruptcies*, 1994 U. ILL. L. REV. 847; Lawrence A. Weiss, *Bankruptcy Resolution: Direct Costs and Violation of Priority Claims*, 27 J. FIN. ECON. 285 (1990); Karen Hopper Wruck, *Financial Distress, Reorganization, and Organizational Efficiency*, 27 J. FIN. ECON. 419, 436–39 (1990). Most, if not all, of that literature is beside the relevant point here—that a bankruptcy imposes a substantial amount of fixed costs which do not vary with the size of the firm and which can be avoided through the use of alternative liquidation procedures. To the relevant decisionmakers, those costs present a floor: if the alternate procedure costs less than those fixed costs, it will save money. The point here is simply that experienced executives in California believe that ABCs often cost less than the minimum costs of a formal bankruptcy proceeding.

60. The typical trustee’s fee would be 3%. Several subjects suggested a typical minimum fee for a sophisticated assignee of \$75,000–\$100,000, *see* Telephone Interview with Third California Attorney (Nov. 3, 2003); Telephone Interview with Second Turnaround Professional (Dec. 17 & 19, 2003), with the general percentage fee being about 7.5% of the proceeds. *See* Telephone Interview with Second Turnaround Professional (Dec. 17 & 19, 2003); *see also* Katherine Goncharoff, *Fade Away* (July 17, 2002), at http://www.shrwood.com/media_td_0207.html (last visited Mar. 27, 2004) (same).

avoids the transaction costs associated with a typical Chapter 7 bankruptcy—costs of formal notices to creditors, attorney’s fees associated with the bankruptcy process, and the like. One California attorney explained the point at length:

From the debtor’s side you have to file bankruptcy schedules and do the formality of that, you have to attend at least a single hearing. And, so you’ve paid a lawyer, and you’ve done that stuff and that’s gone on. And the bankruptcy trustee comes in. If the trustee thinks it’s complicated enough, the trustee has a lawyer and sometimes an accountant. And so those are all going to be costs of administration. And then there is just going to be the time. And the time elongates in bankruptcy. In bankruptcy, months just go on and on and on, so they get to be expensive. So what is it going to cost? A little company may file bankruptcy for \$6,500 or \$10,000—you know that is not a huge fee when it comes time to liquidate something. But in terms of the delays and everything else, you may be talking about doubling or tripling that in terms of the administrative costs as you go through the system of the bankruptcy trustee and his counsel and the like.

If you do an assignment all you do is you do a board of directors’ resolution. You make the assignment, which is typically a preprinted form. You give a list of creditors. The assignor has now completed his work. The assignee takes the assets and while it too has a choice of engaging counsel or what have you, if it’s just going to be an asset liquidation, often times there are no professionals hired at all. It’s just the assignee takes it, does due diligence to see if the sale is good, and makes a sale.⁶¹

When the topic initially was mentioned in interviews, I was skeptical. I had assumed that one of the most difficult aspects of a workable process for a non-bankruptcy transfer of assets would be to ensure that the assets were transferred free of existing or potential liabilities. In California at least, professionals seem to think that is not a serious problem.⁶² Part of the reason is the nature of the firms that I am studying, venture-backed

61. Telephone Interview with Second California Attorney (Oct. 28, 2003); *see also* Telephone Interview with Third Turnaround Professional (Mar. 12, 2004) (similar discussion).

62. *See* Telephone Interview with First Turnaround Professional (Dec. 9, 2003) (describing the ability to provide title free and clear of claims as “one of the . . . fundamental principles that an ABC is all about”); Telephone Interview with Fourth California Attorney (Dec. 16, 2003) (ability to sell free and clear is the “whole concept” of an ABC).

firms that have not yet gone public.⁶³ Interview subjects assumed that the main risk would be after-the-fact suits for breach of fiduciary duty in connection with the assignment. They argued, however, that such suits are relatively unlikely in that context because the major outside equity investors are venture capitalists, who are unlikely to get involved in that kind of litigation.⁶⁴ Because the firms often have not yet started selling products and are unlikely to have complicated debt structures, the likelihood of later disputes is smaller than it is for companies that are more mature or have more intricate debt structures.⁶⁵ Yet, neither the statutes nor the cases in California specifically validate the title of a purchaser from the assignee.⁶⁶ Rather, it is more likely that the willingness to take that risk is driven by the economic motivation of the higher returns that an ABC can bring:

Sometimes, if everything else is equal, a buyer, generally speaking, would prefer to have a bankruptcy court order blessing the acquisition. But frequently, because the assignment process can work so smoothly and efficiently, the benefits of doing an

63. That is an artifact of my data set of course, but more broadly ABCs are rare for public companies because of the shareholder approvals that typically are required for an ABC but not for a bankruptcy filing. See Telephone Interview with First Turnaround Professional (Dec. 9, 2003). For a more general discussion of the policy implications of the public company dynamic, see *infra* note 159.

64. See Telephone Interview with Second California Attorney (Re-interview) (Mar. 30, 2004). It also is relevant that the venture capitalists may fear suit by the owners for their own responsibility for the shutdown, which might make them reluctant to institute litigation challenging the liquidation decisions of the entrepreneurs. See Maria Guzzo, *InfoSAGE Sues Mellon Ventures: Software Firm Claims Fund Foiled Financing Plan*, PITT. BUS. TIMES, Feb. 8, 2002, available at <http://www.bizjournals.com/pittsburgh/stories/2002/02/11/story2.html> (last visited Mar. 30, 2004). The problem is that the relations between venture capitalists and those in whom they invest necessarily give the venture capitalists control over the decision to terminate the firm's operations. See e.g., GOMPERS & LERNER, *supra* note 8, ch. 12; William A. Sahlman, *The Structure and Governance of Venture-Capital Organizations*, 27 J. FIN. ECON. 473, 506–14 (1990); Steven N. Kaplan & Per Strömberg, *Financial Contracting Theory Meets the Real World: An Empirical Analysis of Venture Capital Contracts* (2000) (NBER Working Paper No. 7660, available at <http://gsbwww.uchicago.edu/fac/finance/papers/kaplanstrom.pdf>) (last visited Mar. 30, 2004). For a complementary perspective, one California lender emphasized that the reason that it is difficult to use ABCs for public firms is because the representatives of the public debt holders are much more likely to resort to litigation than the firms that are likely to have extended credit to privately held venture-backed firms. See Telephone Interview with First California Lender (Feb. 5, 2004).

65. See Telephone Interview with Second California Attorney (Oct. 28, 2003). Similarly, those firms may be less likely than more mature firms to have serious concerns about other common types of unliquidated and unmatured liabilities—environmental claims, personal injury claims, IP infringement claims, or securities fraud. The simple fact is that the outstanding liabilities of firms that have not yet started selling products are more predictable than the outstanding liabilities of firms that have broader operations.

66. The laws in the other jurisdictions that I examined (New York, Massachusetts, and Texas) are no more clear on this point than those in California.

assignment outweigh the fact that you're not gonna have any court order as the buyer.⁶⁷

b. Testing the Basic Hypothesis

The interviews with California professionals support the basic hypothesis that failed high-tech companies in California should choose bankruptcy less frequently than failed high-tech companies in other locations. Unfortunately, it is not easy to test that hypothesis directly. Because California law does not require any public filing, I could not collect information on which California firms used ABCs. Accordingly, I tested the corollary hypothesis that bankruptcy rates are lower in California. The data provide considerable support for that hypothesis. Looking at the raw data, for example, the bankruptcy rate overall was about 17%, but it was only 14% in California. Because the data strongly suggested that bankruptcy rates varied by size of firm and by industry, I decided to analyze the data more carefully by using a logistic⁶⁸ regression with a dependent variable of whether the firm filed for any kind of bankruptcy. I included independent variables for the existence of patents ("PAT"), the industry of the firm ("BIOPHARM," "COMM," "SFTWR"), the size by employees ("SMLEMP," "MEDEMP," "LRGEMP"), the size by amount raised ("SMLAM," "MEDAM," "LARGAM"), and whether the firm was located in California ("CA"). As the table below shows,⁶⁹ location in California was significant at the 1% level. The negative coefficient, like the low odds ratio,⁷⁰ indicates an inverse correlation with bankruptcy filings. A goodness-of-fit test indicates that addition of the CA location variable significantly improves the model compared to a model without a location variable.

67. Telephone Interview with Fourth California Attorney (Dec. 16. 2003).

68. I used a logistic regression instead of an OLS regression because the dependent variable (bankruptcy filing) is binary.

69. In the data analysis, the reference category for industry is software, so I report coefficients and odds ratios for the differences in the biopharmaceutical and telecommunication sectors from software firms. Similarly, the reference categories for amount raised and employees were the categories for the larger firms. Thus, the tables report coefficients and odds ratios for the differences between small and medium firms and large firms.

70. An odds ratio below 1.0 indicates that the dependent variable is found less frequently in the category in question than in the reference category; an odds ratio above 1.0 indicates that the dependent variable occurs more frequently in the category in question than in the reference category.

Table 2: California and Bankruptcy Rates

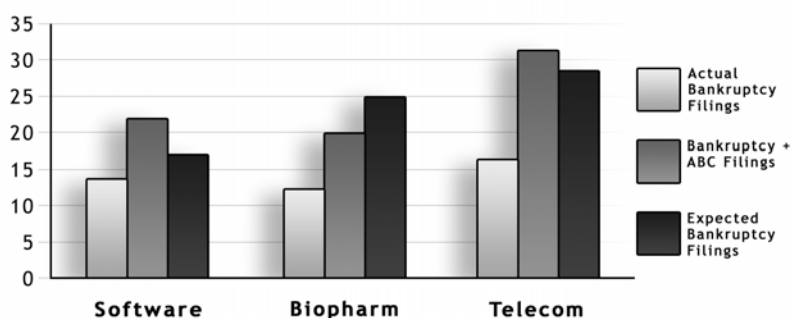
	Coeff	Odds Ratio
Constant	-0.352 (0.228)	0.703
PAT	0.061 (0.248)	1.063
BIOPHARM	0.931* (0.436)	2.537
COMM	0.400 (0.222)	1.492
SMLEMP	-1.392*** (0.337)	0.249
MEDEMP	-0.799** (0.254)	0.450
SMLAM	-0.486 (0.355)	0.615
MEDAM	-0.154 (0.251)	0.857
CA	-0.805*** (0.217)	0.447
* p<.05 ** p<.01 *** p<.001 N=635		

To bolster the argument that the prevalence of ABCs is an important reason for suppressed bankruptcy filings in California, it would have been useful to collect information about the number of ABC filings. As discussed above, I was not able to do that in a systematic way. I was able, however, to collect from the four turnaround firms that I interviewed the number (but not the identities) of the California firms in the data set, organized by industry, for which each of those firms had served as assignees in an ABC.⁷¹ Figure 5 shows how those numbers—which reflect 30 ABCs (about 10% of all failed California firms)—relate to the expected

71. Given the high concentration of expertise my interviews suggested, I think it is likely that my inquiries identified the overwhelming majority of California ABCs in my data set.

and actual number of bankruptcy filings in California. Generally, it suggests that the number of ABCs is a substantial fraction of the total bankruptcy filings. My efforts to locate similar filings in Massachusetts, New York, and Texas (the next three largest states in the data set) indicate that one firm in Massachusetts (out of about seventy five) and that none of the approximately 100 firms in New York and Texas used the ABC procedure.

Figure 5: ABC and Bankruptcy Filings in California



2. Refining the Hypothesis

a. Trying to Separate Law and Culture

That finding led me to seek more information about exactly why and how a preference for ABCs operates in California. Some, but not all, of the interviews suggested that the preference for ABCs was a cultural norm fostered in northern California. For example, one Palo Alto attorney explained that “it has a lot to do with whether you are in the Valley or not. Because the farther you get away from the sort of technology centers, the more likely it is that a company will go into bankruptcy.”⁷² In its most aggressive form, the preference reflected the view that people in northern California understand that the sophisticated and effective way to liquidate failing high-tech firms is to use an ABC. Other locales use different methods because the lawyers and lenders in those areas are less sophisticated. The premise is that professionals in California have simply had more experience in doing liquidations of high-tech firms because of the concentration of failed high-tech firms there in recent years.⁷³ As

72. Telephone Interview with First California Attorney (Oct. 27, 2003).

73. See Telephone Interview with First California Lender (Feb. 5, 2004) (“It may be just that it

Figure 3 illustrates, for example, more than 40% of my data set is from California, almost twice as much as the next three largest States combined. It should be no surprise that the experience would have taught them something professionals in other areas have not yet learned. The most telling evidence in support of that claim is the general view that even in California—where the formal legal system has not changed in any apparently relevant way in recent years—ABCs are much more common than they used to be.⁷⁴ As one attorney put it: “[I]f you go back ten years here in California there weren’t nearly as many ABCs as there are now. . . . I think people just started noticing that that was another way to do things.”⁷⁵ That discussion would suggest that I would obtain a better fit with a geographic variable that included only northern California, using a location variable that is smaller than the CA variable to reflect the 12% of the population based in southern California.⁷⁶

Other interviews suggested that the effect rested on important differences in the legal rules that govern ABCs in California. Those interview subjects started by pointing out that the ABC process in California historically originated in southern California, in the Los Angeles metropolitan area, and became common in Silicon Valley only in recent years.⁷⁷ More affirmatively, the professionals emphasized that ABCs in California can be accomplished under a common-law process that does not involve any judicial filing of any kind at all.⁷⁸ This allows the process to move rapidly and at relatively low cost. Other states, by contrast, often require judicial filings and other onerous conditions that make the process less practical.⁷⁹ This explanation would suggest that I would get the best fit with the model discussed above, using a geographic variable that distinguished between California and the rest of the population.

may be a practice that is historically due to the size of the economy out here, that people historically didn’t realize it’s an option and it’s a less expensive option. That may be part of it. It just may be that it’s more popular out here than elsewhere because you just have more companies.”)

74. See Telephone Interview with Fourth Turnaround Professional (June 18, 2004).

75. Telephone Interview with First California Attorney (Oct. 27, 2003).

76. That hypothesis resonates, of course, with the research of Sullivan, Warren & Westbrook on the effect of local legal culture on the consumer choice between Chapter 7 and Chapter 13 bankruptcy filings. See Sullivan et al., *The Persistence of Local Legal Culture: Twenty Years of Evidence from the Federal Bankruptcy Courts*, 17 HARV. J. LAW & PUB. POL’Y 801 (1994).

77. See Telephone Interview with Second California Attorney (Oct. 28, 2003).

78. See Telephone Interview with First Turnaround Professional (Dec. 9, 2003).

79. See *id.*

Complicating matters still further, several interview subjects⁸⁰ suggested that bankruptcy filings for high-tech firms are particularly difficult in the Ninth Circuit because of the decision in *In re Catapult Entertainment, Inc.*⁸¹ That case generally held that the debtor-in-possession in a bankruptcy proceeding cannot assume a nonexclusive patent license held by the debtor before bankruptcy, even if the debtor has no plans to assign the license to a third party.⁸² Given the likelihood that the businesses of high-tech startups will depend in part on nonexclusive licenses of intellectual property, *Catapult* is a major hindrance to the operation of a high-tech business in bankruptcy in the Ninth Circuit. If the federal legal system caused the distinction, I should find a better fit with a model that stopped at the boundaries of the Ninth Circuit, picking up, in addition to California, the 6% of the firms in Oregon, Washington, Hawaii, Idaho, and Arizona.⁸³

I investigated those explanations in two different ways. First, I ran models that altered the boundary of the portion of the data set in which bankruptcies are depressed. Thus, I used a model that replaced the California variable described above with a variable that differentiated between northern California and the rest of the data set (“NO CAL”). As the table below suggests, the results generally were similar to the results in Table 2 (which used the CA variable). The influence of the NO CAL variable is slightly less than the influence of the California variable: the odds ratio is closer to 1 (.467 for NO CAL versus .447 for CA) and the degree of significance is less (.002 for NO CAL versus .000 for CA). A goodness-of-fit test indicated that the NO CAL variable made a significant

80. See Telephone Interview with Second California Attorney (Oct. 28, 2003); Telephone Interview with Fourth California Attorney (Dec. 16, 2003); Telephone Interview with Second Turnaround Professional (Dec. 17 & 19, 2003).

81. *In re Catapult Entertainment, Inc.*, 165 F.3d 747 (9th Cir. 1999).

82. *Id.* at 749–55 (rejecting a contrary decision of the First Circuit). *Catapult* is similar to rules adopted by the Third, Fourth, and Eleventh Circuits. See *In re Sunterra Corp.*, 361 F.3d 257, 262 (4th Cir. 2004); see also Marjorie Chertok & Warren E. Agin, *Restart.com, Identifying, Securing and Maximizing the Liquidation Value of Cyber-Assets in Bankruptcy Proceedings*, 8 AM. BANKR. INST. L. REV. 255, 288–93 (2000). Interview subjects believe that the rule in *Catapult* (and cases like it) makes bankruptcy systematically unattractive to software firms. Telephone Interview with Second California Attorney (Oct. 28, 2003).

83. Because the *Catapult* rule is the law in other jurisdictions, this line is not perfect. Thus, even if *Catapult* were one of the dominating factors, my regressions might not show a substantial effect based on the Ninth Circuit boundary. It does appear, however, that the *Catapult* rule is not the law in the other major jurisdictions in my data set, including the First Circuit (which has a contrary rule), and the Second and Fifth Circuits (which seem not to have addressed the question). See *supra* note 82 (discussing decisions of other circuits).

improvement over a model without a location variable, but the fit was not as good as with the CA variable.

Table 3: Northern California and Bankruptcy Rates

	Coeff	Odds Ratio
Constant	-0.417 (0.225)	0.659
PAT	0.006 (0.248)	1.006
BIOPHARM	0.935* (0.433)	2.547
COMM	0.377 (0.222)	1.458
SMLEMP	-1.40*** (0.336)	0.246
MEDEMP	-0.81*** (0.253)	0.444
SMLAM	-0.482 (0.353)	0.618
MEDAM	-0.172 (0.250)	0.842
NOCAL	-0.76** (0.240)	0.467
* p<.05 ** p<.01 *** p<.001 N=635		

Still, the differences are slight and might be caused by the slightly smaller number of NO CAL cases than CA cases. Moreover, even if the statistical findings were robust, those findings standing alone would not justify rejection of the cultural hypothesis, because there is some support in the interviews for the notion that the relevant culture is one that fills the entire state of California, having started in southern California and

migrated recently to northern California.⁸⁴ Accordingly, I investigated the matter further.

Parallel to the model in Table 3, I ran a model that used a geographic variable of the Ninth Circuit Court of Appeals (“CA9”) to investigate the possibility that federal law rather than state law was driving the differential filing rates. Again, the location variable in that model was highly significant, but not as influential as either the NO CAL or CA variables. Similarly, a goodness-of-fit test indicated that the CA9 variable made a significant improvement over a model without a location variable, but the fit was not as good as with the CA or NO CAL variables.

Table 4: CA9 and Bankruptcy Rates

	Coeff	Odds Ratio
Constant	-0.395 (0.230)	0.674
PAT	0.042 (0.247)	1.042
BIOPHARM	0.896* (0.433)	2.449
COMM	0.378 (0.221)	1.459
SMLEMP	-1.34*** (0.335)	0.261
MEDEMP	-0.77*** (0.253)	0.463
SMLAM	-0.495 (0.354)	0.610
MEDAM	-0.162 (0.249)	0.850
CA9	-0.580** (0.206)	0.560
* p<.05 ** p<.01 *** p<.001 N=635		

84. See Telephone Interview with Second California Attorney (Oct. 28, 2003).

To investigate the relative importance of law and culture further, I ran separate models that used the three largest states in the population after California: Massachusetts, New York, and Texas. The idea was that by examining legal systems for ABCs outside California, I might be able to determine whether the relative hostility of the legal system to ABCs related to the rate of bankruptcy filings. Accordingly, as a first step in that analysis, I examined the legal systems in those three states. In general, the New York and Texas systems seem most hostile to ABCs, while the Massachusetts statute seems to fall in between the most receptive system in California and the least receptive systems in New York and Texas.

The basic criterion for evaluating the non-California statutes was the extent of judicial involvement. As discussed above, the basic argument presented in the interviews was that states that require a judicial process lose the benefits of an ABC both because of the delays in obtaining approvals and because of the costs of complying with the process.⁸⁵ That argument ties directly to the point above about the importance of avoiding the costs of the Chapter 7 process. Discussing the states that use a judicial process, an attorney who represents the largest assignee in California explained, “[ABCs are] just not used because there’s no real benefit compared to just filing bankruptcy.”⁸⁶

Using that perspective, the Massachusetts statute seems to be the most moderate of the three non-California statutes. It does not require any form of judicial approval. The most onerous requirement seems to be that the assignee obtain written consent to the assignment from a majority of the creditors “in number and value.”⁸⁷ In contrast to discussions of New York and Texas in the interviews, the most serious complaints about the Massachusetts system were that its law is not as clearly developed as California’s.⁸⁸ So, for example, a common complaint in interviews with Massachusetts professionals was that turnaround professionals there, in the absence of statutory support for their actions, feel compelled to give notice to creditors and wait as long as a local bankruptcy court typically would wait (several weeks) before completing a sale of the assets of a failed firm.⁸⁹ In contrast, knowledgeable attorneys expect that a bankruptcy sale in Massachusetts in fact could be accomplished more expeditiously

85. See Telephone Interview with Fourth California Attorney (Dec. 16, 2003); Telephone Interview with Third Turnaround Professional (Mar. 12, 2004).

86. Telephone Interview with Fourth California Attorney (Dec. 16, 2003).

87. MASS. ANN. LAWS ch. 203 § 41 (Law. Co-op. 1981).

88. See Telephone Interview with First Turnaround Professional (Dec. 9, 2003).

89. Massachusetts Professional Interview (transcript on file with author).

because of the possibility of an order from the judge expediting the standard notice period.⁹⁰

The most serious problem Massachusetts professionals identify, however, is a general lack of confidence in the system, based on past experiences in which assignees have cooperated with the executives of failed firms to engage in collusive transactions that disadvantaged creditors.⁹¹ Thus, although several of my interview subjects stated that assignments are used on occasion in Massachusetts, and perhaps even with increasing frequency,⁹² they do seem to be viewed with great hostility by creditors, particularly secured creditors.⁹³ As a result, they do not appear to be effective in the high-tech transactions for which they are used in California, in which all parties can agree that an immediate transfer to a third party is the best course of action for keeping the technology together with the employees necessary to operate it.⁹⁴ On that point, it is easy to speculate that the highly localized venture-capital community in Silicon Valley more easily might develop reputation-based norms of cooperation than the more dispersed venture-capital community in Massachusetts (to say nothing of the highly dispersed venture-capital community in Texas).

The next most onerous legal system appears to be the system in Texas. Although the Texas statute does not require judicial supervision of the entire process, it does require the assignee to file a final report with the court, and the court must approve the report and make the final distribution.⁹⁵ A California attorney familiar with the Texas experience doubted that professionals in Texas often would take advantage of that process.⁹⁶ My direct examination of filing records in Texas found no filings for the approximately 50 Texas firms in the data set; similarly, the results from interviews consistently indicate that ABCs are quite rare. Attorneys, for example, may have heard of them as something that happens occasionally, but direct experience is quite uncommon.⁹⁷ A major technology lender to whom I spoke⁹⁸ had never seen an ABC in his

90. *Id.*

91. The basic transaction seems to have been one in which the firm would make an assignment to an unduly cooperative assignee, which immediately would sell the assets to a firm controlled by an executive of the failed firm, making it difficult for creditors to locate the assets of the failed firm.

92. Massachusetts Professional Interview (transcript on file with author).

93. *Id.*

94. *Id.*

95. TEX. BUS. & COM. CODE ANN. § 23.23 (Vernon 2002).

96. See Telephone Interview with Fourth California Attorney (Dec. 16, 2003).

97. See Telephone Interview with Texas Attorney (Oct. 13, 2003).

98. He was a lender in two of the eight Western District of Texas bankruptcies in the data set.

lending portfolio in Texas.⁹⁹ The perspective of one experienced attorney in Texas¹⁰⁰ is that it would be easier to have the failing company file under Chapter 7 and have the business purchased from a trustee than it would be to do this through an assignee.¹⁰¹ Furthermore, the same attorney indicated that she thought that a bankruptcy would provide much better closure for outgoing officers than an ABC.¹⁰² As discussed above, California turnaround professionals strongly disagree with that assessment.

She did echo, however, the typical California perspective in one regard by emphasizing how poorly bankruptcy works for a failing high-tech company. First, she emphasized that Chapter 7 was a poor fit for a company with valuable technology assets because that technology needs to be “kept with the engineers who developed it” and “packaged with the specialized research equipment.”¹⁰³ Because everybody would be laid off immediately in a Chapter 7, she suggested that an auction works better in that situation.¹⁰⁴ Similarly, her view was that a Chapter 11 generally would not be a useful option unless the company had sufficient resources to survive for about six months,¹⁰⁵ which seems unlikely for most of the smaller high-tech companies likely to go through ABCs in California.

Those interviews standing alone, of course, cannot separate the effect of the legal system from the cultural hypothesis discussed above. For example, the skepticism about the utility of ABCs may rest, at least in part, on a lack of familiarity. This may pass as Texas lawyers gain experience in dealing with distressed high-technology firms. One interesting anecdote did provide considerable support for the view that the reluctance to use ABCs in Texas, at least, is not entirely cultural. One of the California attorneys that I interviewed was a member of a firm that has an office in Austin. He described a recent transaction in which the firm and the assignee expended considerable effort attempting to use Delaware law to govern an assignment of a firm in Texas. These were parties familiar with the process and highly motivated to use it, but quite dissatisfied with the process available under Texas law. Ultimately, the parties decided to use an assignment under Texas law, but the cost and

99. See Interview with Texas Lender (Oct. 29, 2003).

100. That attorney represented the debtor in two of the four Western District of Texas Chapter 11s in my data set.

101. See Telephone Interview with Texas Attorney (Oct. 13, 2003).

102. See *id.*; Interview with Texas Lender (Oct. 29, 2003).

103. Telephone Interview with Texas Attorney (Oct. 13, 2003).

104. *Id.*

105. See *id.* As Figure 7 suggests, the six month figure seems optimistic for the firms in our data set.

delay was much more than they had been accustomed to based on their experience in California.¹⁰⁶

Turning finally to the New York statute, it seems plain that this is the most onerous of the statutes that I examined.¹⁰⁷ Under the New York statute, for example, a court generally administers the estate of the assignor, determining such things as which claims are permissible, whether the business can be operated while in the control of the assignee, and whether actions should be brought to recover preferences.¹⁰⁸ Most importantly, the assignee cannot sell assets at a private sale without advance judicial authorization.¹⁰⁹ Generally, courts view the process as bringing the entire business *in custodia legis*.¹¹⁰

Based on that information, I ran three separate models using in sequence, MAS, TX, and NY as geographic variables. If legal systems were the only factor driving the results, the expectation would be that MAS would be weakly significant if at all, TX would have a positive influence on bankruptcy filings, and NY would have the strongest positive influence on bankruptcy filings. The regressions provide little support for that framework: MAS is not significant, TX is highly significant, but NY is not significant. Goodness-of-fit tests show no significant improvement from use of MAS and NY over a model without a location variable; the TX variable showed an improvement only in some of the runs. On the other hand, the small number of cases for those states suggests that little weight should be put on the limited significance revealed by the data analysis.

106. See Telephone Interview with First California Attorney (Oct. 27, 2003). The anecdotal evidence of that transaction is not inconsistent with my statement above that I found no Texas ABCs, as the firm in question was not a firm in my data set.

107. See Telephone Interview with Fourth California Attorney (Dec. 16, 2003).

108. N.Y. DEBT. & CRED. LAW § 15 (Consol. 2004).

109. N.Y. DEBT. & CRED. LAW § 19 (Consol. 2004).

110. See *City of New York v. U.S.*, 283 F.2d 829 (2d Cir. 1960); *Florence Trading Corp. v. Rosenberg*, 128 F.2d 557 (2d Cir. 1942).

Table 5: Massachusetts and Bankruptcy Rates

	Coeff	Odds Ratio
Constant	-0.58** (0.223)	0.560
PAT	-0.066 (0.246)	0.936
BIOPHARM	0.992* (0.433)	2.697
COMM	0.365 (0.219)	1.440
SMLEMP	-1.39*** (0.337)	0.250
MEDEMP	-0.84*** (0.251)	0.432
SMLAM	-0.462 (0.351)	0.630
MEDAM	-0.166 (0.247)	0.847
MAS	-0.193 (0.335)	0.825
* p<.05 ** p<.01 *** p<.001 N=635		

Table 6: Texas and Bankruptcy Rates

	Coeff	Odds Ratio
Constant	-0.68** (0.219)	0.506
PAT	-0.083 (0.245)	0.920
BIOPHARM	1.052* (0.432)	2.864
COMM	0.373 (0.220)	1.453
SMLEMP	-1.37*** (0.335)	0.254
MEDEMP	-0.78** (0.252)	0.460
SMLAM	-0.522 (0.354)	0.593
MEDAM	-0.174 (0.248)	0.840
TX	0.794* (0.346)	2.212
* p<.05 ** p<.01 *** p<.001 N=635		

Table 7: New York and Bankruptcy Rates

	Coeff	Odds Ratio
Constant	-0.63** (0.218)	0.530
PAT	-0.040 (0.244)	0.960
BIOPHARM	0.956* (0.429)	2.601
COMM	0.378 (0.219)	1.459
SMLEMP	-1.38*** (0.335)	0.253
MEDEMP	-0.82*** (0.250)	0.439
SMLAM	-0.461 (0.352)	0.631
MEDAM	-0.163 (0.247)	0.850
NY	0.286 (0.428)	1.331
* p<.05 ** p<.01 *** p<.001 N=635		

In the end, the data analysis is not sufficiently clear to justify a view that attributes the pattern of filing entirely to law or culture. Thus, I find the most plausible explanation to be that the pattern is a combination of both law and culture: firms often avoid ABCs in states that do not have a legal system that is hospitable to those filings, but even if the legal system is hospitable, there is a considerable learning curve that makes those filings less customary in locations where the relevant professionals have less experience dealing with failed venture investments.

b. Location and Type of Bankruptcy Filing

The next question I tried to investigate was the relation between location and the type of bankruptcy filing. The purpose of this inquiry was

to understand in which types of cases the ABC process might be preferred to bankruptcies. The interviews suggested two conflicting hypotheses. First, firms that are small in the sense of having too few liquid assets would not use an ABC process because of the substantial minimum fee that a major ABC firm takes for doing the assignment.¹¹¹ Second, firms that are more complex do not use an ABC process because it cannot be used to sustain an operating business for a substantial period.¹¹² Generally, some interview subjects suggested that ABCs should be a substitute for Chapter 7 filings except in relatively small cases, and should not be a substitute for Chapter 11 filings.¹¹³ Because all of the firms were venture-backed and thus (at least at one point in time) had substantial assets, I doubted that many of them would have been too small at the time of failure for an ABC. Accordingly, I approached the data with the hypothesis that ABCs were a substitute for Chapter 7 filings, but not for Chapter 11 filings.

The data supported that hypothesis with respect to Chapter 7. First, to test the relation between location and Chapter 7 filings, I ran a logistic regression using the same variables as above, but compared firms that did not file for bankruptcy with firms that filed for Chapter 7. As the table below illustrates, location in California was highly significant, with a negative coefficient and low odds ratio, indicating a lower likelihood of Chapter 7 filings.¹¹⁴

111. See Telephone Interview with First Turnaround Professional (Dec. 9, 2003).

112. See *id.*

113. See *id.*; Telephone Interview with Fourth California Attorney (Dec. 16, 2003); Telephone Interview with Second Turnaround Professional (Dec. 17 & 19, 2003).

114. A similar regression, which I do not report here, produced similar but less significant results from a comparison of firms that filed for Chapter 7 to those firms that did not. Two parallel regressions using NO CAL instead of CA also produced similar results with a lower degree of significance for the location variable.

Table 8: California and Chapter 7 Filings

	Coeff	Odds Ratio
Constant	-0.83** (0.272)	0.434
PAT	-0.040 (0.313)	0.960
BIOPHARM	0.920 (0.482)	2.510
COMM	-0.271 (0.294)	0.763
SMLEMP	-1.00* (0.394)	0.367
MEDEMP	-0.623* (0.324)	0.536
SMLAM	-0.476 (0.419)	0.621
MEDAM	-0.05 (0.316)	0.951
CA	-0.77** (0.268)	0.461
* p<.05 ** p<.01 *** p<.001 N=572		

Table 9: Texas and Chapter 7 Filings

	Coeff	Odds Ratio
Constant	1.15*** (0.266)	0.317
PAT	-0.166 (0.313)	0.847
BIOPHARM	1.033* (0.482)	2.810
COMM	-0.293 (0.293)	0.746
SMLEMP	-0.969* (0.394)	0.379
MEDEMP	-0.605 (0.321)	0.546
SMLAM	-0.531 (0.420)	0.588
MEDAM	-0.095 (0.310)	0.910
TX	0.830* (0.406)	2.292
* p<.05 ** p<.01 *** p<.001 N=572		

Conversely, as you would expect from the data reported above, the data from Texas show a similar degree of significance, but in this case the positive coefficient and elevated odds ratio indicates a greater likelihood of Chapter 7 filings.¹¹⁵

The data related to Chapter 11, however, did not support the hypothesis that location would not affect Chapter 11 filings. As it happens, the effect on Chapter 11 filings is about the same as the effect on Chapter 7 filings. The tables below illustrate those results for California (where Chapter 11 filings are depressed even more strongly than Chapter 7 filings)¹¹⁶ and Texas (where Chapter 11 filings are elevated).¹¹⁷ The Texas findings do fall short of statistical significance, but the positive coefficient and elevated odds ratio is consistent with the other findings.

115. A similar regression, which I do not report here, produced similar but less significant results from a comparison of firms that filed for Chapter 7 to those firms that did not. Parallel regressions with respect to Massachusetts were inconclusive, much like the Massachusetts model reported above.

116. *See supra* note 114.

117. *See supra* note 115.

Table 10: California and Chapter 11 Filings

	Coeff	Odds Ratio
Constant	-1.47*** (0.336)	0.230
PAT	0.175 (0.345)	1.191
BIOPHARM	1.128 (0.740)	3.088
COMM	1.32*** (0.326)	3.734
SMLEMP	-2.38*** (0.658)	0.093
MEDEMP	-1.09** (0.368)	0.337
SMLAM	-0.376 (0.628)	0.687
MEDAM	-0.284 (0.358)	0.753
CA	-0.956** (0.319)	0.384
* p<.05 ** p<.01 *** p<.001 N=553		

Table 11: Texas and Chapter 11 Filings

	Coeff	Odds Ratio
Constant	-1.83*** (0.330)	0.160
PAT	0.021 (0.337)	1.021
BIOPHARM	1.142 (0.731)	3.133
COMM	1.24*** (0.321)	3.461
SMLEMP	-2.29*** (0.646)	0.101
MEDEMP	-1.02** (0.364)	0.359
SMLAM	-0.420 (0.621)	0.657
MEDAM	-0.286 (0.351)	0.751
TX	0.642 (0.506)	1.899
* p<.05 ** p<.01 *** p<.001 N=553		

Thus, the data suggest that something in California—and the use of ABCs certainly seems to be the most obvious answer—is removing a portion of filings from both the Chapter 7 *and* the Chapter 11 docket.¹¹⁸ My intuition is that this reflects the fact that the distinction between a Chapter 7 filing and a Chapter 11 filing in practice is not as stark as the data suggest. On reflection, this seems to make sense given the nature of the data set. For one thing, because all of the firms are relatively small, the need for Chapter 11 based on size and complexity alone is relatively uncommon. Thus, within the data set, the use of Chapter 11 often is a liquidation device much like Chapter 7.¹¹⁹ Many of the Chapter 11 filings either involve sales of property under Section 363¹²⁰ or liquidating plans.¹²¹ For another, to the extent that the assignee is important because of the assignee's ability to keep the employees attached to the business long enough to sell it,¹²² the ABC procedure operates as a low-cost privately ordered reorganization. From that perspective, it should provide a method for simple sales of businesses that would be too small to bear the

118. I also tried to separate a set of “successful” Chapter 11s to see if the relation would hold against that set. I had some difficulty in defining success for this set of Chapter 11s, all of which were filed since 2001 and many of which are ongoing. See 1 NAT'L BANKRUPTCY REVIEW COMM'N, BANKRUPTCY: THE NEXT TWENTY YEARS 611 (1997) (discussing difficulty in defining success). I settled on excluding clearly unsuccessful bankruptcies, and I included the bankruptcies for which a plan was proposed that has been confirmed or is still pending (39 of 68 Chapter 11s). The model showed no significant influence for the location variable. Given the small numbers with which I was working (39), however, I ultimately decided that the line of inquiry was not probative.

119. This finding is consistent with the findings in Baird & Rasmussen, *Twilight*, *supra* note 3.

120. Sales of property under Section 363 is a possibility discussed in the interviews as a way in which an assignment might be a substitute for a Chapter 11 proceeding. See Telephone Interview with Second Turnaround Professional (Dec. 17 & 19, 2003).

121. It is plain that all involved would prefer a sale of the business under Section 363 rather than a liquidating plan, largely because of the transaction costs of complying with the procedures for approval of a plan. Telephone Interview with Second California Attorney (Oct. 28, 2003). The decision of the Second Circuit in *In re Lionel Corp.* (*Committee of Equity Security Holders v. Lionel Corp.*), 722 F.2d 1063 (2d Cir. 1983), suggested that such sales might be appropriate in relatively narrow circumstances if a substantial justification is apparent. *In re Lionel Corp.*, 722 F.2d at 1066–72. In recent years, however, practice seems to have allowed the *Lionel* exception almost to swallow the rule, so that Section 363 sales of the entire business have become quite common; most courts will not insist on full adoption of a liquidating plan. See Telephone Interview with Second California Attorney (Mar. 30, 2004); Email from Second California Attorney (Mar. 29, 2004). Interestingly, many of the firms that conduct Section 363 sales nevertheless file and confirm plans of reorganization, instead of converting the cases to Chapter 7 and liquidating under that Chapter. In my data set, for example, Chapter 11 plans followed Section 363 sales in at least ten cases (Sphera Optical Networks, Phyllos, Flashcom, BroadBand Office, InternetConnect, Digital BroadBand, Cambrian Communications, Onsite Access, Protarga, PointOne Telecommunications). There appear to be only three cases of Section 363 sales followed by a conversion to Chapter 7 (Nanovation, Fastech, HydraWeb Technologies).

122. See *supra* notes 54–58 and accompanying text.

costs of a Chapter 11 proceeding.¹²³ Thus, in the end, there may be little substantive distinction between the use of Chapter 11 and Chapter 7, at least with respect to the value of the ABC procedure as a substitute. I explore the implications of those findings in the next part of the Article.

c. Size and Bankruptcy Filing

The final topic I examined was the relation between size and Chapter filings. As discussed above, the interviews and the bankruptcy filing data suggest that ABC filings are siphoning off the smaller firms from each Chapter.¹²⁴ The interviews generally suggested that the California-style ABC works better for firms that have smaller and simpler affairs, both because of the lower likelihood of complex disagreements among stakeholders and because of the lower likelihood of important preference litigation. For Chapter 11 filings, the interviews strongly suggested that only larger firms could bear the substantial costs of those proceedings.¹²⁵ To the extent the data above indicate that there is little distinction between the two Chapters, the regressions should show similar size effects for both Chapters.

That in fact is the case. As discussed briefly above, I collected two different proxies for size: employees and amount financed. In each case, I divided the firms into three sectors (small, medium, and large employees and amounts raised). In each of the tables reported above, SMLEMP is statistically significant, with a coefficient and odds ratio indicating that bankruptcy filings are less common than for the remainder of the data set. MEDEMP is occasionally significant, though always with less influence than SMLEMP. Finally, the variables for amounts generally are not significant, suggesting that the number of employees is a better proxy for the terminal size of the firm than the total amount raised.¹²⁶

123. See Telephone Interview with Third California Attorney (Nov. 3, 2003) (suggesting that it would not be plausible to use a Chapter 11 for a business that would have assets worth less than \$15 million).

124. That assumes, as I suggested above, that none of my firms are too small for a California-style ABC.

125. See *supra* note 123.

126. That makes some sense given the way that the variables are collected. The number for employees reflects the number of employees as of the last time that VentureOne collected a report from the firm, generally some time in the last quarter of the firm's operations. That is probably a better proxy for size and complexity as of the firm's failure than the total amount raised during the firm's lifetime.

III. IMPLICATIONS

The data described above seem to me interesting and informative in their own right. They also, however, have some obvious implications for bankruptcy policy. Specifically, the data directly raise the question whether other states should adopt a process similar to the California-style ABC described above. More generally, because the data provide some information on the reasons that firms choose bankruptcy from the available liquidation options, they shed light both on the various bodies of literature that have articulated views about the role that the bankruptcy process plays in dealing with the failure of firms in our economy, and on potential improvements of that process.

A. Alternatives to Bankruptcy

The most interesting possibility that the data suggest is that the costs of financial distress could be lowered if states adopted legal systems that were as hospitable to the ABC process as the California system. The line of argument is simple enough. The premise is that the ABC process dominates in California because it provides a cheaper and more effective method of dealing with a significant class of failed firms. If that is true, then other states that adopt similar statutes could produce better results in their own states: lowering the number of corporate bankruptcies, increasing the recoveries for creditors of failed firms, and increasing the speed with which assets and employees of failed firms are redirected to productive use.¹²⁷ Two concerns with that premise are apparent, both of which warrant further investigation, but neither of which strikes me as dispositive: protecting nonconsenting creditors and secrecy.

1. Nonconsenting Creditors

The most obvious concern is that the ABC process would harm nonconsenting creditors. Although more information would be useful, my current view is to doubt that the problem is significant, at least as things currently operate in California. For one thing, it seems likely that any substantial group of creditors harmed by the process could overturn the results by filing an involuntary bankruptcy proceeding. The easy case is

127. The California statutes are by no means unique. See BERMAN, *supra* note 40. As discussed above, however, none of the other states with major concentrations of high-technology businesses have legal systems that are similarly receptive to ABCs.

secured creditors; interview subjects uniformly recognize that the consent of secured creditors is a prerequisite to a successful ABC, indeed that the secured creditors typically control the process in those cases in which there are not enough assets to repay the secured creditors easily.¹²⁸ As discussed below, however, the particular nature of these firms makes it relatively unlikely that the secured creditors ordinarily are directly responsible for the decision to put the firm through an ABC.¹²⁹

The position of unsecured creditors is harder to evaluate. Those who conduct ABCs say that unsecured creditors have the practical ability to disrupt an ABC, at least if it does not proceed in a way that advances their interests.¹³⁰ The apparent idea is that any substantial group of mistreated creditors could file an involuntary bankruptcy proceeding and force the assignee to turn the assets of the failed firm over to the bankruptcy court.

At least in California, however, there is some reason to believe that bankruptcy judges are not inclined to disrupt ABCs. Thus, at least from the perspective of turnaround professionals, it is commonplace for bankruptcy judges faced with a bankruptcy that is filed in response to a well-administered ABC to abstain and dismiss the bankruptcy proceeding under Bankruptcy Code § 305.¹³¹ That understanding seems plausible: the relevant statute directs courts to consider whether “the interests of creditors and the debtor would be better served by . . . dismissal,”¹³² which

128. See Telephone Interview with First California Attorney (Oct. 27, 2003); Telephone Interview with First Turnaround Professional (Dec. 9, 2003); Telephone Interview with Fourth California Attorney (Dec. 16, 2003); Telephone Interview with Second Turnaround Professional (Dec. 17 & 19, 2003). One California attorney explained to me that secured creditors often prefer an ABC to a foreclosure because the assignee is likely to produce more value than the secured creditor's own personnel. That is true, he explained, both because of the greater ease with which the assignee can package assets with the relevant personnel, and because of the experience of the assignee in locating and dealing with buyers for technology-related assets. See Telephone Interview with Second California Attorney (Mar. 30, 2004). A lender emphasized the difficulties lenders face in selling those assets because of the reluctance of institutional lenders to make the requisite representations and warranties. See Telephone Interview with Texas Lender (Oct. 29, 2004); Telephone Interview with Third California Attorney (Nov. 3, 2003). Although it is not clear that the distinction is entirely rational, purchasers in ABC transactions apparently are more willing to forego reliable assurances of that nature.

129. See *infra* text accompanying notes 178–86.

130. See, e.g., Telephone Interview with First Turnaround Professional (Dec. 9, 2003).

131. See Kupetz, *supra* note 40, at 75–78; Telephone Interview with Second Turnaround Professional (Dec. 17 & 19, 2003) (discussing two such cases dismissed under Bankruptcy Code § 305); Telephone Interview with Third Turnaround Professional (Mar. 12, 2004) (describing “[m]any, many, many” of those cases involving his firm and stating that he could not remember an involuntary bankruptcy filed against one of his firm's assignments that was not dismissed).

132. 11 U.S.C. § 305(a)(1) (2000). Courts are emboldened by legislative history indicating that abstention is appropriate when “an arrangement is being worked out by creditors and debtors out of court, there is no prejudice to the rights of creditors in that arrangement, and an involuntary case has been commenced by a few recalcitrant creditors to provide a basis for future threats to extract full

a court readily could determine to be the case when a competent assignee is involved.

Finding objective support for that thesis, however, is more difficult. Reported decisions in such cases are scant—and there are not any from California. That is not to say, however, that the issue does not arise with some frequency. As indicated below, even this small data set indicates that bankruptcy judges plainly do not write opinions in each case where this problem arises. At least one of the interviews suggested a less favorable view of ABCs: one California attorney explained that in his view California bankruptcy judges in fact are hostile to ABCs and keep cases whenever there is any substantial claim that would warrant use of the bankruptcy process, such as preferences that need to be pursued (a topic I discuss in more detail below).¹³³ Even that explanation, however, involves a willingness to intervene only to expedite litigation involving the debtor (a subject also discussed below), not a willingness to intervene to second-guess business and liquidation decisions of the assignee. The same subject went on to suggest that courts are particularly unlikely to write opinions when they deny motions to dismiss. To the extent those comments reflect a consistent pattern, it is plausible to think that the opinion-reporting process rather than unanimity in decided cases caused my difficulty in finding any such opinions.¹³⁴ Still, it is plain that a number of courts have abstained in those circumstances.¹³⁵ I have not located any reported opinion rejecting a motion to dismiss that is filed by an assignee in an ABC. Moreover, interviews with three experienced California bankruptcy judges—none of whom had ever seen a case in which an assignee sought such a ruling—strongly suggest that turnaround professionals overestimate the extent to which bankruptcy judges have a decided views about the process.

It happens—perhaps fortuitously, given what I was told in interviews with judges—that one of the California bankruptcies in the data set involves that scenario. Four creditors filed an involuntary Chapter 11 proceeding against Pluris, Inc. in August of 2002.¹³⁶ Previously, the firm had made a voluntary assignment under an ABC procedure to Sherwood

payment.” H.R. REP. NO. 95-595, at 325 (1977) (quoted in *In re Cincinnati Gear Co.*, 304 B.R. 784 (Bankr. S.D. Ohio 2003)).

133. See Telephone Interview with Second California Attorney (Mar. 30, 2004).

134. See *id.*

135. See, e.g., *In re Bailey’s Beauticians Supply Co.*, 671 F.2d 1063 (7th Cir. 1982); *In re Cincinnati Gear Co.*, 304 B.R. 784 (Bankr. S.D. Ohio 2003); *In re Artists’ Outlet, Inc.*, 25 B.R. 231 (Bankr. D. Mass. 1982); *In re M. Egan Co.*, 24 B.R. 189 (Bankr. W.D.N.Y. 1982).

136. This information is from the bankruptcy court’s docket sheet.

Partners, Inc., a prominent California firm that often serves as an assignee.¹³⁷ In September of 2002, Sherwood Partners, Inc. filed a motion seeking abstention and dismissal. After a November 2002 hearing, the motion was granted on January 3, 2003, resulting in dismissal of the bankruptcy. The court explained that the bankruptcy proceeding apparently had been filed by a creditor that sought to take control of the debtor in Chapter 11 to gain access to the tax attributes of the failed entity. The court also expressed skepticism about the viability of the creditor's proposed Chapter 11 plan, as well as the concern that a Chapter 11 proceeding would involve wasted expenses that in the end would not benefit creditors.¹³⁸

Without more information, it is difficult to assess the role that bankruptcy courts play in protecting minority creditors in ABCs. On the one hand, reluctance of bankruptcy judges to intervene could result in an ABC process that is harmful to creditors by leaving no practical mechanism by which unsecured creditors can use the bankruptcy process to protect themselves. Conversely, it could be viewed as yet another empirical data point indicating that the ABC process is producing such a clearly positive return for creditors as a group that bankruptcy judges are reluctant to intervene. Of course, even if judges are declining to intervene on the theory that intervention would not aid creditors (the position of the judge in *Pluris*), that does not prove that the system is working optimally. It is possible, of course, that creditors would have gotten a better outcome had the firm initially filed for bankruptcy, but a bankruptcy that comes after much of the liquidation has been conducted by the assignee can only make matters worse. I obviously do not have enough evidence to take a conclusive view on that point.

My intuition, however, is that the more benign understanding is better. After all, bankruptcy judges have no good reason to abstain if they think the process is harming creditors. Whatever Section 305 means, it is difficult to say that it *requires* a judge to abstain in deference to an ABC that the judge views as harmful.¹³⁹ Even the interview subject discussed above suggested only that bankruptcy judges would retain the cases if there was a substantial need for the bankruptcy process, not that

137. See Goncharoff, *supra* note 60. For information on Sherwood, see <http://www.shrwood.com> (last visited Mar. 31, 2004).

138. Copies of the relevant portions of the file are on file with the author.

139. See Telephone Interview with Second California Attorney Interview (Mar. 30, 2004) (suggesting that bankruptcy courts would be receptive in cases in which creditors have a "real grievance").

bankruptcy judges would overturn ABCs simply because a creditor asked them to.¹⁴⁰ That understanding resonates with my discussion below, which contends that the ABC process in California has evolved to serve the cases where bankruptcy has no useful role, and that bankruptcy continues to be used in the substantial set of cases where it has functional value.

It is particularly important in assessing California-style ABCs to notice that the statute directly protects the principal creditors that would receive priority payments in a bankruptcy proceeding. The California statute includes provisions, modeled on Bankruptcy Code § 502(b), that require assignees to make payments to priority creditors much like a trustee in bankruptcy.¹⁴¹ It is not clear how effective those are in practice, and it is clear that the list of priorities is much shorter than in the federal Bankruptcy Code,¹⁴² but their existence provides some assurance for those creditors.

More directly, aside from the ability of creditors to use the bankruptcy process to overturn the results of ABCs, the actions of assignees are policed by the behavior of creditors dissatisfied with the process. Doubtless the most important possibility is that assignees that do not perform well will lose business. The market in California is highly concentrated, the relevant players (entrepreneurs, venture capitalists, and lenders) are all likely to be repeat players, and a failure to perform well is likely to be quite evident to all. Thus, there is some reason to believe that reputational constraints will have a substantial effect on assignees. Thus, even in California it is clear that some creditors have a decidedly negative view of the ABC process and that they tolerate ABCs only where they have confidence that the assignee will protect their interests actively.¹⁴³ For some assignees (like CMA—the California affiliate of the National Association of Credit Managers), that is feasible because of a long tradition as a creditor representative. For others, that is accomplished through close relational ties to the community of venture investors and lenders. The Massachusetts interviews show how important those

140. *See id.*

141. *See* Telephone Interview with Third Turnaround Professional (Mar. 12, 2004) (discussing CAL. CIV. PROC. CODE § 1204–1204.5) (West 1982 & Supp. 2005)).

142. The priorities under California law are limited to employees, pension creditors, and certain tax payments. *See* CAL. CIV. PROC. CODE §§ 1204–1204.5 (West 1982 & Supp. 2005). Thus, the possibility that creditors that would receive priority payments in bankruptcy will receive nothing in an ABC is at least plausible. *See* Telephone Interview with Second California Attorney (Mar. 30, 2004). Given the frequency with which priority creditors go unpaid in bankruptcy, however, it is not clear that this should be a major concern. I note that none of my Chapter 11 schedules indicated priority claims that predated bankruptcy for anything other than wages, pension contributions, and taxes.

143. *See* Telephone Interview with Fifth California Attorney (Jan. 7, 2005).

constraints are to a functioning system: in the more dispersed community there, the actions of what seem to have been a few unreliable assignees apparently have poisoned the community in general against the assignment as a routine vehicle for rapid disposition of high-tech firms.¹⁴⁴

Most conventionally, there is, of course, the possibility that disaffected creditors will sue an assignee for failure to perform adequately. Surprisingly enough, the legal standard that would govern such an action is unclear. One lawyer opined to me that the duty of the assignee is a straightforward contractual obligation formed in the contract with the assignor.¹⁴⁵ It seems to me likely, however, that a court faced with substantial claims of misconduct would conclude that an assignee has a fiduciary duty to creditors.¹⁴⁶ The reason that standard is not clear is evident from the discussion above. As one attorney explained, disaffected creditors have little incentive to litigate about what the assignee's standard of care is when they have the ready ability to file an involuntary bankruptcy proceeding in which they can overturn the entire assignment process if they can establish some substantial need for judicial oversight.¹⁴⁷

2. *Secrecy*

The second concern relates to the secrecy of the process. Several of the interviews suggested that secrecy is a motivating factor for using the ABC process. It is not clear how important this is,¹⁴⁸ but it is something that *some* people mention as having *some* import in *some* cases. The basic point is that the process can be accomplished quickly, without a public filing, and often without any public notoriety. Indeed, one of the reasons it

144. See *supra* notes 89–94 and accompanying text.

145. Email from Telephone Interview with Second California Attorney (Mar. 29, 2004); Telephone Interview with Second California Attorney (Mar. 30, 2004).

146. I rely on the typical statement to the effect that “[i]t is the duty of the assignee in the performance of his trust to defend this property against all unjust adverse claims” or that the assignee is “trustee for all the creditors.” *Credit Managers Ass’n v. Nat’l Independent Bus. Alliance*, 162 Cal. App. 3d 1166, 1171, 1172 (Ct. App. 1984); see also *Mechanics Bank of Richmond v. Rosenberg*, 201 Cal. App. 2d 419, 424 (1962) (describing assignee as holding a “trust for the benefit of creditors”); *Brainard v. Fitzgerald*, 3 Cal. 2d 157, 163 (1935) (validating general assignment for the benefit of creditors because it is “made for the benefit of creditors generally”).

147. See Telephone Interview with Second California Attorney (Mar. 30, 2004) (suggesting that bankruptcy courts would be receptive in cases in which creditors have a “real grievance”).

148. See Telephone Interview with Second California Attorney (Oct. 28, 2003) (“I don’t think notoriety is the driving force on these things. I think it is purely economic.”); Telephone Interview with Fourth California Attorney (Dec. 16, 2003) (“There’s also sometimes been played up, in some of the articles or interviews that I’ve been involved with, the lower level of publicity. But that’s not something that I really promote or necessarily think that is really such a big deal.”).

is so difficult to collect information about the frequency of ABCs is that newspaper reports by uninformed reporters may describe an ABC as a sale of the firm without any understanding that it reflects a failure and insolvency. The instinct to protect confidentiality is also evidenced by the unwillingness of turnaround firms to identify for me the firms for which they had done ABCs: they would tell me how many firms in my data set had been their customers, but not which ones—even when I already knew that the firms had failed. Thus, it is plain that there is some stigma associated with the process.

Absent some specific statutory obligation of publicity, however, it is not obvious to me why a process that allows a firm to fail quietly is inherently bad. There is, of course, a fine line between improper “secrecy” and simply being reticent to publicize an embarrassing event. As one of the leading turnaround professionals explained:

I don't think it's done for secrecy. I think it's done for more public relations, concern about future business and the perception of it more than anything of bankruptcy. That's what I get from most people. . . . It's interesting because I don't like the word, secret. I don't think it's a real secret. If I have creditors who call and ask me, “What's going on? What was the sale? What happened?” I tell them. So from that perspective I don't look at it as secret because creditors have a right to know what's happening, and when they are going to get paid, and what the distribution was.¹⁴⁹

The biggest concern is that such a process might have an adverse effect on a creditor that did not in fact receive notice. As discussed above,¹⁵⁰ however, it seems unlikely to me that the process would bind such a creditor. My impression is that the process works relatively well in this context because the businesses are sufficiently young and simple in their operations that the likelihood of large unknown creditors is small. My interview subjects—admittedly not the most reliable source since they do not represent creditors that have not received notice—suggest that the problem of omitted creditors is not a major one. For one thing, they think that major creditors are highly likely to learn of the process before funds are distributed.¹⁵¹ The only major creditors likely to be negligent enough to fail to notice the closure of their debtor for the greater part of a year appear to be tax creditors, and for various reasons assignees seem to have

149. Telephone Interview with Fourth Turnaround Professional (June 18, 2004).

150. See *supra* note 42.

151. See Telephone Interview with Fourth California Attorney (Dec. 16, 2003).

strong reasons to make sure that tax creditors are paid.¹⁵² Thus, it surely is the case that some creditors, some of the time, will be prejudiced by failure to receive notice of an ABC. It does not appear, however, based on the limited information I have, to be a major problem in practice.

A related point is that the use of an ABC instead of a bankruptcy allows the officers of the failed firm to avoid the need to make disclosures required by securities laws when directors of a failed firm previously have filed for bankruptcy.¹⁵³ If we assume that the rules requiring those disclosures reflect a policy choice that it is important to the investment markets to know if officers and directors previously have been involved with failed companies, then the ability of those officers and directors to use this process to avoid that obligation could be problematic. Still, the SEC could readily revise its rules to extend them to cover ABCs explicitly if it wished to do so.

In sum, although it is appropriate to be skeptical about a process dominated by the debtor and its major creditors, I am not persuaded that there is a serious reason for concern about the process in this context. Given the obvious cost savings that it produces, it seems to me that it is at least worth considering whether it would be beneficial for other states to follow California's lead here. The most difficult problem would be trying to avoid the breakdown in trust that has disrupted the use of the procedure in Massachusetts. It might be hard, however, to replicate that system in contexts that do not share the basic structure of the Silicon Valley high-tech community: a highly concentrated and interrelated set of actors, including boards of failed companies making liquidation choices, controlled by venture-capital investors that have repeat-player reasons for wanting to ensure that a small group of repeat-player secured creditors are treated fairly. I do not intend to resolve these questions here. There are of course important bankruptcy policies implicated by a concerted effort by states to develop procedures that would shift the liquidation of failed firms from a federal forum specifically designed to protect creditors to a state process specifically designed to avoid judicial oversight.¹⁵⁴ I intend only to

152. *See supra* note 42.

153. *See* Telephone Interview with Second Turnaround Professional (Dec. 17 & 19, 2003); Telephone Interview with Third Turnaround Professional (Mar. 12, 2004). The regulation in question is Item 401(f)(1) of Regulation S-K, which requires disclosure of involvement in certain bankruptcy and insolvency proceedings. 17 C.F.R. § 229.401(f)(1) (2004). Given the general vagueness of disclosure requirements in securities laws, it is a bit surprising to me that California lawyers are so certain that involvement in ABCs need not be disclosed, but the interviews suggest in practice a bright line between the two types of proceedings.

154. For a preliminary discussion of the general problem, see Elizabeth Warren & Jay Lawrence

underscore the possibility that a state process can play a useful role in lowering the costs in a substantial part of the overall volume of failed firms, and the parallel need to ensure that any such system is designed in a way (as the current systems do) that permit creditors to protect themselves from the ABC process if it treats them unfairly.

B. The Role of Bankruptcy

A substantial part of current bankruptcy literature focuses on what role bankruptcy plays in the liquidation and reorganization of failing firms. Douglas Baird and Bob Rasmussen, in their work on the “End” and “Twilight” of bankruptcy, have underscored a decline in the traditional use of Chapter 11 as a venue for negotiating and working out a plan for reorganization of a complex business.¹⁵⁵ Lynn LoPucki has criticized that explanation,¹⁵⁶ but even his responses do not seem to undercut the notion that Chapter 11’s role in its maturity is quite different from its role in the 1980s.¹⁵⁷ Because so many firms continue to file for Chapter 11, there is something of a void in our understanding of exactly why firms file for Chapter 11.

This research contributes to that subject in three ways. First, because it provides a rare opportunity to examine a population of failed firms to see which of those firms file for bankruptcy, it gives some limited insight into why firms choose to file for bankruptcy instead of using one of the other options available to them. Second, by shedding some light on the efficacy of liquidation and sale of businesses in ABCs and in bankruptcy, this research provides limited support for an optimistic view of current practice that undermines the calls for high-speed mandatory auctions supported by several groups of bankruptcy scholars. Third, by illuminating the problems with bankruptcy that cause firms to choose ABCs, it offers some guidance about potential avenues for improvement in the bankruptcy process.

Westbrook, *Secured Party in Possession*, AM. BANKR. INST. J., Sept. 2003, at 150.

155. Baird & Rasmussen, *The End*, *supra* note 2; Baird & Rasmussen, *Twilight*, *supra* note 3. Baird’s paper with Ed Morrison contributes to that literature as well by suggesting that bankruptcy decisionmaking about the optimal stopping of firms is better than might have been thought. Baird & Morrison, *supra* note 3. For an empirical extension of that work, see Morrison, *supra* note 3.

156. Lynn M. LoPucki, *The Nature of the Bankrupt Firm: A Reply to Baird and Rasmussen’s The End of Bankruptcy*, 56 STAN. L. REV. 645 (2003).

157. David Skeel’s work reflects a similar perspective on the differences in practice as Chapter 11 has matured. *E.g.*, David A. Skeel, *Creditor’s Ball: The “New” New Corporate Governance in Chapter 11*, 152 U. PA. L. REV. 917 (2003).

It is true, of course, that the data set presents a narrow slice of the Chapter 11 universe.¹⁵⁸ Still, a data set concentrated on bankruptcies of this particular size sheds considerable light on the role of bankruptcy because of the unique opportunity to examine how firms of a particular sort use bankruptcy. Indeed, the particular features of this data set make it useful for examining these questions. Among other things, the data set includes a homogenous set of firms all of whom are represented by counsel, all of whom have relatively sophisticated equity investors, and none of whom face any of the problems unique to public companies.¹⁵⁹ By removing the distractions of unsophisticated borrowers and creditors and the distortions that securities laws impose on firm conduct, the data set makes it possible to look exclusively at the value of using the bankruptcy process to resolve the various problems of a failing firm.

1. Summary Data

I start by providing a few summary statistics about the bankruptcy files I have examined to put in context the analysis in the sections that follow. The data draws on the schedules from 62 of the Chapter 11 cases in the data set.¹⁶⁰

Assets: The first question is what assets remained for these firms by the time that they filed. The simplest number to report would be the total

158. As mentioned above, *supra* note 3, Elizabeth Warren and Jay Lawrence Westbrook are involved in a major project that involves a sample of all Chapter 11s. Their work will provide a much better understanding of the universe of Chapter 11 filings.

159. For example, one of the interview subjects noted that public firms do not use the ABC process because they would have to obtain shareholder approvals that are unnecessary for a bankruptcy filing. See Telephone Interview with First Turnaround Professional (Dec. 9, 2003). That suggests some difficulty in relying on data about the filings of public firms to learn much about the functions that the system serves. On that point, the position of an ABC in the gray area between a sale of assets and an insolvency proceeding has produced an interesting dynamic. As the interview subjects suggest, it commonly is said that you need shareholder approval to accomplish an ABC. Historically, though, there is some support for the notion that an assignment can be accomplished without shareholder approval. See *In re E.T. Russell Co.*, 291 F. 809 (D. Mass. 1923). Accepting the received wisdom from the interviews, however, raises the question of whether it is appropriate for bankruptcy to be used for the sole reason of avoiding shareholder approval requirements that would limit the ability to use an ABC. It may be that the bankruptcy process in effect serves as a form of shareholder approval that resolves any corporate governance concerns. Still, the role of shareholder approval in guiding firms into the formal bankruptcy process is troubling. The question of course relates to the broader question that is surfacing in recent literature regarding the possibility that managers of an insolvent firm owe their duty to creditors rather than to shareholders. See generally Jonathan C. Lipson, *Directors' Duties to Creditors: Power Imbalance and the Financially Distressed Corporation*, 50 UCLA L. REV. 1189 (2003).

160. There were a total of 66 Chapter 11 cases. Three firms filed no schedules and I was unable to obtain the schedules from one of the firms.

assets as reported on the schedules. It is clear, however, that different firms used different protocols for deciding how to fill out their schedules. Many firms, including some with substantial patent portfolios, simply attributed no value at all to their intellectual property,¹⁶¹ while others attributed substantial value to such assets specifically.¹⁶² To give some objectivity to the data, I decided to collect both the total amount of assets and the tangible assets specifically.¹⁶³ Table 12 provides summary data on those points. Generally, it suggests a substantial asset base for these firms, even excluding intangible assets.¹⁶⁴

Table 12: Assets of Chapter 11 Firms (\$M)

	Biopharm N=3	Software N=17	Telecom N=42	Aggregate N=62
<u>Tangible Assets</u>				
Mean	2.1	6.9	29.4	21.9
Median	2.5	2.3	9.1	4.50
Standard Deviation				60.3
<u>Total Assets</u>				
Mean	2.2	13.8	31.0	24.9
Median	2.5	4.3	9.7	8.09
Standard Deviation				60.9

Liabilities: The nature of the liabilities of the bankrupt firm is much more interesting, because it relates directly to the scholarship (discussed above) about the types of firms that might file for bankruptcy. Here, because the schedules provide insufficient information to break down the types of lenders in a systematic way,¹⁶⁵ the most useful, replicable

161. Onix and Transcept, for example, each reported no value for their 12-patent portfolios.

162. Cavu and UTM each reported more than \$20 million in intangible assets. Given the wide variation in the value of patents and other intangibles (such as license rights), it is entirely possible that these reports are accurate. Still, it is also true that there is great imprecision in valuing those assets. The possibility of over-optimistic valuation by debtors makes it at least instructive as a conservative baseline to examine the data on the assumption that the intangible assets in fact have no value.

163. For my purposes, tangible assets equal total scheduled assets reduced by amounts listed on the schedules for intangible assets and other contingent claims.

164. The likelihood remains that the values stated on the schedules for tangible assets overstate the values that creditors actually obtain from those assets. I do not have adequate information to evaluate that likelihood for this data set.

165. It is plain, however, that the capital structures are heterogeneous and not sufficiently simple

information seems to be a breakdown of total liabilities, divided between claims of secured creditors (that is, the total amount of claims without regard to collateral) and unsecured creditors. Then, I have broken the claims of secured creditors into secured claims¹⁶⁶ and deficiency claims. Similarly, I divide unsecured claims into priority claims and nonpriority claims. Like the data related to assets, this must be taken cautiously, because debtors often report that the amounts owed to particular creditors are unknown. Still, the data on the schedules seems unlikely to overstate the debtors' obligations.

Table 13 summarizes the data on those points. The most obvious point is that the overall amount of the liabilities is substantial. Although I previously have written about the existence of one type of debt for venture-backed firms—debt extended by banks in a symbiotic relation with the venture investors—¹⁶⁷the files reveal a large dollar amount of debt of all types.¹⁶⁸ Because the nature of the debt differs substantially from file to file, it is difficult to generalize. Three points, however, seem salient. First, secured bank lending to these firms (the type of lending I describe in my prior work) is common: 29 of the 62 files report a secured creditor that is a bank or recognizably affiliated with a bank.¹⁶⁹ Second, the unsecured creditors as a group have relatively substantial claims: the average claim is about \$140,000.¹⁷⁰ The other obvious generalization is that it seems likely, recognizing the potential understatement of claims, to think that unsecured

to permit generalization. See Telephone Interview with First California Lender (Feb. 5, 2004) (arguing that the debt structure of venture-backed firms has increased in complexity since the mid-1990s). Frequently there are numerous types of secured creditors, including not only banks, but also substantial equipment lessors, entities that appear to be strategic partners, and entities that appear to be related to venture debt funds.

166. The calculations are, by necessity, rough. For the sake of simplicity and plausibility, I have calculated the secured claims on the assumption that intangible assets have no value, that tangible assets have their scheduled value, and that secured creditors have a claim against all tangible assets.

167. See Ronald J. Mann, *Secured Credit and Software Financing*, 85 CORNELL L. REV. 134, 157–61 (1999) [hereinafter Mann, *Software Financing*].

168. This is contrary to the understanding of some. See *supra* note 2.

169. I cannot report the average amount of bank debt, because a number of the files report “unknown” for the amounts of debt owed to specific creditors. Although I have less complete financial information for the firms that did not file for bankruptcy, it is clear from VentureSource that many of those firms had substantial institutional financing in addition to venture capital equity investments. The VentureSource data also makes it plain that much of the secured debt was in place at a time when the firm was not in financial distress. For comparative purposes, I note the different debt structure found by Franks & Sussman in their database of privately held British companies: domination by a single bank with a group of small and dispersed trade creditors. Franks & Sussman, *supra* note 5. As Franks and Sussman suggest, there is every reason to think that the structure would be different from country to country, shaped in large part by the bankruptcy systems in each country.

170. For comparison purposes, Warren and Westbrook find a median of \$905 in their study of business cases in Warren & Westbrook, *Empirical Intervention*, *supra* note 3.

creditors in many of these cases would have received a substantial recovery: the scheduled tangible assets for many of the firms substantially exceed the secured claims and priority claims. There was an excess in 32 cases. The average case (including those with and without excesses) had an excess of \$13.7 million; the median case had an excess of \$415,000.

Table 13: Liabilities of Chapter 11 Firms (\$M)

	Biopharm N=3	Software N=17	Telecom N=42	Aggregate N=62
<u>Total Claims</u>				
Mean	6.9	41.7	48.5	44.6
Median	5.5	6.6	21.8	12.6
Standard Dev.				93.9
<u>Sec'd Creditors</u>				
Mean	0.80	7.3	16.0	12.8
Median	0.18	2.3	8.3	3.2
Standard Dev.				20.3
<u>Sec'd Claims</u>				
Mean	0.9	2.2	10.3	7.5
Median	0.2	1.3	3.1	1.7
Standard Dev.				14.6
<u>Def'y Claims</u>				
Mean	0	5.1	5.6	5.2
Median	0	0	0	0
Standard Dev.				13.4
<u>Unsec'd Claims</u>				
Mean	6.1	34.4	33.2	32.2
Median	5.4	2.5	9.4	7.2
Standard Dev.				92.8
<u>Priority Claims</u>				
Mean	0.08	0.18	0.39	0.32
Median	0.10	0.08	0.09	0.09
Standard Dev.				0.55
<u>Gen'l Unsecured</u>				
Mean	6.0	34.2	32.9	31.9
Median	5.2	2.3	9.3	7.0
Standard Dev.				92.8

2. *Why File for Bankruptcy?*

The unique contribution of this data set is that it gives some glimpse as to the reasons that firms might choose to file for bankruptcy. I address first the most common suggestions from recent literature and then turn to the reasons for selecting bankruptcy that appear from the data.

a. Optimal Stopping

Ed Morrison's forthcoming work and his recent work with Douglas Baird emphasize the role of bankruptcy courts in making an optimal decision about whether a firm should be terminated.¹⁷¹ Ed Morrison's empirical work in particular suggests that bankruptcy courts do a better job than previous scholars might have expected in moving quickly to terminate firms for which termination is warranted.¹⁷² In his analysis, shutdown occurs when a judge grants a secured creditor's motion to lift the automatic stay, a landlord's motion to repossess the debtor's premises, or a trustee's motion to convert the case to Chapter 7.¹⁷³ Using that data, he finds a correlation between the presentation of cash collateral motions and the length of time before shutdown.¹⁷⁴ The data I examine here do not contribute to that debate because cash collateral motions were so prevalent in the Chapter 11 firms¹⁷⁵ and because few of the firms were the subject of judicial shutdown decisions. It may be that for the kinds of firms Morrison examines—resting so completely on individual human capital—that a successful motion to lift the stay by a single creditor often might shut down the firm. But in the bankruptcy cases examined here, most of the firms are not in bankruptcy because of a dispute over whether they should shut down. They are in bankruptcy as a step in the process of redeploying assets to a more productive use, which often is done by transferring a portion of the business as a going concern, rather than by closing the business entirely and liquidating the assets piecemeal.¹⁷⁶

As discussed below, my working hypothesis (outlined in the textual paragraphs that follow) is that the overwhelming majority of Chapter 11

171. See Baird & Morrison, *supra* note 3; Morrison, *supra* note 3.

172. Although Morrison's model is designed to show that bankruptcy judges make that decision in an optimal way, it seems to me that the most his data can show is that the decision is made reasonably quickly. Given the general complaints of delay by bankruptcy courts, quantitative evidence on that point contributes to the policy debate even if it is wholly descriptive.

173. See Morrison, *supra* note 3.

174. *Id.*

175. Cash collateral motions were granted in 30 of my cases.

176. See Morrison, *supra* note 3.

filings in this data set reflect firms that are using Chapter 11 to save money, not in the exercise of a misguided effort to defer liquidation. Thus, the decision to terminate is not an important role of the bankruptcy court. Rather, as is well known, the capital structure of the typical venture capital firm operates to make it relatively unlikely that bankruptcy courts will be called upon to resolve a conflict between management and investors regarding the propriety of termination.¹⁷⁷

The more difficult question, however, is precisely who among the investors does make that decision. Several of the interview subjects state specifically that the board of directors of the failing firm makes the decision.¹⁷⁸ In the context of a venture-backed firm,¹⁷⁹ the board of directors generally is controlled by the venture capitalists.¹⁸⁰ So, in context, saying that a decision is made by the board is quite different in this context from saying that it is made by management. To be sure, in some cases a firm might be liquidated because management decides that they no longer wish to devote their time to the firm.¹⁸¹ In most cases, however, the firm is likely to liquidate if, and only if, the venture capitalists decide that they will not advance further equity contributions to the firm.¹⁸² Although the venture capitalists are likely to keep the lenders fully apprised of details of the deteriorating situation,¹⁸³ any action of lenders to venture-backed firms to move aggressively against their

177. Two of the most obvious points are: (a) that the venture capitalists are likely to dominate the board of directors (*see infra* note 180 and accompanying text); and (b) that the firm is likely to depend for continued existence on the willingness of venture capitalists to continue funding despite the absence of any contractual obligation to do so. *See, e.g.,* Smith & Strömberg, *supra* note 3; Baird & Rasmussen, *Control Rights*, *supra* note 2, at 956.

178. *See, e.g.,* Telephone Interview with Second California Attorney (Oct. 28, 2003); Telephone Interview with Second California Lender (Apr. 5, 2004); Telephone Interview with First Turnaround Professional (Sept. 21, 2004).

179. One possibility is that different venture capitalists have different preferences about liquidation alternatives. The interviews did not, however, suggest any such dynamic. For a number of reasons, it would be difficult to test that point quantitatively with this data set. First, for each firm there are generally a large number of investors, which makes it difficult to attribute the liquidation decision for that firm to any single investor. VentureSource does report a “lead investor,” but the population of lead investors is so unconcentrated (I have more than 400 in the data set) that it would be difficult to detect differences in liquidation preferences among lead investors.

180. *See id.*; Telephone Interview with First Professional Turnaround (Sept. 23, 2004); Fourth California Attorney Interview (Sept. 23, 2004). VentureSource reports the affiliation of board members of the portfolio firms. Although generalizations necessarily are imprecise, it is unusual for a firm in the data set to have a board of directors that is not controlled by venture capital investors.

181. *See* Telephone Interview with First Professional Turnaround (Sept. 21, 2004).

182. *See* Mann, *Software Financing*, *supra* note 167, at 157–61.

183. *See* Telephone Interview with Third California Lender (Apr. 5, 2004); Telephone Interview with Venture Investor (Apr. 16, 2004) (“[T]hat’s why I work so hard [in a liquidation of a portfolio firm], so . . . Silicon Valley Bank would be willing to lend to us again.”).

borrowers is likely to be predicated on a decision of venture capitalists to stop contributing.¹⁸⁴ Moreover, in the unusual case in which lenders attempt to liquidate a firm that in the opinion of venture capitalists should not be liquidated, the venture capitalists ordinarily can sustain the firm by paying off the amounts owed to the lenders.¹⁸⁵ Thus, my impression is that in practice the decisions about the timing and process for liquidation are influenced significantly—if not dominated—by the views of the venture capitalists, not the lenders.¹⁸⁶

b. Reorganizing

The classic justification for Chapter 11 is to provide an active forum for negotiation among interested parties over the appropriate structure of a reorganized firm.¹⁸⁷ As suggested above,¹⁸⁸ several scholars have contended that the role of Chapter 11 has shifted, so that reorganization is no longer a substantial function of Chapter 11. Not surprisingly, given the homogenous set of firms in the data set, there was little variation on that point in the files. Whether the case was nominally filed in Chapter 7 or in Chapter 11, the bankruptcy process was used to liquidate the firm, not to retain control in a reorganization. For one thing, because of the relatively simple capital structure typified by these firms,¹⁸⁹ there is little need to use

184. See Mann, *Software Financing*, *supra* note 167, at 157–61; Telephone Interview with First Turnaround Professional (Sept. 21, 2004); Telephone Interview with Fourth California Attorney (Sept. 23, 2004). This is not to say the process is always consensual. In the case of Encore Software, for example, a Chapter 11 filing was precipitated when a tumultuous meeting between Comerica and the defaulting borrower caused Comerica to sweep the borrower's accounts. Comerica was paid in full when the assets of the borrower were sold to Navarre in Chapter 11.

185. See Telephone Interview with First Turnaround Professional (Sept. 21, 2004). This assumes, as is typically the case, that the investment of the lenders is relatively small compared to the investment of the venture capitalists. It also is important to my view that the lenders are unlikely to have any plausible expectation of repayment through liquidation of collateral or the business; their principal expected source of repayment always will have been the venture capitalists. See Mann, *Software Financing*, *supra* note 167, at 157–61. Thus, this situation is quite different from the typical situation in which the secured creditor's control is central to the liquidation decision. See Jay Lawrence Westbrook, *The Control of Wealth in Bankruptcy*, 62 TEX. L. REV. 795 (2004).

186. For a similar view, see Smith & Strömberg, *supra* note 3 (asserting that VCs control the decision to liquidate).

187. See, e.g., Baird & Jackson, *Bargaining After the Fall and the Countours of the Absolute Priority Rule*, 55 U. CHI. L. REV. 738 (1988).

188. See *supra* notes 155–57 and accompanying text.

189. The capital structure of these firms is highly homogenous. Venture capitalists generally have a substantial amount of preferred stock, sufficient to control the firm. GOMPERS & LERNER, *supra* note 8, ch. 12; Kaplan & Strömberg, *supra* note 64; Sahlman, *supra* note 64. As discussed above, there is a great deal of debt of various kinds, but in practice that seems not to complicate the process. Presumably, that is because much of the largest debt is held by parties with sufficient relational ties to the venture capitalists to minimize the potential for holdup that might lead to contentious negotiation

bankruptcy to reorganize the capital structure of the firm.¹⁹⁰ For another, again because of the nature of the data set, the opportunity for third-party financing is relatively small.¹⁹¹ Generally, institutional lenders that make loans to firms of this sort depend entirely on the willingness of the venture capitalists to make future fundings that will be adequate to repay the loan.¹⁹² Firms of this sort that have filed for bankruptcy, of course, are firms whose venture capitalists have decided not to make further advances. Once venture capitalists have made that decision, they tend to be much more interested in liquidation than in the prospects of a reorganization in which they could retain an interest in a surviving firm:

Bankruptcy is not even an option. It's just not an option. Venture capitalists aren't looking to clean up the debt and continue on with the company for the most part. That's just not the mentality of venture capitalists. Venture capitalists have the mentality that the soufflé only rises once, we gave it a shot, it didn't work, let's get out of it in the cleanest way possible and move on, [in the] cleanest, cheapest way possible.¹⁹³

In an effort to quantify this point based on the information in the files, it seems to me that the most relevant question is how often firms that file for Chapter 11 leave bankruptcy under the control of a person that was an equity or debt claimant before the proceeding was filed.¹⁹⁴ Using that

about reorganization. See Mann, *Software Financing*, *supra* note 167, at 157–61; Mann, *supra* note 6.

190. See Telephone Interview with Second California Attorney (Oct. 28, 2003). That point is, of course, consistent with the arguments of Baird & Rasmussen in their recent work, cited *supra* note 155.

191. Thus, post-petition financing is not a major part of the data set. Post-petition financing orders were entered in 18 of the Chapter 11 cases. This is a contrast to the traditional perception that post-petition financing is a major part of Chapter 11 practice in the modern era, see Skeel, *supra* note 157. In addition, see George G. Triantis, *A Theory of the Regulation of Debtor-in-Possession Financing*, 46 VAND. L. REV. 901 (1993) (general discussion of post-petition financing), and especially in technology bankruptcies, see Scott D. Cousins, *Postpetition Financing of Dot-coms*, 27 DEL. J. CORP. L. 759 (2002). Most of the post-petition financing that does appear in these cases derives from funds contributed by a stalking horse, which are expected to come out of the proceeds of the deal that the stalking horse hopes to make to acquire control of the company. That was the pattern, for example, in Digital BroadBand, Onsite Access, Phylos, and BroadBand Office.

192. See Mann, *Software Financing*, *supra* note 167, at 157–61; Mann, *supra* note 6.

193. Telephone Interview with Venture Investor (Apr. 16, 2004).

194. There obviously is considerable ambiguity in distinguishing plans that are “true” reorganizations from those that are liquidations and sales. Because most of the literature on that subject involves public firms, there is not a great deal of guidance on how to draw such a line in this data set. The premise of my analysis is that firms that leave bankruptcy in the control of somebody entirely new have been sold; those where the capital structure is reshuffled in some way that results in control by a party that was an investor or creditor before the bankruptcy are closer to reorganizations as traditionally conceived.

metric, only four of the bankruptcies involved a conventional reorganization: 15% of the 26 confirmed plans I have been able to examine and 8% of the 53 terminated cases that I have been able to examine.¹⁹⁵

This is not to say that bankruptcy was never used to determine who the appropriate purchaser should be. For example, stalking horse bids were apparent at the beginning of several of the cases. It is to suggest, however, that the bankruptcies ordinarily did not involve negotiation over allocation of the proceeds of such a sale or any likelihood that the firm would continue in the control of those that brought it into the bankruptcy proceeding.

c. Enforcing Pro Rata Treatment

Turning to more important issues in the data set, the dominant consideration mentioned in the interviews is the need to file bankruptcy to avoid, or transfer, some interest important to a sale of the firm. Given the relatively small size of the firms, it is not surprising that none of the cases used a prepackaged bankruptcy to do this. The most common example in the interviews—doubtless reflecting my focus on interviews in Palo Alto and Austin, Texas—is something much simpler, such as an over-priced lease of office space or production facilities.¹⁹⁶ One turnaround professional described her typical advice to clients this way: “In many instances I will just say, ‘Your leases are just so bad. You really should file a bankruptcy because they will eat up anything you have.’”¹⁹⁷

This pattern was common in the files as well. For example, Digital Broadband filed for Chapter 11, rejected a major lease, and then sold much

195. Limitations of this data set make it difficult to tie the work closely into some of the recent work in the field. For example, recent work by Lynn LoPucki and his co-authors has emphasized the rate at which plans fail as an important criterion in assessing the effectiveness of the Chapter 11 process. See Lynn M. LoPucki & Sara D. Kalin, *The Failure of Public Company Bankruptcies in Delaware and New York: Empirical Evidence of a “Race to the Bottom,”* 54 VAND. L. REV. 231 (2001); Lynn M. LoPucki & Joseph W. Doherty, *Why Are Delaware and New York Bankruptcy Reorganizations Failing?*, 55 VAND. L. REV. 1933 (2002). The plans in this data set, however, are too recent to get any sense for the likelihood that they will fail. In any event, it is not clear how valuable the information would be. Those papers assume too readily that any rate of failure of reorganized firms is excessive. See Robert K. Rasmussen & Randall S. Thomas, *Whither the Race? A Comment on the Effects of the Delawareization of Corporate Reorganization*, 54 VAND. L. REV. 283 (2001).

196. See Telephone Interview with Second California Attorney (Oct. 28, 2003); Telephone Interview with Fourth California Attorney (Dec. 16, 2003); Telephone Interview with Second Turnaround Professional (Dec. 17 & 19, 2003); Telephone Interview with Third Turnaround Professional (Mar. 12, 2004); Telephone Interview with Second California Lender (Apr. 5, 2004).

197. Telephone Interview with Fourth Turnaround Professional (June 18, 2004).

of the firm to Connecticut Broadband. Similarly, DNA Sciences filed for Chapter 11 after negotiations with its landlord failed. After rejection of the lease, the business was sold to Genaissance Pharmaceuticals. The LayerOne bankruptcy seems to have been filed *solely* for the purpose of shedding leases in markets that a contracting firm would no longer serve.

The files also commonly involve the rejection of equipment leases or contracts for the supply of circuits. In the Darwin Networks case, for example, the bankruptcy litigation involved rejection of a \$20M equipment lease with Cisco and a series of service contracts with AT&T, followed by a sale of much of the assets of the business to US Wireless.¹⁹⁸ Similarly, the interviews report, the bankruptcy process is uniquely capable of permitting a sale that includes a transfer of an executory contract that otherwise might be terminated because of the general financial distress of the firm.¹⁹⁹ So, for example, EC Cubed seems to have been in the unusual situation of having a below-market lease to transfer, instead of an above-market lease to reject. It needed the bankruptcy process, and the cooperation of its lender (Silicon Valley Bank) to transfer the lease to a third party.

From some perspectives, that use of the bankruptcy process might be seen as wholly illegitimate. This paper certainly is not the place for a general assessment of that question. It is, however, plausible to suggest that if the provisions that permit avoidance of executory contracts work in a sensible way, they should have the general effect of ensuring that all contract creditors share in the diminution of their claims against the failed firm.²⁰⁰ The broader point is that the provisions of Section 365 that permit failed firms to assume, reject, or transfer contracts to third parties reflect a congressional policy judgment regarding the way in which difficulties attendant on failure should be spread.²⁰¹

198. Another common topic of litigation in those cases is whether the leases are “true” leases or disguised security interests, litigation that the debtors often win. In *InternetConnect*, for example, the debtor successfully recharacterized as loans purported leases from Cisco that could not be terminated during their term and provided for purchase by the debtor for \$1 at the end of their term. Cf. UCC § 1-203(b)(4) (2001) (“A transaction in the form of a lease creates a security interest if [among other things,] the lessee has an option to become the owner of the goods . . . for nominal additional consideration upon compliance with the lease agreement.”).

199. See Telephone Interview with Second California Attorney (Mar. 30, 2004).

200. It is of course not at all clear that the provisions function in a sensible way. See, e.g., Michael T. Andrew, *Executory Contracts in Bankruptcy: Understanding “Rejection,”* 59 U. COLO. L. REV. 845 (1988); Jay Lawrence Westbrook, *A Functional Analysis of Executory Contracts*, 74 MINN. L. REV. 227 (1989).

201. To be sure, those provisions are susceptible to abuse when firms that are not insolvent file. To police that problem, some courts have interpreted the “cause” standard in § 1112 to permit dismissal of Chapter 11 bankruptcies if the debtor is not in sufficient distress. *In re Integrated Telecom*

My interest is in the effect of those provisions on the liquidation system as a whole. If all parties were rational, if negotiating were costless, and if the application of those provisions were entirely predictable, people would *never* file for bankruptcy to take advantage of those provisions. The ABC process (or any other out-of-court workout) would result in an allocation of claims negotiated in the shadow of the federal provisions. Because those assumptions are not always true, however, parties often need to use a judicial process to resolve those problems. The states, of course, cannot directly adopt statutes to alter contractual rights in that way.²⁰² Thus, the bankruptcy process is the only forum available to enforce a pro rata distribution of losses attendant on financial distress. Here, a federal forum is necessary because the parties cannot resolve the issue by contract.

d. Resolving Complex Litigation

The second common example from the interviews is a major preference or set of preferences that the estate can recover.²⁰³ Although California's ABC statute permits assignees to recover preferences on terms similar to those in the Bankruptcy Code,²⁰⁴ and although assignees report that they pursue those claims regularly,²⁰⁵ I am persuaded by the assertions in some of the interviews that the bankruptcy forum provides a cheaper and more effective forum for that kind of litigation.²⁰⁶

It is easy to see how Chapter 11 provides a major benefit on that score. The ability of a single court to handle what amounts to a series of related pieces of commercial litigation is a valuable attribute not readily replicated in a state court system that does not have nationwide authority or any likelihood of repeat expertise on those questions.²⁰⁷ For example, the main

Express, Inc., 384 F.3d 108, 118–24 (3d Cir. 2004); *In re* SGL Carbon Corp., 200 F.3d 154 (3d Cir. 1999); Liberate Technologies, 314 B.R. 206 (Bankr. N.D. Cal. 2004). It is doubtful, however, that such a problem is important in my data set, where all of the firms probably are close to insolvency most of the time, so that a decision by venture capitalists to send the firm into bankruptcy doubtless carries with it financial distress and insolvency that should justify the loss-spreading provisions in question.

202. See generally Ronald J. Mann, *The Rise of State Bankruptcy-Directed Legislation*, 25 CARDOZO L. REV. 1805 (2004) (discussing the boundaries between the legitimate policymaking spheres of Congress and the states).

203. See Telephone Interview with Second California Attorney (Oct. 28, 2003).

204. CAL. CIV. PROC. CODE § 1800 (West 1982 & Supp. 2005).

205. See Telephone Interview with Third Turnaround Professional (Mar. 12, 2004).

206. See Telephone Interview with Second California Attorney (Oct. 28, 2003).

207. See Telephone Interview with Second California Attorney (Mar. 30, 2004) (explaining that it is “hard” for a state trial court “to swallow” the idea that it should retract funds received by a creditor in perfectly legitimate circumstances that amount to a preference under federal bankruptcy law).

feature of the Asta Networks bankruptcy was a dispute with amazon.com; the bankruptcy was dismissed shortly after that matter was settled.²⁰⁸

In some cases, the benefits that the bankruptcy court provides are not so much swift resolution of the dispute as they are a classic benefit of a stay that can hold the firm in stasis while the litigation is resolved. This was the case for Napster, when the bankruptcy court provided refuge pending the Ninth Circuit's ultimately unfavorable resolution of the firm's litigation with content providers.²⁰⁹

e. Industry Effects

One of the most difficult things to understand about the data set is the strong industry effect: firms in different industries choose bankruptcy differently and choose between Chapter 7 and Chapter 11 differently. A definitive understanding of those differences would require considerably more fieldwork. Still, it is easy to offer some general explanations for the two prominent industry effects that the data indicate. First, the data indicate that software firms are significantly less likely than the other firms to file for bankruptcy. As discussed above, decisions like *Catapult* make it difficult for software firms to obtain the benefits of bankruptcy because they cannot assume in-bound technology licenses even while in bankruptcy.²¹⁰ Thus, at least as a relative matter, a software firm may less often receive substantial value for a bankruptcy filing.

Second, although telecom firms do not file bankruptcies at an unusually high rate compared to firms in the other sectors, when they do file, they choose Chapter 11 at a rate that is significantly higher than the rate for firms in the other sectors. Although any generalization is

208. The hypothesis that the role of the bankruptcy courts in the maturing system is in large part to resolve complex litigation is in some tension with the rapid decline of bankruptcy trials in recent years. See Elizabeth Warren, *Vanishing Trials: The Bankruptcy Experience*, 1 J. EMPIRICAL LEGAL STUD. 913 (2004). In fact, however, the data seems to support my hypothesis when the data on business and non-business bankruptcy filings is disaggregated, because the disaggregated data suggests that the number of adversary proceedings filed in business bankruptcy cases has risen steadily over the last twenty years (from about 0.4 proceedings per case in 1985 to 0.7 in 2002). *Id.* at 933–34. To be sure, the share of those proceedings that have resulted in an actual trial has fallen precipitously (from 16% in 1985 to 3% in 2002). *Id.* at 935. But that trend probably says less about bankruptcy courts than it does about litigation in the United States more generally. See Marc Galanter, *The Vanishing Trial An Examination of Trials and Related Matters in Federal and State Courts*, 1 J. EMPIRICAL LEGAL STUD. 459 (2004) (reporting various indicators of the general decline in recent decades in the use of the civil trial to resolve litigation).

209. A&M Records, Inc. v. Napster, Inc., 239 F.3d 1004 (9th Cir. 2001).

210. See *supra* note 82 (discussing the significance of *In re Catapult Entm't, Inc.*, 165 F.3d at 747).

necessarily simplifying, many of the telecom firms in the data set were operating firms with substantial pending executory contracts. They often were driven into bankruptcy by financial disagreements with suppliers.²¹¹ In some cases, it might not have been specific disputes with suppliers, but simply a more general decline in market conditions that made it difficult for the firm to sustain its existing infrastructure.²¹² Chapter 7 for those firms would have resulted in a substantial loss of going-concern value as they lost the revenue from ongoing contracts with customers that would have terminated upon a Chapter 7 filing.²¹³ In part, that is a peculiarity of the regulatory situation of those firms, which imposed substantial penalties on them if they terminated customer service without adequate notice.²¹⁴ In contrast, software and biopharm firms at this stage would less commonly have large numbers of revenue-generating customers, and thus, as a relative matter, would have less occasion to use Chapter 11.²¹⁵

To summarize the thesis of this section, Table 14 illustrates six general functions that can be important in the liquidation of a failed firm. The first

211. This seems to apply, for example, to 2d Century, Cambrian, and Point One Telecom.

212. Onsite Access is a good example of that situation. After successfully restructuring its affairs with AT&T and J.P. Morgan, it spent a year unsuccessfully negotiating with GECC and TransAmerica. The firm filed for bankruptcy to preserve itself during those negotiations and eventually was sold to ELink.

213. See Steven D. Pohl, *Bankruptcies Cast Shadows on Three Embattled Industries*, BOSTON BUS. J., Feb. 3, 2003, available at <http://boston.bizjournals.com/boston/stories/2003/02/03/focus4.html> (last visited Mar. 30, 2004) (suggesting that problems with customer contracts often motivate telecom bankruptcies).

214. This was a major concern, for example, in OnSite Access.

215. Another common characteristic of these files is the importance of preventing utility providers from terminating contracts with the debtors. Many bankrupt telecommunications firms are "competitive local exchange carriers" ("CLEC"s), engaged in the business of reselling telecommunications services purchased from incumbent providers as part of deregulation of the telecommunications industry. See Patricia Baron Tomasco, *Telecom Bankruptcies: Swimming Against a Tidal Wave* (May 16, 2002), available at http://www.brownmccarroll.com/articles_detail.asp?ArticleID=47 (last visited Sept. 29, 2004). For those entities, survival is a going concern, directly dependent on preventing utilities from discontinuing service gives them an important advantage not available for the analogous suppliers to firms in other sectors. In my data set, prompt motions on that topic were salient in the cases of *BroadBand Office*, *Colo.com*, *Darwin Networks*, and *InternetConnect*. The litigation on that topic presents a complex interplay between the traditional rules for executory contracts in Section 365 and the special rules of Section 366 for contracts with a "utility." Section 366 favors the debtor by prohibiting a "utility" from terminating services because of nonpayment of fees for pre-bankruptcy services, but is adverse to the debtor by requiring it promptly to post adequate assurance of payment for ongoing services. The application of Section 366 to the large-scale commercial contracts at issue in these cases remains unclear. See generally Tomasco, *supra*. The theoretical propriety of that as a use of bankruptcy is perhaps debatable. See Alan Schwartz, *A Normative Theory of Business Bankruptcy* (Apr. 29, 2004) (unpublished manuscript, available at <http://law.bepress.com/cgi/viewcontent.cgi?article=1037&context=alea>) (last visited Sept. 28, 2004) (arguing that business bankruptcies should not permit debtors to force their suppliers to continue providing service without payment).

column lists the functions that contractual negotiations between the parties can resolve. The last two columns list the functions that the bankruptcy court necessarily needs to perform.

Table 14: Benefits of Contract and Bankruptcy Liquidation

	Contract Liquidation	Bankruptcy Liquidation
Locating Purchaser	X	
Setting Price	X	
Defining Capital Structure	X	
Administering Estate	X	
Enforcing Pro Rata Treatment		X
Resolving Complex Litigation		X

3. *The Efficacy of the Liquidation System*

Once we know more about the functions that the bankruptcy process can—and cannot—serve in a system for the liquidation of failed firms, we are in a better position to evaluate the functions that Congress has allocated to the bankruptcy courts.²¹⁶ The most obvious issue is raised by the weighty body of bankruptcy literature in the 1990s asserting that the bankruptcy process, particularly Chapter 11, works so poorly that some form of mandatory auction should replace it.²¹⁷ The papers that make that criticism implicitly rest on the twin assumptions that: (a) the existing process does a poor job of redirecting assets of failed firms to better uses;

216. This paper advocates a system that allocates the functions necessary for liquidation of failed firms to the actor best placed to fulfill them. In general, that allocation ultimately should lower the cost of capital for those firms by lowering the losses attendant on liquidation. See Schwartz, *supra* note 215.

217. That idea has been promulgated in various forms in four separate lines of scholarship: by Barry Adler, see, for example, Barry E. Adler & Ian Ayres, *A Dilution Mechanism for Valuing Corporations in Bankruptcy*, 111 YALE L.J. 83 (2001); Barry E. Adler, *A World Without Debt*, 72 WASH. U. L.Q. 811 (1994); Barry E. Adler, *Financial and Political Theories of American Corporate Bankruptcy*, 45 STAN. L. REV. 311 (1993); by Aghion, Hart & Moore, see, for example, Phillippe Aghion et al., *Improving Bankruptcy Procedure*, 72 WASH. U. L.Q. 849 (1994); Phillippe Aghion et al., *The Economics of Bankruptcy Reform*, 8 J.L. ECON. & ORG. 523 (1992); by Lucian Bebchuk, see, for example, Lucian A. Bebchuk, *A New Approach to Corporate Reorganizations*, 101 HARV. L. REV. 775 (1988); Lucian A. Bebchuk, *Using Options to Divide Value in Corporate Bankruptcy*, 44 EUR. ECON. REV. 829 (2000); and by Douglas Baird, see, for example, Douglas G. Baird, *Revisiting Auctions in Chapter 11*, 36 J.L. & ECON. 633 (1993).

and (b) the bankruptcy process needs to do little other than accomplish that task. The evidence presented in the last section, albeit inconclusive and anecdotal, undermines both of those assumptions.

The preceding sections of this paper present a system in which ABCs and bankruptcies are interacting (at least in California), sorting firms to a forum in which their assets can be redirected rapidly. Two points about that system are salient here. One, if firms that have no need for complicated litigation are using ABCs, the sorting function is working. Two, it appears that the bankruptcy process is serving a variety of functions that would need to be accomplished even in a mandatory auction system. Thus, as discussed above, bankruptcies are particularly common in cases in which recalcitrant creditors (often lessors) are unwilling to accept the reduction of their rights commensurate with pro rata treatment. Similarly, it appears common that in the days before failure creditors will have received preferences. Although it might be optimal to transfer the assets rapidly (as we see from the ABC process), it remains necessary in some forum to pursue litigation to recover those preferences. In cases where that litigation is anything other than trivial, the bankruptcy forum needs to remain available for that purpose. In cases in which the outcome of disputed litigation is sufficiently uncertain and important to influence the ultimate disposition of the firm (Napster being a good example in the data set), it may be that the bankruptcy process is necessary to shelter the firm while that litigation can be conducted.

That chain of reasoning suggests that the reasoning of the auction theorists is fundamentally flawed. Specifically, my analysis suggests that their proposals, if implemented rigorously, would remove from the bankruptcy courts the issues that only the bankruptcy process can resolve (the points discussed in the previous section) and bring into the process the issue that most clearly can be resolved outside of bankruptcy—selection of the optimal purchaser and completion of a prompt sale. If the purpose of bankruptcy reform is to make the system as a whole more efficient,²¹⁸ those reforms might be counterproductive.

To be sure, the discussion in this section does rest in part on the sense that—at least in the areas relevant to the data set—the process in the bankruptcy proceedings in the set is sufficiently streamlined to be practical. There has been a great deal of concern that the bankruptcy process does not work well, except for the largest businesses. One concern

218. See Schwartz, *supra* note 215.

has been that the process is too cumbersome for creditors.²¹⁹ The data set provides some interesting evidence on that point because it is a specific slice of reasonably large, though not public, bankrupts. The evidence about motions to convert and appointments of trustees, for example, suggests that creditors are readily capable of participating in the process.²²⁰ Similarly, as the data below (regarding the time that elapses before plan confirmation or dismissal) indicates, this is not a process where debtors routinely use exclusivity motions to defer the moment of reckoning for long periods. Here, at least, the debtor is not in full control.

There also is pervasive concern about the delay inherent in small business bankruptcies.²²¹ On that point, although different people will have different views about what counts as prompt, the bankruptcies in the data set for the most part proceeded relatively promptly. Figure 6 shows the outcomes of the 66 Chapter 11s, divided among the cases in which plans have been confirmed, those converted to Chapter 7, those dismissed, and the cases in which proposed plans are still pending.²²² Figure 7 shows the mean time to those outcomes, which were generally considerably less than a year.²²³ If the firms in the data set can move through Chapter 11 that quickly, it is difficult to credit the notion that Chapter 11 is systematically impractical for all but the largest publicly traded firms.

219. *E.g.*, LoPucki, *Debtor in Full Control* (Parts I & II), *supra* note 3; *see also* 1 NAT'L BANKRUPTCY REVIEW COMM'N, *BANKRUPTCY: THE NEXT TWENTY YEARS* 642 (1997).

220. In the 66 Chapter 11 cases, 20 were converted to Chapter 7s and four had trustees appointed.

221. *E.g.*, 1 NAT'L BANKRUPTCY REVIEW COMM'N, *supra* note 219, at 613–14.

222. There are no pending cases in which plans have not been proposed.

223. The medians did not differ materially from the means that I report here. The eight pending cases are such a small part of the data set that it seems unlikely that they ultimately will increase the average outcome shown here substantially. Interestingly, the four reorganization plans in the population were confirmed in much less than a year, all in the range of six to eight months.

Figure 6: Chapter 11 Outcomes

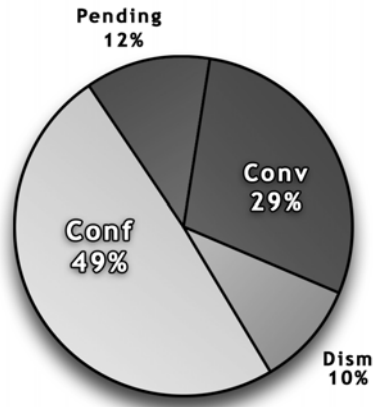
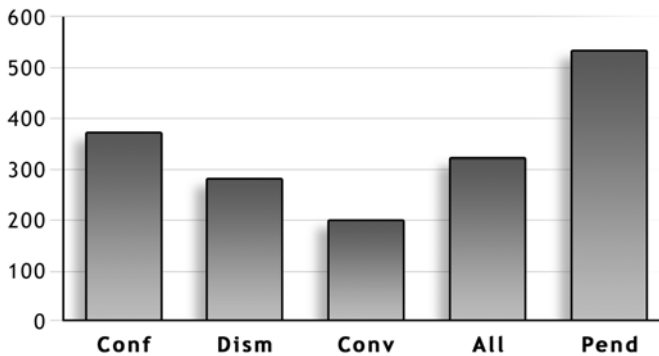


Figure 7: Average Time in Chapter 11



4. Making Chapter 7 More Effective

The last avenue for inquiry is whether bankruptcy policymakers can learn from the benefits of the ABC experience. Although this Article is not the place to explore that topic in detail, it is evident that the principal comparative advantage of the ABC process is the skill of the liquidator. It might be possible to capture much of that advantage in the bankruptcy process by the simple device of permitting Chapter 7 bankrupts to opt for a private trustee, with the trustee's higher fee to be paid by consenting creditors. Chapter 11 bankrupts already have control over bankruptcy

operations for the most part through their ability to remain in possession.²²⁴ It is not clear why something similar could not be accomplished in Chapter 7.

This, of course, would not capture all of the benefits of an ABC process because an important advantage of the ABC process is that it is quicker than bankruptcy, and would involve the expense of participation in the bankruptcy process. Among other things, any special Chapter 7 appointment would necessarily involve judicial involvement. It is possible, however, that it might increase the payouts in firms that need to file for bankruptcy and have insufficient assets to successfully navigate Chapter 11 but prefer an experienced and hands-on liquidator. Similarly, it might allow some firms that need access to bankruptcy solely to conduct expedited litigation before transferring assets to a third party to use a cheaper Chapter 7 process rather than the more expensive Chapter 11 process that they use now. The data reported above—which indicate that only a small share of the Chapter 11 cases in the data set involve “true” reorganizations—coupled with the interviews that suggest that the high costs of Chapter 11 drive liquidation choices²²⁵ suggest that this simple proposal might be quite beneficial.

IV. CONCLUSION

This paper has two main points. First, it argues that states can improve the efficacy with which the assets of failed firms are redirected to profitable uses by adopting procedures that are more hospitable to ABCs. Those procedures, the data suggest, should redirect a substantial number of failed firms from expensive and protracted bankruptcy proceedings to more expeditious proceedings conducted under the protection of a state court. The major caveat to that argument is that the system needs to be at once attentive to the possibility of abuse and at the same time sufficiently streamlined to be attractive to the failed firms.

224. 11 U.S.C. §§ 1104, 1107 (2000). To the extent those firms wish to employ a turnaround professional, they of course could appoint such a person as Chief Reorganizing Officer, a common occurrence in large-firm bankruptcies in recent years. *See, e.g.*, Robert K. Rasmussen, *Secured Credit, Control Rights and Options*, 25 CARDOZO L. REV. 1935, 1944–45 (2004); David A. Skeel, Jr., *The Past, Present and Future of Debtor-in-Possession Financing*, 25 CARDOZO L. REV. 1905, 1917–18 (2004).

225. The bankruptcy policy questions are complex. Among other things, it is not clear why in practice it is so difficult for firms to obtain special Chapter 7 appointments under existing law. *See* Elizabeth Warren & Jay Westbrook, *Remembering Chapter 7*, AM. BANKR. INST. J., May 2004, at 22.

Second, arising out of the first, analysis of liquidation choices is an ideal way to understand the role of bankruptcy courts in dealing with the liquidation of failed firms. I argue here—at least for the sectors that I examine—that bankruptcy courts have an important role in that process but that the role is quite different from the traditional role as evidenced by the major substantive provisions of the Bankruptcy Code. Specifically, the most important roles of the bankruptcy court for the firms are: (a) to provide a backstop for cases in which the parties cannot agree upon an appropriate allocation of losses among themselves; and (b) to provide a convenient forum for complex litigation that practicably cannot be conducted in state courts. Similar research in other areas doubtless would reveal other situation-specific functions of the bankruptcy courts, but the understanding of their role for venture-backed high-tech firms is interesting in its own right.