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The End of Bankruptcy

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INTRODUCTION

Corporate reorganizations have all but disappeared. Giant corporations make headlines when they file for Chapter 11, but they are no longer using it to rescue a firm from imminent failure. Many use Chapter 11 merely to sell their assets and divide up the proceeds. TWA filed only to consummate the sale of its planes and landing gates to American Airlines.[1] Enron's principal assets, including its trading operation and its most valuable pipelines, were sold within

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1. *See* Susan Carey, *American Airlines' TWA Financing Plan Is Approved, Although Rivals Cry Foul*, WALL ST. J., Jan. 29, 2001, at A3.

a few months of its bankruptcy petition.[2] Within weeks of filing for Chapter 11, Budget sold most of its assets to the parent company of Avis.[3] Similarly, Polaroid entered Chapter 11 and sold most of its assets to the private equity group at BankOne.[4] Even when a large firm uses Chapter 11 as something other than a convenient auction block, its principal lenders are usually already in control and Chapter 11 merely puts in place a preexisting deal.[5] Rarely is Chapter 11 a forum where the various stakeholders in a publicly held firm negotiate among each other over the firm's destiny.

Large firms, of course, form only a tiny portion of the Chapter 11 docket.[6] For the vast majority of firms in financial trouble, the traditional corporate reorganization has become increasingly irrelevant. Of the half million firms that will fail this year, only 10,000 will file for Chapter 11, half of what we saw a decade ago.[7] The typical case is the electrical subcontractor who uses the bankruptcy forum to cut a deal with the IRS while keeping other creditors at bay.[8] Marginally competent owner-managers, bureaucratically inept tax

2. The court approved the sale of Enron's trading operation only a few weeks after the bankruptcy petition was filed. *See* PETER C. FUSARO & ROSS M. MILLER, WHAT WENT WRONG AT ENRON 178 (2002). Enron completed its sale of its major pipeline to Dynergy in the first months of the bankruptcy as well. *See Dynergy to Pay Enron a $25 Million Settlement*, N.Y. TIMES, Aug. 16, 2002, at C4. The sale of other assets also took place. *See, e.g.*, Jeff St. Onge & Christopher Mumma, *Enron's $358 Mln Wind-Asset Sale to GE Is Approved*, BLOOMBERG NEWS, Apr. 11, 2002. In March 2002, Enron agreed to sell U.K. water utility Wessex Water to Malaysia's YTL Corp. for $1.77 billion in cash and assumed debt. Enron's European coal-trading, metals-trading, and retail-supply units have also been sold. *See* Margot Habiby, *Enron CEO Says Debt, Other Claims May Total $100 Bln*, BLOOMBERG NEWS, Apr. 12, 2002. Plans are underway to sell most of what remains by the end of the year. *See* Neela Banerjee, *Enron to Sell Major Units to Raise Cash for Settlements*, N.Y. TIMES, Aug. 28, 2002, at C1. For a more detailed application of the ideas developed in this Article to the Enron bankruptcy, see Douglas G. Baird & Robert K. Rasmussen, *Four (or Five) Easy Lessons from Enron*, 55 VAND. L. REV. (forthcoming 2002).

3. *See Cendant, Owner of Avis, to Acquire Budget*, N.Y. TIMES, Aug. 23, 2002, at C3.

4. *See* James Bandler, *Polaroid Plans to Sell Its Assets for $265 Million*, WALL ST. J., Apr. 19, 2002, at A17.

5. A recent and altogether typical example is the August 2002 Chapter 11 filing of medical test maker Dade Behring, Inc. *See* Bruce Japsen, *Dade Behring Seeks to Reorganize*, CHI. TRIB., Aug. 2, 2002, § 3, at 1. The other large category of public Chapter 11 cases involves firms that once manufactured asbestos. *See* Christopher Bowe, *Grace Seeks Bankruptcy Deal; Chemical's U.S. Group Hit by Mounting Asbestos Claims*, FIN. TIMES (London), Apr. 3, 2001, at 30 (noting that companies filing for bankruptcy as a result of asbestos liability within previous 12 months include W.R. Grace, Babcock & Wilcox, Pittsburgh-Corning, Owens Corning, Armstrong, and G-1 Holdings, formerly GAF). Section 524(g) of the Bankruptcy Code provides these firms with an ability to dispose of these claims that is available nowhere else. 11 U.S.C.A. § 524(g) (West 2002).

6. Such bankruptcies, however, do account for a substantial amount of the assets and employees that visit the bankruptcy forum.

7. *See* 2001 BANKRUPTCY YEARBOOK & ALMANAC 9 (reporting 23,989 Chapter 11 filings in 1991 and 9884 in 2000).

8. An owner-manager of a small business in trouble too often uses funds earmarked for

collectors, small-time landlords and suppliers, and unsophisticated workers and tort victims populate this world.[9] The business is run out of a small office with little in the way of hard assets and few long-term employees. To the extent we understand the law of corporate reorganizations as providing a collective forum in which creditors and their common debtor fashion a future for a firm that would otherwise be torn apart by financial distress, we may safely conclude that its era has come to an end.

This Article takes on the job of accounting for this new state of affairs. Our approach departs from much of recent bankruptcy scholarship in two important respects.[10] Most recent debates about corporate reorganizations have focused upon capital structures and priority rights.[11] People have argued about the extent to which nonbankruptcy priority rights are or should be vindicated in bankruptcy and what is the best mechanism for doing so.[12] The tools of modern finance have been front and center. We show that this approach neglects foundational questions about the nature of the firm itself. One should not ask about the shape the firm's capital structure should take without understanding first why the assets in question should be located within a particular firm. In other words, rather than beginning with Modigliani and Miller's irrelevance propositions and Black-Scholes option pricing, scholars of corporate reorganization should start with Ronald Coase and *The Nature of the Firm*.

This Article differs from much recent bankruptcy scholarship in a second respect. Rather than use the nineteenth-century railroad as the paradigmatic

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employee withholding taxes and social security payments to keep the business's doors open. *See* Edward R. Morrison, Bankruptcy Decisionmaking: An Empirical Study (Nov. 2002) (unpublished manuscript, on file with author). Because owner-managers are personally liable for these debts, they are especially anxious to cut a deal.

9. For a comprehensive account of the Chapter 11 docket of one bankruptcy court over the course of an entire year, see Morrison, *supra* note 8.

10. For a survey of modern bankruptcy scholarship, see Douglas G. Baird, *Bankruptcy's Uncontested Axioms*, 108 YALE L.J. 573 (1998). As we make plain below, a number of the observations we bring together in this Article are immanent in the work of others, especially Barry Adler, Marcus Cole, Randy Picker, and David Skeel.

11. Among the best known of these efforts among law and economics scholars is Lucian Arye Bebchuk, *A New Approach to Corporate Reorganizations*, 101 HARV. L. REV. 775 (1988). Among more traditional bankruptcy scholars, priority rules (and in particular the absolute priority rule) have been the central focus as well. *See, e.g.*, John D. Ayer, *Rethinking Absolute Priority After* Ahlers, 87 MICH. L. REV. 963 (1989); Randolph J. Haines, *The Unwarranted Attack on New Value*, 72 AM. BANKR. L.J. 387 (1998); Bruce A. Markell, *Owners, Auctions, and Absolute Priority in Bankruptcy Reorganizations*, 44 STAN. L. REV. 69, 84-85 (1991).

12. *See, e.g.*, Barry E. Adler & Ian Ayres, *A Dilution Mechanism for Valuing Corporations in Bankruptcy*, 111 YALE L.J. 83 (2001); Philippe Aghion, Oliver Hart & John Moore, *The Economics of Bankruptcy Reform*, 8 J.L. ECON. & ORG. 523 (1992); Alan Schwartz, *A Contract Theory Approach to Business Bankruptcy*, 107 Yale L.J. 1807 (1998); Mark J. Roe, *Bankruptcy and Debt: A New Model for Corporate Reorganization*, 83 COLUM. L. REV. 527 (1983).

example of a firm that needs to be reorganized,[13] we use a large number of alternative examples, drawn from both history and recent events, from the Lancaster cotton mill to the automobile assembly plant to the modern dot-com. By using historical examples of prototypical industrial firms, we show that the basic forces that undermine the usefulness of the railroad paradigm have been in place for a long time. The modern examples show how these forces have accelerated over the last twenty years.

Part I establishes the basic framework. It connects the concept of going-concern value to the nature of the firm and transaction costs. There is no special magic beyond transaction costs in accounting for any particular collection of assets assembled within a single firm. From this familiar point, it follows that transaction costs themselves put a ceiling on the value of keeping different assets together in the same firm. By importing this well-known insight into the world of corporate reorganizations, we focus squarely on the central idea in corporate reorganizations, that of preserving the "going-concern surplus," preserving the value a firm has above and beyond the liquidation value of its discrete assets.

Part II explains why firms in financial distress are unlikely to have a substantial going-concern surplus. Such a surplus comes from assets that are dedicated to a particular purpose. Current law is predicated on the belief that financially distressed firms hold such assets. The oft-quoted phrase is that, absent bankruptcy law, a firm's assets would be "sold for scrap"[14] and value would be lost. Railroads provide an especially vivid illustration. The left-hand rails are worth little apart from the right-hand rails. We show that this example is misleading. Even at the height of the industrial revolution, railroads were a special case. Most firms did not depend upon assets that were custom-made for its operations and not of use elsewhere. The railroad paradigm makes even less sense today. In a service-based economy, intangible assets, such as a firm's proprietary business methods, are the assets most likely to be dedicated to a particular firm. Such assets, however, are precisely those that are likely to have little value when a firm is in financial distress. Many modern markets have a

13. *See, e.g.*, DAVID A. SKEEL, JR., DEBT'S DOMINION 48-69 (2001).

14. *See* United States v. Whiting Pools, Inc., 462 U.S. 198, 203 (1983) ("In proceedings under the reorganization provisions of the Bankruptcy Code, a troubled enterprise may be restructured to enable it to operate successfully in the future. Congress presumed that the assets of the debtor would be more valuable if used in a rehabilitated business than if 'sold for scrap.'"); ROBERT L. JORDAN, WILLIAM D. WARREN & DANIEL J. BUSSEL, BANKRUPTCY 633 (5th ed. 1999) ("Society is better off also when a firm that is worth more alive than dead is successfully rehabilitated."); MARK S. SCARBERRY, KENNETH N. KLEE, GRANT W. NEWTON & STEVE H. NICKLES, BUSINESS REORGANIZATION IN BANKRUPTCY 1-2 (2d ed. 2001) ("Chapter 11 of the federal Bankruptcy Code gives financially distressed businesses an opportunity to reorganize and avoid liquidation. Liquidation of a business's assets can be very costly to the persons directly involved and to society. Keeping the business in operation will often be much more desirable than liquidating it. The fundamental premise of chapter 11 of the Bankruptcy Code is that reorganization is desirable.").

winner-take-all character. A hundred years ago, a railroad that connected two small cities might be less successful and less profitable than a railroad that connected two larger cities. By contrast, today a bookstore or an office supply store with a business plan that is only slightly worse than a competitor's might not be able to survive at all.

Part III shows that even when an economic enterprise depends on dedicated assets, rarely do the assets themselves need to remain in a particular firm. An economic enterprise may require collaboration among a particular group of highly skilled workers, but they do not need to work for the same firm, nor does their ability to work together depend on the continuation of any given firm. To make these points, we again draw on a number of different examples. We focus in particular on examples from the early history of the automobile industry. Even here, where it is commonly assumed that highly specialized assets require vertical integration of production within a single firm,[15] keeping assets together in a single firm was not in fact so important.[16]

Part IV suggests that the law of corporate reorganizations as traditionally conceived no longer matters much even in the rare case in which a valuable economic enterprise requires that dedicated assets be locked up in a single firm. Two things have changed in recent times. Investors in nineteenth-century railroads relied on primitive investment contracts that scarcely differed from real estate mortgages. Today's investors allocate control rights among themselves through elaborate and sophisticated contracts that already anticipate financial distress. In the presence of these contracts, a law of corporate reorganizations is largely unnecessary.[17] As long as the parties whose interests are at stake have already decided among themselves what will happen in bad states of the world, nothing is to be gained by second-guessing them.

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15. *See* Robert F. Freeland, *Creating Holdup Through Vertical Integration: Fisher Body Revisited*, 43 J.L. & ECON. 33, 34 (2000) ("Most accounts focus on physical assets, arguing that vertical integration is driven by investment in specialized plant and equipment."). Indeed, the notion now widespread among economists that asset specificity drives vertical integration started with the example of General Motors's acquisition of Fisher Body. *See* Benjamin Klein, Robert G. Crawford & Armen A. Alchian, *Vertical Integration, Appropriable Rents, and the Competitive Contracting Process*, 21 J.L. & ECON. 297, 307-10 (1978).

16. We reject the conventional wisdom that asset specificity drives vertical integration, and our views are inconsistent with the assertions a number of economists have made about General Motors's acquisition of Fisher Body. One of us explains at greater length elsewhere how these economists were led astray. *See* Douglas G. Baird, *In Coase's Footsteps*, 70 U. CHI. L. REV. (forthcoming 2003). But the basic story and the contemporaneous evidence economists overlooked are set out below. *See infra* note 119. Our basic observations here (and elsewhere) are, not surprisingly, consistent with what Ronald Coase has said for many decades. *See* Ronald H. Coase, *The Nature of the Firm: Origin*, *in* THE NATURE OF THE FIRM: ORIGINS, EVOLUTION, AND DEVELOPMENT 34, 45 (Oliver E. Williamson & Sidney G. Winter eds., 1993) (quoting from a letter he wrote in 1932).

17. When involuntary tort victims loom large in the capital structure, of course, we cannot rely upon contracts to sort things out. It is no accident that asbestos cases now are a significant part of the Chapter 11 docket involving large firms. *See* Bowe, *supra* note 5.

A second development makes corporate reorganizations less important. In the nineteenth century, no single group of investors could amass the capital needed to buy large firms, and the market for small ones was undeveloped. Today, both small and large firms can be sold as going concerns, inside of bankruptcy and out. The ability to sell entire firms and divisions eliminates the need for a collective forum in which the different players must come to an agreement about what should happen to the assets. That decision can be left to the new owners.[18]

We conclude with a few brief observations about small firms and corporate reorganizations. Small firms constitute the vast bulk of Chapter 11 filings in sheer numbers, but the total amount of assets at risk for most firms that enter Chapter 11 are modest relative to the large firms in Chapter 11.[19] In the typical small Chapter 11 filing, the bankruptcy judge is asked to decide whether the plumber, travel agent, or jeweler should be given another chance to run her small business. We suggest that the debate focus squarely upon whether its benefits (which inure largely to owner-managers who derive psychic income from running their own business) justify its costs (which fall upon tax collectors, unpaid workers, and others who are poorly positioned to bear risk).

Each of the independent strands of analysis we develop in this Article reinforces the others. In the aggregate they explain what bankruptcy judges and practitioners have increasingly come to recognize: The face of bankruptcy practice has changed dramatically over the last decade. To show how fundamental the change has been, however, we must first locate the law of corporate reorganizations within a coherent theory of the firm. This is the task to which we turn in Part I.

I. CORPORATE REORGANIZATIONS AND THE NATURE OF THE FIRM

In the fall of 1931, a twenty-year-old undergraduate left England to spend the year in the United States on a traveling fellowship.[20] The trip was in lieu of a final year at the London School of Economics. His research project was both simple and topical. Lenin had boasted that he would turn the Soviet Union into one giant factory.[21] This undergraduate wanted to write an essay explaining why such an ambition was doomed to fail. There were, of course, large firms.

18. Enron provides an example. The market for energy trading shrank in the first half of 2002, but the decision about whether to cut back Enron's trading operations did not have to be made in the bankruptcy court. Instead, the decision rested with the new buyer. *See UBS Warburg Cuts Division Staffed by Team at Enron*, WALL ST. J., Aug. 21, 2002, at C9. As a result, the bankruptcy court can focus on what it does best—allocating responsibility for the frauds and misdeeds that brought about the bankruptcy.

19. The vast majority of firms in Chapter 11 have less than one million dollars in assets. These aggregated together constitute a smaller pool of assets than one finds just in the two or three largest Chapter 11 cases each year. *See* Morrison, *supra* note 8.

20. *See* Coase, *supra* note 16, at 38-39.

21. *See id.* at 38.

Henry Ford built the giant River Rouge Works. Iron ore began at one end, and cars emerged at the other. Nevertheless, it would seem that there had to be some natural limit on the size of an enterprise.

This undergraduate believed that by spending a year touring the United States to interview its entrepreneurs and economists, he would be able to show why factories could not become arbitrarily large.[22] He soon discovered, however, that he had to be able to answer other questions as well. Why were large firms needed at all? What prevented production from taking place through transactions among arbitrarily small firms in the marketplace? Indeed, what was the difference between activity inside a firm and outside it? One could make no progress on his initial question or any of the others without first gaining some purchase on the nature of the firm. This task was quite beyond the reach of an ordinary undergraduate. Ronald Coase, however, was no ordinary undergraduate.[23]

The insights Coase developed during his trip must be the starting place for those who ask foundational questions about the structure of corporations. The transaction-cost literature spawned by Coase now dominates the theory of the firm.[24] Where an activity takes place—inside a firm or between two firms in the market—turns solely on a question of comparative advantage. The touchstone is which method of organizing allows the activity to be done more cheaply. This in turn depends on the relative transaction costs of the potential organizational routes.

Much of this literature in recent years has focused on the elusive boundary between transactions in the firm and in the marketplace. A firm itself can be understood as a nexus of contracts.[25] Left largely unexplored, however, has been the relationship between the formal legal entity such as a corporation and

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22. *See id.* at 38-39.

23. The paper that emerged from the trip was R.H. Coase, *The Nature of the Firm*, 4 ECONOMICA 386 (1937). This paper was in large part responsible for earning Coase the Nobel Memorial Prize in Economics in 1991.

24. *See* HAROLD DEMSETZ, OWNERSHIP, CONTROL, AND THE FIRM 144 (1988). Major works in this vein include OLIVER E. WILLIAMSON, THE ECONOMIC INSTITUTIONS OF CAPITALISM: FIRMS, MARKETS, RELATIONAL CONTRACTING (1985); OLIVER E. WILLIAMSON, THE MECHANISMS OF GOVERNANCE (1996); Sanford J. Grossman & Oliver D. Hart, *The Costs and Benefits of Ownership: A Theory of Vertical and Lateral Integration*, 94 J. POL. ECON. 691 (1986); Paul L. Joskow, *Asset Specificity and the Structure of Vertical Relationships: Empirical Evidence*, 4 J.L. ECON. & ORG. 95 (1988).

Property rights theory is a further development of these ideas. *See generally* OLIVER HART, FIRMS, CONTRACTS AND FINANCIAL STRUCTURE (1995); Oliver Hart & John Moore, *Property Rights and the Nature of the Firm*, 98 J. POL. ECON. 1119 (1990). For an overview of the development of this literature, see Edward B. Rock & Michael L. Wachter, *Islands of Conscious Powers: Law, Norms, and the Self-Governing Corporation*, 149 U. PA. L. REV. 1619, 1630-36 (2001).

25. This idea was first set out in Michael C. Jensen & William H. Meckling, *Theory of the Firm: Managerial Behavior, Agency Costs, and Ownership Structure*, 3 J. FIN. ECON. 305, 310 (1976).

the economic idea of a "firm." While perhaps of little moment to economists, it is all-important to a coherent account of the law of corporate reorganizations. The law clearly demarcates which assets belong to which legal entities. A Chapter 11 petition raises the question whether the assets that legally belong to *this firm* should remain with *this firm.*[26] Coase asked the question of what explained whether a transaction would be located in a firm or in the market.[27] In the same spirit, reorganization law ought to begin by ascertaining the value of keeping *particular* assets together inside a *given* firm. (The alternative is for these assets to be returned to the market, where they may be reassembled in whole or in part in another firm.) We have a going-concern surplus (the thing the law of corporate reorganizations exists to preserve) only to the extent that there are assets that are worth more if located within an existing firm. If all the assets can be used as well elsewhere, the firm has no value as a going concern.[28] In the next two Parts, we show that such assets are increasingly hard to find. Even if certain assets are best used together with other assets, it often does not matter whether these assets are used in conjunction with other assets in a particular existing firm, or whether they are moved to an altogether different one.

II. FIRMS AND DEDICATED ASSETS

In this Part, we begin by delineating the attributes of financially distressed railroads that necessitated a law of corporate reorganizations. These corporations had dedicated assets that were being put to their highest valued use. While railroads have remained the common paradigm for corporate reorganizations, they were in fact not representative of firms in the Industrial Age. We examine the archetypal firm of the period and show that it depended relatively little on specialized assets. In our own time, specialized assets matter even less. The specialized assets of a firm today are often intangible, such as its business know-how. In a winner-take-all economy, such assets are likely to have value only for the firms that flourish and not the ones that encounter financial distress.

A. *Railroads and Going-Concern Value*

The usual account of the law of corporate reorganizations assumes that firms today that cannot pay their obligations are like the nineteenth-century

26. Indeed, large firms today increasingly consist of affiliated groups of legally distinct corporations. Adroit use of corporations allows investors to ensure that some of an enterprise's assets never enter the bankruptcy forum. *See* STEVEN L. SCHWARCZ, STRUCTURED FINANCE: A GUIDE TO THE PRINCIPLES OF ASSET SECURITIZATION (2d ed. 1993).

27. *See* Coase, *supra* note 23, at 390-92.

28. Human capital, of course, is one of the assets located inside a firm.

railroads.[29] At its inception in the late nineteenth century, the law of corporate reorganizations focused exclusively on railroads. Many railroads turned an operating profit, but could not hope to recoup their construction costs.[30] Their assets were being put to their highest and best use. Indeed, the iron rails and wooden ties connecting two cities had no use other than as a railroad. In addition, the railroads lacked a coherent capital structure. In the course of their construction, railroads issued dozens of different types of investment instruments, putting up different stretches of track and other assets as collateral for each bond.[31]

The options for dealing with an economically sound but financially distressed railroad in the nineteenth century were limited. A cash sale was simply out of the question. It cost $20,000 to $30,000 to build a single mile of track on the Great Plains.[32] In more difficult terrain, the cost would be $80,000 or more.[33] No single individual or group of individuals could amass sufficient capital to buy an established line as a unit. The law of corporate reorganizations came into being as a result. Lawyers and the investment bankers who sold the bonds in the first instance created it by extending the existing legal device of an equity receivership.[34] As the receivership developed, its salient features emerged: a stay of the collection activity of creditors, the infusion of operating funds, and negotiations among representatives of the various debtholders over a new capital structure. Judges entered the picture to resolve disputes and ensure that the agreed-upon capital structure was fair and equitable to those who dissented.

Modern Chapter 11 derives its principal features from the equity receivership. The assumption that the railroad is the prototypical firm in financial distress, however, is suspect. Even at its height, the Industrial Revolution did not depend upon large firms with specialized assets dedicated

29. *See* Douglas G. Baird & Robert K. Rasmussen, *Boyd's Legacy and Blackstone's Ghost*, 1999 SUP. CT. REV. 393, 397-408 (discussing how the modern law of corporate reorganizations evolved through judicial decisions).

30. For detailed descriptions of this history, see SKEEL, *supra* note 13, at 48-69; Douglas G. Baird & Robert K. Rasmussen, *Control Rights, Priority Rights, and the Conceptual Foundations of Corporate Reorganizations*, 87 VA. L. REV. 921, 925-36 (2001).

31. *See, e.g.*, STUART DAGGETT, RAILROAD REORGANIZATION 196-200 (1908) (noting that by 1889, the Atchison, Topeka, and Santa Fe had 7010 miles of track and 41 different types of bonds, each secured by different assets); 2 ROBERT T. SWAINE, THE CRAVATH FIRM AND ITS PREDECESSORS 1819-1948, at 169 (1948) (stating that the Frisco had 30 different issues of securities other than equipment trusts and terminal bonds, most of them secured by liens on single constituent lines).

32. *See* DAVID H. BAIN, EMPIRE EXPRESS: BUILDING THE FIRST TRANSCONTINENTAL RAILROAD 198 (1999).

33. *See id.* at 102.

34. *See* Robert W. Gordon, *Legal Thought and Legal Practice in the Age of American Enterprise, 1870-1920*, *in* PROFESSIONS AND PROFESSIONAL IDEOLOGIES IN AMERICA 70, 101-10 (Gerald L. Geison ed., 1983).

exclusively to them. In Part II.B, we illustrate this point by focusing on the iconic firm of the Industrial Revolution—the Lancaster textile mill.

B. *Ermen & Engels and Going-Concern Value*

Lancaster's textile mills dominated England's economy in the nineteenth century.[35] For the first time, cloth became readily available. Through its export, England amassed wealth on a scale never seen before. The average mill employed 400 workers.[36] Machinery was organized around a central steam engine. Gears and belts extending from it powered the spindles, and accidents were common.[37] By 1835, a quarter of a million people worked in the cotton industry.[38] Ermen & Engels is a representative example of these firms. Indeed, it is perhaps the iconic firm of the Industrial Revolution.[39] Formed in 1838, Ermen & Engels made sewing thread in a large, four-story factory.[40] Its "Diamond Thread" was sold with a distinctive logo of three red towers.[41]

Ermen & Engels, like other mills, brought with it a large measure of human misery. As one of the managers of Ermen & Engels observed:

> The atmosphere in the factories is generally both damp and warm . . . . Even if the ventilation of the factory is very good, the air is still foul, stuffy, and deficient in oxygen. It is polluted with dust and the smell of stale machine oil, with which the floor is generally impregnated.[42]

Until the 1840s, the average work week was seventy-six hours.[43] Half of the workers were children who spent most of their waking lives tying pieces of broken thread together surrounded by pulleys, belts, and whirring machinery.[44]

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35. The industry also gave rise to *Raffles v. Wichelhaus*, 159 Eng. Rep. 375 (Ex. 1864). With its two ships Peerless, the case remains a staple of first-year law school contracts courses.

36. P.L. COTTRELL, INDUSTRIAL FINANCE 1830-1914, at 23 (1980).

37. *See* FRIEDRICH ENGELS, THE CONDITION OF THE WORKING CLASS IN ENGLAND 185-86 (W.O. Henderson & W.H. Chaloner eds. & trans., 1958) (1845).

38. *See* J.R.T. HUGHES, FLUCTUATIONS IN TRADE, INDUSTRY AND FINANCE: A STUDY OF BRITISH ECONOMIC DEVELOPMENT 1850-1860, at 98 (1960).

39. The junior partner at Ermen & Engels actively wrote about social conditions in England and in Europe, and his perspective on markets and firms, formed while working at Ermen & Engels, became well known. For a representative example of his views, see KARL MARX & FRIEDRICH ENGELS, THE COMMUNIST MANIFESTO (1848). For a discussion locating Engels within the Lancaster cotton industry in economics, see George R. Boyer, *The Historical Background of the Communist Manifesto*, J. ECON. PERSP., Fall 1998, at 151.

40. 1 W.O. HENDERSON, THE LIFE OF FRIEDRICH ENGELS 200, 216 (1976).

41. *Id.* at 196, 200.

42. *See* ENGELS, *supra* note 37, at 174-75.

43. *See* Joel Mokyr, *Editor's Introduction: The New Economic History and the Industrial Revolution*, *in* THE BRITISH INDUSTRIAL REVOLUTION 1, 94 (Joel Mokyr ed., 2d ed. 1999).

44. *See* ENGELS, *supra* note 37, at 158-59.

Ermen & Engels merged with a number of other cotton spinning firms at the end of the nineteenth century, and with several others again at the end of the twentieth century.[45] Now operating under the name Coats plc, the company controls a large part of the world's market for sewing thread and has offices throughout Europe and North America, as well as in China and Vietnam.[46]

Many textile firms, however, did not enjoy the same success. Many were shut down.[47] It might seem that these factories were much like railroads and that the world would have been a better place if England had had a law of corporate reorganizations at the time.[48] The factory itself operated as a unit, and if the firm shut its doors, all the assets would lie idle and the workers would lose their jobs. If fights among investors shut the firm down, the value of the firm as a going concern would be lost.

But appearances are deceiving. Even though they employed hundreds, the capital requirements of firms in the textile business were much, much smaller than those of a railroad.[49] The partners at Ermen & Engels used their own assets for the £50,000 needed to build and equip a factory that employed 800 people.[50] Many firms began on a smaller scale and used the revenue generated from operating profits to expand.[51] But the total amount of capital required was in any event within the reach of individual entrepreneurs.

Moreover, the machinery used to spin cotton was not dedicated to a particular physical plant, nor were the machines in any plant interdependent. Even when a factory added more sophisticated equipment, it did not need to acquire entirely new machinery. One could, for example, convert a partially hand-powered spinner into one that was fully steam-powered by replacing the headstock, at a cost of only a fifth of a new one.[52] By the time of large firms

45. *See* 1 HENDERSON, *supra* note 40, at 230; MONOPOLIES & MERGERS COMM'N, COATS VIYELLA PLC AND TOOTAL GROUP PLC: A REPORT ON THE MERGER SITUATIONS 23 (1989), *available at* http://www.competition-commission.org.uk/reports/260coats.htm.

46. *See* Coats PLC list of worldwide offices, *at* http://www.coats.com/80256C240031E2B6/vWeb/wpSPAR5D6JY4 (last visited Nov. 23, 2002). The firm's junior partner did not expect market economies, let alone his own firm, to last nearly so long. *See* 1 HENDERSON, *supra* note 40, at 200.

47. *See* COTTRELL, *supra* note 36, at 35 ("[L]ongevity was the exception rather than the rule during the industrial revolution.").

48. England's first law allowing for the bankruptcy of firms as opposed to individuals was passed in 1844. This law focused on liquidating as opposed to reorganizing the firm. *See* V. MARKHAM LESTER, VICTORIAN INSOLVENCY: BANKRUPTCY, IMPRISONMENT FOR DEBT, AND COMPANY WINDING-UP IN NINETEENTH-CENTURY ENGLAND 222-23 (1995).

49. *See, e.g.*, Sidney Pollard, *Fixed Capital in the Industrial Revolution in Britain*, 24 J. ECON. HIST. 299, 314 (1964) ("In the industrialization process, the pressure for capital stems to a very large extent indeed from the needs of public utilities, rather than from the factories or the mines.").

50. *See* 1 HENDERSON, *supra* note 40, at 216.

51. *See* COTTRELL, *supra* note 36, at 23 ("Cotton firms expanded mainly by the retention of profits . . . .").

52. G.N. VON TUNZELMANN, STEAM POWER AND BRITISH INDUSTRIALIZATION TO 1860,

employing hundreds of workers, the equipment that was needed to spin thread became standardized and could be added incrementally at low cost. The value that a textile mill had as a going concern did not come from the way in which its assets were dedicated to the firm. What assets existed could be readily replicated. A mill could burn to the ground and it could be readily rebuilt.[53]

These attributes of the cotton mill share much in common with today's industry. The hard assets of modern businesses tend to be even less dedicated to a particular firm than those of these cotton mills. Retailers rent space in a shopping center. Manufacturers lease space in an industrial park. Because power sources are contained within machines, factories no longer have to be organized around a central source. Modern building materials—particularly reinforced concrete—make workspace flexible.[54] A factory can be readily transformed to make the same product differently or another product altogether. Just as the machines used for making thread became standardized, so too has the equipment used across a broad range of our economy.[55] Retailers can acquire standardized shelving, cash registers, and furniture.

Moreover, an increasingly service-based and information-based economy requires less in the way of hard assets. The law firm leases its space and may have no hard assets beyond office furniture and personal computers. The high-tech startup may have these same assets and no others. Even many of the firms that rely the most on large capital assets, such as airlines, are more like thread-makers than railroads. The capital assets of an airline are readily bought, sold, or leased. Individual airplanes can be added to the fleet or taken away as demand changes. The Boeing 747s owned by TWA on one day can be easily reconfigured and run by American Airlines the next.[56]

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at 191 (1978).

53. For example, the fire that destroyed Ermen & Engels's Bencliffe mill in 1871 had little impact on the firm. With the insurance policies that covered the hard assets, the firm was able to consolidate its production, build a new mill, and continue to flourish. *See* John Smethurst, *Ermen and Engels*, MARX MEMORIAL LIBR. Q. BULL., July-Sept. 1966.

54. *See* ROBERT LACEY, FORD: THE MEN AND THE MACHINE 104-05 (1986).

55. This development has been underway for a long time. It had already begun in the automobile industry in the 1920s, when General Motors shifted from using custom-built machine tools that could perform only one operation to general-purpose machine tools. *See* DAVID A. HOUNSHELL, FROM THE AMERICAN SYSTEM TO MASS PRODUCTION 1800-1932: THE DEVELOPMENT OF MANUFACTURING TECHNOLOGY IN THE UNITED STATES 263-301 (1984) (discussing similar developments at Ford Motor Co. factory); William S. Knudsen, *"For Economical Transportation": How the Chevrolet Motor Company Applies Its Own Slogan to Production*, INDUS. MGMT., Aug. 1927, at 65-68.

56. In what has become a conventional use of Chapter 11, TWA entered bankruptcy last year solely for the purpose of selling its assets to American Airlines. *See* Carey, *supra* note 1.

C. *Intangible Firm-Specific Assets and Going-Concern Value*

Firms also have intangible assets. Intellectual property accounted for the success enjoyed by Ermen & Engels's Diamond Thread. Godfrey Ermen developed a number of patents for cotton processing, including a particularly valuable one for polishing cotton thread.[57] Intellectual property is an even more important part of modern firms. Such assets, however, are not necessarily locked inside a particular firm. Godfrey Ermen made his fortune not only from the operating profits of his firm, but also from the royalties he collected from other thread makers who used his technology.[58] They produced the same commodity using the similar machinery and the same pool of workers.

Intangible assets can be firm-specific. The textile mills varied in their ability to use the machinery and the workers effectively. This know-how is, of course, an asset of the firm, but the firms that possessed this knowledge were the ones that flourished. The firms that failed were typically those that were young[59] and hence lacked exactly this asset. Few textile firms had any long-term debt.[60] Any inability to make ends meet resulted not from an inability to service debt but rather from an inability to produce revenue that exceeded ongoing operating costs. In these circumstances, financial distress was synonymous with economic distress.

In an industry where assets are fungible, what creates value in a firm is the ability to use assets better than one's competitors. John Rockefeller grew rich in part because he was able to cut small costs at many points in the production process. Every Standard Oil refinery sealed its five-gallon kerosene tin cans with thirty-nine drops of solder. Why thirty-nine? Some cans leaked when only thirty-eight drops were used, but forty drops were wasteful.[61] Henry Ford's Model T began as a midpriced car that relied on exotic alloys like vanadium.[62] It became cheap only because Henry Ford and the team he assembled discovered tens of thousands of small ways to reduce its cost and produce it in volume.[63]

Bankruptcy law, by its nature, does not see those firms that succeed. Ermen & Engels never needed a law of corporate reorganization to protect its blend of assets and ability. The question for us is not how much value is locked inside the firms that flourish, but how much is locked up in firms that

57. *See* 1 HENDERSON, *supra* note 40, at 200.

58. *See id.*

59. *See* COTTRELL, *supra* note 36, at 35 ("[L]ongevity was the exception rather than the rule during the industrial revolution. . . . The crucial factor was whether a firm could survive its first four or five years . . . .").

60. *See, e.g.*, Pollard, *supra* note 49, at 308 ("[B]anks provided little long-term capital because little long-term capital was demanded.").

61. RON CHERNOW, TITAN: THE LIFE OF JOHN D. ROCKEFELLER, SR. 180 (1998).

62. *See* LACEY, *supra* note 54, at 87.

63. *See id.* at 106-09.

fail. The textile mills that failed may have failed precisely because their know-how was second-rate.

Our economy today may have even fewer distressed firms that possess valuable know-how. The know-how that Ermen, Rockefeller, and Ford possessed was, to a large extent, scalable. Godfrey Ermen ran not one mill, but several.[64] The story repeats itself many times. An entrepreneur who thinks there is a better way to run a business—perhaps only slightly better—bets everything on it. If the entrepreneur turns out to be right, enormous success awaits. In today's economy, it can happen quickly. A single individual believes that people will spend serious money on espresso and cappuccino that are properly made and succeeds on a grand scale in less than a decade.[65] Such entrepreneurs succeed because capital markets and modern information technology let them place their products in almost every market. In other words, someone with a slightly better way of doing things can easily leverage this advantage across the economy as a whole.

A single business model can drive out others. McDonald's, Wendy's, and other national fast food chains occupy the niche the local coffee shop once enjoyed.[66] Office Depot, Staples, and Office Max are displacing the local stationery store.[67] Instead of an economy in which there are many small firms, each of which has developed its own way of doing things, we increasingly have uniform firms built on the same business model. Put differently, our economy rewards entrepreneurs who discover a successful business plan and learn how to replicate it.

Borders began as a single store in Ann Arbor, Michigan and, as it grew, it displaced many stores that also had developed their own ways of doing things.[68] The firms that failed in Borders's wake possessed intangible know-how. Every small bookstore has a process for acquiring new books, displaying them, and training a workforce to sell them. Know-how locked up in any individual bookstore, however, is not worth saving in a world in which another firm has an operating plan that is both better and scalable. The small bookstore

64. *See* Smethurst, *supra* note 53, at 9-10.

65. Starbucks sold its first cup of coffee in April 1984 and had only six stores in March 1987. By 1997, it had 1300 stores and 25,000 employees. *See* HOWARD SCHULTZ & DORI JONES YANG, POUR YOUR HEART INTO IT: HOW STARBUCKS BUILT A COMPANY ONE CUP AT A TIME 5, 58, 91 (1997).

66. National chains now occupy more than 50% of the restaurant market. Shirley Leung, *Food Fight: Local Restaurants Find Big Chains Eating Their Lunch*, WALL ST. J., July 9, 2002, at A1.

67. *See* Jeff Bailey, *Enterprise: Doing Battle with the Giants of Office Products*, WALL ST. J., Sept. 3, 2002, at B4. We must be careful not to overstate the point. Office Depot, Staples, and Office Max currently enjoy less than 15% of the $250 billion market in office supplies. *Market Slows, but Still Grows*, DSN RETAILING TODAY, Aug. 7, 2000, at 40, *available at* 2000 WL 11029772.

68. Christopher Caldwell, *Five Ways America Keeps Getting Better*, WKLY. STANDARD, May 27, 1996, at 28.

has a firm-specific know-how that will disappear, but this know-how is worthless in a competitive market when a competitor arrives whose know-how is better, even if it is only slightly better.

The losers are not simply the small firms, but also the larger ones that have different business models. Crown Books developed expertise in selling a relatively small number of the most popular books at deep discounts. Although this concept proved initially successful, it soon lost luster when competitors developed ways to both match this discount and offer a wider selection.[69] Any expertise that even a large firm possesses becomes worthless when its business model fails.

WalMart, the nation's largest corporation, produces nothing. It developed a way of putting manufactured goods into consumer hands at a cost lower than its competitors. To be sure, WalMart made substantial investments in infrastructure to give it these advantages. For example, Walmart's ability to monitor sales and ensure a continuous supply of inventory turns on a proprietary computer system.[70] But such know-how has value only to the extent that it gives WalMart an edge over its rivals. WalMart did not fail; Kmart did.[71] Indeed, it was Kmart's failure to put a similar system in place that contributed to its downfall.[72]

Hard assets are, of course, still dedicated to a particular enterprise. A brewery, a steel foundry, a power plant, a coal mine, and an oil refinery have assets whose highest and best use is to brew beer, smelt iron, generate power, extract coal, and produce petrochemicals at that location. These assets are dedicated to a specific purpose and cannot be easily transferred to either another use or another location. Firms constructed around such assets, however, have decreased in economic importance.

Railroads, steel manufacturers, and oil refineries dominated the economy in the first part of the twentieth century. The Pennsylvania Railroad, the New York Central, and a half dozen others each had more assets than any firm apart from U.S. Steel and Standard Oil.[73] Most workers were engaged in

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69. *See id.*

70. VANCE H. TRIMBLE, SAM WALTON: THE INSIDE STORY OF AMERICA'S RICHEST MAN 194 (1990).

71. Kmart's Chapter 11 filing is one of the few that most resembles the traditional reorganization in which a firm tries to sort through its problems under the watchful eye of a bankruptcy judge. Kmart's Chapter 11 filing took place in part because bankruptcy's peculiar rules governing the rights of landlords allowed Kmart's creditors to terminate leases and cap the damages that the landlords would have received outside of bankruptcy. *See* 11 U.S.C.A. § 502(b)(6) (West 2002). Such special bankruptcy rules, rules that serve only to transfer wealth from one group (real estate investors) to another (banks and other financial institutions), cannot be justified by traditional notions of corporate reorganization or indeed any other.

72. *See* Michael Levy & Dhruv Grewal, *Manager's Journal: So Long, Kmart Shoppers*, WALL ST. J., Jan. 28, 2002, at A14.

73. *See* ALFRED D. CHANDLER, JR., THE VISIBLE HAND: THE MANAGERIAL REVOLUTION

manufacturing.[74] Microsoft and WalMart did not exist. Our economy has undergone a continuous transformation since then, and the pace is accelerating. Intangible assets now make up almost half of the value of nonfinancial firms in this country.[75] The number of people working in the service industries has more than doubled over the last twenty years.[76] More than twice as many people today work in service industries as in manufacturing.[77] The hard assets in the service industries consist of general office space, desks, chairs, and word processors.

Moreover, many investments in specialized hard assets are made after the business plan has proved successful and are small relative to the revenues that the business already realizes. Henry Ford established the moving assembly line only after the Model T had been in production for five years.[78] The factory that produced annual revenues of $89 million cost only $6.4 million.[79] Even the annual cost to Ford of the plan to pay workers five dollars a day ($10 million) swamped these costs.[80] WalMart's large investment in its inventory system came only after its business plan had proved successful. Anheuser-Busch constructed new breweries only as demand for its beer grew.[81] Firms that make large investments in enterprise-specific assets tend not to be the firms that fail. Indeed, they commonly lead to the failure of other firms. As Ford profited from the Model T, others withered. Fifty years ago, small cities would have several breweries. These have disappeared.[82]

IN AMERICAN BUSINESS 503-13 (1977).

74. *See* Victor R. Fuchs, *The Growing Importance of the Service Industries*, 38 J. BUS. 344, 344 (1965).

75. *See* Greg Ip, *Mind Over Matter: Why Many Highfliers Built on Big Ideas Are Such Fast Fallers*, WALL ST. J., Apr. 4, 2002, at A1 (stating that 50 years ago, tangible assets represented 78% of the assets of nonfinancial corporations; today that figure is 53%).

76. *Compare* U.S. DEP'T OF LABOR, HANDBOOK OF LABOR STATISTICS 61 (1977), *with* HANDBOOK OF U.S. LABOR STATISTICS 69 (Eva E. Jacobs ed., 4th ed. 2000).

77. *See* U.S. CENSUS BUREAU, 2000 STATISTICAL ABSTRACT OF THE UNITED STATES tbl.867 (data as of 1997), *available at* http://www.census.gov/prod/1/gen/95statab/business.pdf.

78. *See* BRUCE W. MCCALLEY, MODEL T FORD: THE CAR THAT CHANGED THE WORLD 11 (1994) (noting that the first Model Ts were manufactured in 1908); JAMES M. RUBENSTEIN, MAKING AND SELLING CARS: INNOVATION AND CHANGE IN THE U.S. AUTOMOTIVE INDUSTRY 18 (2001) (noting that Ford installed its first moving assembly line in 1913).

79. *See* HORACE LUCIEN ARNOLD & FAY LEONE FAUROTE, FORD METHODS AND THE FORD SHOPS 3, 25 (1915). Many of the benefits of mass production do not derive from firm-specific investment in hard assets. Ford's team of engineers was able to reduce the amount of labor it took to build a Model T in half over the course of a single year without having to make any capital investment at all. RUBENSTEIN, *supra* note 78, at 23.

80. *See* RUBENSTEIN, *supra* note 78, at 23. While the move generated much positive publicity, Ford in fact had to make this concession because the conversion to the assembly line increased employee turnover to 380%. HOUNSHELL, *supra* note 55, at 257.

81. *See* F.M. SCHERER, INDUSTRY STRUCTURE, STRATEGY, AND PUBLIC POLICY 407 (1996).

82. We can make this point by comparing similar census data for three random

Even when firms make large investments in hard assets and face financial distress, there is still nothing to reorganize if what fails is the basic business plan. Webvan was an audacious attempt to revolutionize the way in which people bought groceries. A few clicks of the mouse, and the selected groceries would arrive at your doorstep at the time of your choosing. To implement this concept, Webvan created a large infrastructure designed to assemble produce and other perishables in large warehouses and distribute them across a large geographic region.[83] Much of the machinery in the warehouse was custom designed to ensure that groceries moved quickly from shelves to waiting vans for delivery.

Webvan's business plan did not work. Others might.[84] Webvan had substantial operating costs over and above its massive firm-specific investments. It could not generate a positive cash flow. Once the business plan failed, the assets specifically built to distribute groceries in this fashion no longer had any value. The assets were dedicated to an enterprise that was not itself viable. Chapter 11 could do nothing to change this, and hence Webvan's Chapter 11 consisted entirely of bringing about an orderly liquidation of the assets.

Iridium provides another example.[85] One of the largest business failures in history, Iridium built a five billion dollar network of satellites in low-earth orbit.[86] The business plan was based on the idea that this network could

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counties in 1958 and 1997. *Compare* U.S. CENSUS BUREAU, 1958 CENSUS OF MANUFACTURERS: PLANT LOCATION OF MANUFACTURING INDUSTRIES, BY COUNTRY AND EMPLOYMENT SIZE, *with* U.S. CENSUS BUREAU, 1997 ECONOMIC CENSUS, MANUFACTURING SERIES, *available at* http://www.census.gov/prod/ec97/97m31-wv.pdf (Cabell County, West Virginia data), http://www.census.gov/prod/ec97/97m31-mi.pdf (Jackson County, Missouri data), and http://www.census.gov/prod/ec97/97m31-mn.pdf (Hennepin County, Minnesota data). In 1958, Cabell County, West Virginia, had two breweries (one of which employed almost 50 people); it had none in 1997. Jackson County, Missouri also had two breweries in 1958 (one of which employed over 100 people) and none in 1997. Hennepin County, Minnesota, had two large breweries (each with over 100 workers) and none in 1997. There has been a proliferation of microbreweries, but these are a trivial fraction of domestic beer production. In 2000, Anheuser-Busch had a market share of 49.7%, Miller 21.3%, Coors 11.6%, and Pabst 4.5%. Imports counted for approximately another 10%. *See* Sarah Theodore, *Beer's on the Up and Up*, BEVERAGE INDUSTRY, Apr. 1, 2001, at 18, *available at* 2001 WL 14821103. The large domestic beer manufacturers enjoy significant economies of scale. *See* SCHERER, *supra* note 81, at 410.

83. *See* WEBVAN GROUP INC., REGISTRATION STATEMENT UNDER THE SECURITIES ACT OF 1933, at 3 (Aug. 6, 1999). Webvan initially focused on the San Francisco Bay Area.

84. Peapod, for example, is still in business, and it relies on preexisting grocery stores, rather than its own warehouses. For a description of Peapod's operations, see http://www.peapod.com/corpinfo/peapodFacts.pdf.

85. For information about Iridium, its history, and its bankruptcy proceedings, see David Barboza, *Iridium, Bankrupt, Is Planning a Fiery Ending for Its 88 Satellites*, N.Y. TIMES, Apr. 11, 2000, at C1; Jonathan Sidener, *Grand Telecommunications Scheme Set in Motion*, ARIZ. REPUBLIC, Mar. 26, 2000, at D1; Peter Spiegel, *Dishing Out Data*, FORBES, Jan. 24, 2000, at 110.

86. *See* Barboza, *supra* note 85.

capture one percent of the world market for cell phones. The idea was that at least this many users of cell phones needed to be able to use a phone that would call any other phone in the world from anywhere in the world, and would pay a hefty premium for such a service. Like Webvan, the business idea required a large investment in dedicated assets with a long development period. By the time the network came into operation, however, cell phone technology with a shorter development cycle and less dependence on large, upfront, enterprise-specific investment had outstripped it in both convenience and costs. Few people were far enough away from ordinary phone service that they wanted to spend several dollars a minute for a brick-sized Iridium phone that could be used only outdoors.[87]

Once Iridium's business plan failed, its dedicated assets had little value. The satellites were almost burned up in the atmosphere because even the expense of maintaining them in orbit was high relative to the revenues they could generate.[88] Iridium was a firm built entirely of assets that had no use in any other configuration. But when it failed, this point was irrelevant.[89]

In short, many assets work equally as well in one firm as another. Other assets that are tailored to a specific firm may not represent a source of value but the source of failure. Our point here is a cautionary one. One can point to neither the size of a firm alone nor the existence of firm-specific assets to conclude that corporation reorganization law has an important role to play in our modern economy. In the next Part, we show that even large firms with dedicated assets that produce a positive value cannot, standing alone, animate a robust law of corporate reorganizations.

III. SPECIALIZED ASSETS AND THE FIRM-MARKET BOUNDARY

This Part of the Article focuses upon economic enterprises that do indeed depend on specialized assets. Here again we make two basic points. First, the need for a law of corporate reorganizations as traditionally conceived depends crucially upon specialized assets that need to reside *in a particular firm*. The cost of alternatives to production inside a particular firm puts a ceiling on the going-concern surplus any given firm possesses. The boundary between transactions inside the firm and outside in the market is permeable even in the industries most dependent upon hard, fixed assets.

87. *See* Sidener, *supra* note 85; Spiegel, *supra* note 85.

88. *See* Spiegel, *supra* note 85.

89. As with many other large firms in Chapter 11, Iridium's assets were ultimately sold to a newly formed entity, in this case for $25 million. *See* Barboza, *supra* note 85. Its principal customer was the military. Ocean drilling platforms and other remote industrial users constitute the remainder of the customer base. *See* Yuki Noguchi, *Iridium Finds Itself in a Contractual Bind; Va. Firm Must Commit to Satellites, Even as Rivals Pursue New Technologies*, WASH. POST, May 23, 2002, at E5.

We then focus upon what may be the most important specialized assets in our economy: teams of individuals that have, over time, developed specialized expertise that cannot be transplanted wholesale to others. Even here, however, the problem of keeping a team intact is different from the problem of preserving a particular firm. Not all of the workers in a firm are part of the team that gives the enterprise value and not all of the members of the team need to work for the firm. While maintaining a successful team may be a challenge, it is not one to which bankruptcy law is a primary response. To illustrate both ideas, we use examples drawn from the automobile industry.

A. *Dedicated Assets and the Early History of Automobile Manufacturing*

Many entrepreneurs started automobile companies at the start of the twentieth century. Over 500 car companies were formed in this country between 1900 and 1908.[90] The backers of the first car makers faced the familiar challenge of bringing a prototype into production. The designer of their car was often someone who possessed great engineering skills, but who knew nothing about putting the car into production. The experience of the backers of the Detroit Automobile Company captures the basic problem. In 1899, investors together pooled $150,000—perhaps the largest amount yet assembled behind a car company.[91] They put their trust in an engineer whose prototype was perhaps the best car made up to that time. But the engineer, rather than trying to put the prototype into production, spent the firm's capital designing a wholly different kind of vehicle—a delivery truck.[92]

Less than a year later, neither had been brought to market, and the designer complained he was undervalued. The firm closed, but the same group backed this designer again some months later. When he again showed an inability to produce the car he designed, his backers brought in the head of Detroit's finest machine shop as a consultant. A short while later, they made the consultant their chief executive officer and threw out the designer.[93] The new CEO was Henry Leland.

Henry Leland was born in Vermont, trained as a mechanic, and worked at Colt Revolver and other arms factories. He excelled at making finely machined and interchangeable parts. After moving to Detroit, he began to produce internal combustion engines. Once put in charge of the company, Leland took the design that his predecessor had made, substituted a motor of his own design, and proceeded to manufacture the car.[94]

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90. *See* LACEY, *supra* note 54, at 62-63.

91. *See id.* at 46. The amount of resources necessary to start an automobile company was orders of magnitude less than what was needed for a railroad and was easily in the reach of a handful of individual investors.

92. *See id.* at 47-48.

93. *See id.* at 61.

94. *See id.* The firm's name was changed to Cadillac soon after Leland's arrival. The

The key to the production of automobiles came from milling each metal part precisely. Assembly of the car no longer required trained mechanics to get the pieces to work together. Leland stunned automobile builders in England when he disassembled three of his cars, mixed the parts together and then reassembled them. It was no accident that one of the first leaders in the automobile industry began in the arms industry, the place where the production of machines with interchangeable parts began. Leland's expertise—in particular his ability to organize the production and assembly of finely milled metal components—made the company successful.

But Leland's initial contributions to the firm came in his capacity as an outside consultant. Indeed, at the time he started this work, he was also making motors for Ransom Olds, a car already in quantity production.[95] The need for Leland's expertise did not necessarily require that he be an employee as opposed to an outside consultant. Nor did his ability to manufacture precision parts for one firm preclude him from making different parts for another firm.

The first automobile makers in fact were little more than designers who assembled components acquired from others.[96] For example, the designer Leland displaced founded yet another firm after being shown the door. This time he farmed out most of the manufacturing. The C.R. Wilson Carriage Company made the car's wooden body shells and leather upholstery. The Prudden Company produced the wheels. For the mechanical components, he turned to John F. and Horace E. Dodge, two young brothers who made mechanical components for steam engines, bicycles, and firearms. Like Leland, they had already produced parts for Ransom Olds. The firm spent $384 on components for each car and only twenty dollars on assembling them.[97]

The early days of the automobile industry shows how highly engineered and complicated products made to fine tolerances can be produced through contracts in the market place as well as inside a firm. This ability to conduct business through contracts as easily as inside a firm is increasingly common today. As communication costs, transportation costs, and contracting costs drop, it has become easier to produce goods without creating a traditional firm. For example, two entrepreneurs began the Boston Brewing Company. They developed their own recipe and proprietary yeast strains and then contracted out the brewing of Sam Adams beer to others. A team of brewmasters ensures that each contractor conforms to company standards. For many years the

investors no longer cared for the original name (the Henry Ford Company) after they rid themselves of their brilliant but unreliable designer. *See id.*

95. *See* ARTHUR POUND, THE TURNING WHEEL: THE STORY OF GENERAL MOTORS THROUGH TWENTY-FIVE YEARS 1908-1933, at 102-03 (1934).

96. *See* LACEY, *supra* note 54, at 70.

97. *See id.* at 70-73.

Boston Brewing Company's only brewery was a small one used to develop and test recipes.[98]

By contracting in the marketplace, business enterprises can flourish without owning any hard assets dedicated to the task at hand. Monorail Corporation sells computers but owns nothing. It leases an office building and has contracts with computer manufactures. When it gets an order, it sends the order to the appropriate manufacturer. FedEx delivers the finished computer to the customer.[99] An entrepreneur who wants to bring a new shoe to market today hires a designer, finds an offshore manufacturer, and negotiates a deal with distributors without investing in any hard assets or indeed ever leaving her desk. The rise of business-to-business electronic commerce makes it easier to transact in the marketplace and hence makes asset-specialization inside the firm less important.

Creating such a network of contracts can be costly. If the beer, the shoe, or the computer fails in the marketplace, the resources dedicated to producing it will become worthless and the entrepreneurs who supported the venture will lose a lot of money. But the need to make product-specific investments does not require a commitment to keeping any particular firm in existence or indeed any firm at all. Even if the product a firm makes is valuable, the firm itself may have no value as a going concern.

What applies to hard assets applies to an even greater extent to intangible assets. Products may have intangible good will associated with them, but nothing requires that a particular entity survive in order for such assets to survive. For example, when the company that made Ballantine beer failed, the name and the distribution network were sold to Falstaff.[100] The beer continues to be sold, even though the brewery itself closed a quarter century ago.[101]

Return again to the designer who oversaw the demise of the Detroit Motor Company and its successor. He persuaded a handful of investors to back him again and finally succeeded. He designed the car, but relied upon others to produce the components. His firm only assembled the different parts. This designer continued to spend much of his time tinkering and was not satisfied until, after six years, he reached his twentieth design.[102] As at other car firms of the period, each model (not all of which were produced and marketed) was named after successive letters of the alphabet—Model A, Model B, and so forth. Hence, Henry Ford called this car the Model T.

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98. BOSTON BEER CO. ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(D) OF THE SECURITIES EXCHANGE ACT OF 1934 (Mar. 31, 1997).

99. *See A Matter of Choice*, ECONOMIST, Dec. 22, 2001, at 74-75.

100. *See* Bloor v. Falstaff Brewing Corp., 601 F.2d 609 (2d Cir. 1979).

101. Greg Glaser, *The Late, Great Ballantine: Traditional American Ale*, MOD. BREWERY AGE, Mar. 27, 2000, at 4.

102. LACEY, *supra* note 54, at 78. For a brief discussion of the design and development of this car, see *id.* at 90-93.

The Model T represented a clean break from vehicles based on carriages designed to be pulled by horses, and relied instead on a lightweight frame of the steel alloy vanadium. The engine was cast from a single block. Another innovation was a lightweight steel casing that enclosed the transmission, axles, and other workings of the car. Keim Mills, a machine shop in Buffalo, developed this technology and convinced Ford to try it on his new model.[103]

Keim Mills's contributions to the design and the production of the Model T did not depend in any way on its assets or its workers being part of the Ford Motor Company. Keim Mills remained an independent entity for several years, and then it became a wholly owned subsidiary of Ford Motor Company. Some time later, workers at Keim Mills were foolish enough to think that they were essential to the production of the Model T and went on strike. Within three days, Henry Ford shut down the plant, and moved both the stamping presses and the key managers to Detroit.[104] The ownership of these machines and the loyalty of those in charge had value, but neither depended upon Keim Mills's existence as a going concern.

Firms that supply components to another manufacturer are commonplace because they rarely have hold-up power, and what power exists can typically be restrained through contract. A supplier may use stamping presses with custom dies, but the downstream supplier can own the machine and then lease it to the supplier.[105] Modern automobiles made in this country today contain over 10,000 parts and more than a third of those still come from outside suppliers.[106] The trend today in the car industry is toward car companies owning fewer assets and relying increasingly on contracts with suppliers.[107] The aircraft industry tells a similar story. The engine of the modern jetliner accounts for a large part of its value, and aircraft makers rely on others to supply it.[108] Airbus is a consortium of many manufactures, and for some models forty percent of the components are made by manufacturers in the United States.[109]

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103. *See id.* at 91-95.

104. *See id.* at 106.

105. *See* Coase, *supra* note 16, at 45.

106. *See* LACEY, *supra* note 54, at 70.

107. *See Incredible Shrinking Plants*, ECONOMIST, Feb. 23, 2002, at 71. In Japan, the reliance on suppliers in the automobile industry has always been even more pronounced. *See* Yoshiro Miwa & J. Mark Ramseyer, *Rethinking Relationship-Specific Investments: Subcontracting in the Japanese Automobile Industry*, 98 MICH. L. REV. 2636 (2000).

108. *See* AEROSPACE INDUS. ASS'N, AEROSPACE FACTS AND FIGURES 2000/2001, PERCENT OF CIVIL TURBOJET ENGINE MARKET BY MANUFACTURER AND AIRCRAFT MODEL, *available at* http://www.aia-aerospace.org/stats/facts_figures/ff_00_01/Ff00p086.pdf.

109. *See* AIRBUS, REGIONAL OVERVIEWS: NORTH AMERICA (2002), *at* http://www.airbus.com/media/north_america.asp.

B. *Firm-Specific Human Capital, Teams, and Going-Concern Value*

Even if the value of a firm resides largely in the team of key employees who work there, little may be lost if the firm disappears.[110] As the example of Keim Mills illustrates, the team can continue to work together at one or more other firms. Indeed, there are parts of the economy—such as the motion picture industry—in which firms often come into being for a single project.[111] The technicians and support staff are under short-term contract.[112] Nevertheless, we see a director and the same group of actors, producers, and cinematographers stay together for decades.[113] It makes no difference to the workers that they are working for a different entity or that the hard assets they are using (cameras, lights, and so forth) are different from the ones they used in the last project. Some of the projects make money; many do not.[114] Failure of one film to turn a profit may make it harder for the producer to induce investors to fund the next film. But the entity that created the film will disappear regardless of whether the film succeeds or fails.

Writing the contracts to ensure that teams remain together entails costs, but these costs are what we must squarely focus upon. It has nothing to do with whether a particular firm continues as a discrete legal entity. The synergy of the team makes it valuable, but the value may be independent of any firm. As long as the team can be reassembled easily, the firm for which it works at any moment has little value in its own right. Corporations are entities that, in theory, last forever, but this legal principle tells us nothing about whether the firm is worth keeping intact.[115]

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110. The idea that bankruptcy law serves to preserve valuable teams can be found in Benjamin Klein, *Vertical Integration as Organizational Ownership: The Fisher Body-General Motors Relationship Revisited*, *in* THE NATURE OF THE FIRM: ORIGINS, EVOLUTION, AND DEVELOPMENT, *supra* note 16, at 225 n.10.

111. *See* Susan Christopherson & Michael Storper, *The Effects of Flexible Specialization on Industrial Politics and the Labor Market: The Motion Picture Industry*, 42 INDUS. & LAB. REL. REV. 331, 334 (1989) ("[M]otion pictures are now only rarely made by a single major studio. . . . Instead, the major studio acts primarily as a financial investor, and an independent production company organizes the production. This company may exist solely to produce one film."); Robert G. Weiss & Alan G. Benjamin, *Feature Film Secured Financing: A Transactional Approach*, 15 UCC L.J. 195, 197 (1983).

112. *See* Christopherson & Storper, *supra* note 111, at 334.

113. Woody Allen is a prominent example of a filmmaker supported by a team. Allen directed 22 films between 1979 and 1997. Jack Rollins and Howard Joffe produced all of them. Susan Morse was the editor of each. Santo Loquasto was the costume designer for three films in the early 1980s, and then the production designer on every film after 1986. In the same period, Allen used only three cinematographers (Gordon Willis, Carlo Di Palma, and Sven Nykvist). *See* ERIC LAX, WOODY ALLEN: A BIOGRAPHY 419-28 (rev. ed. 2000).

114. *See* Paul Farhi, *Taming Movies' Titanic Costs; Despite Hits, Studios Losing Money*, WASH. POST, Mar. 13, 1999, at E1.

115. On the general tendency to create temporary firms to perform discrete projects, see Gaurang Mitu Gulati, William A. Klein & Eric M. Zolt, *Connected Contracts*, 47 UCLA L. REV. 887 (2000).

The willingness of the key personnel at Keim Mills to move to Detroit contributed in large measure to the ultimate success of the Model T.[116] The most important contributions of the Keim Mills team came from its skill in organizing automobile production, not from its expertise with respect to stamping metal parts or any other specialized skill. John Lee created the incentive compensation system that allowed Henry Ford to boast that he paid his workers five dollars a day.[117] William S. Knudsen decentralized automobile assembly at Ford. He established assembly plants all across the country and reduced the cost of a Model T by reducing transportation costs.[118] After leaving Ford, Knudsen brought the same ideas to General Motors. His reconfiguration of the Chevrolet Division required him to change where one of its principal suppliers (Fisher Body) ran its operations and how it conducted them. Just as Ford had relocated Keim Mills's metal stamping operations and folded them into his firm, Knudsen folded Fisher Body into General Motors.[119]

Human capital today is increasingly industry-specific, rather than firm-specific. Even in the most high-tech sector of the economy, the place where the skills of the workers tend to loom largest, we see high levels of worker mobility.[120] Worker mobility again has increased over the last several decades,

116. The experience of key people at Keim Mills was not uncommon. Alfred Sloan is most remembered for the organizational structure he put in place at General Motors. *See* ALFRED D. CHANDLER, JR., STRATEGY AND STRUCTURE: CHAPTERS IN THE HISTORY OF THE INDUSTRIAL ENTERPRISE 161 (1962); Patrick Bolton & David S. Scharfstein, *Corporate Finance, the Theory of the Firm, and Organizations*, 12 J. ECON. PERSP. 95, 104-05 (1998). But Sloan started as a supplier of roller bearings, and only started to work for General Motors after he decided to sell his firm to them. *See* ALFRED P. SLOAN, JR., MY YEARS WITH GENERAL MOTORS ch. 2 (reissue ed. 1986).

117. Faced with extraordinary employee turnover, Lee instituted a new wage structure. He maintained a base pay of $2.34, but a worker could earn five dollars a day if he worked for six months and qualified in other respects. *See* LACEY, *supra* note 54, at 117-18.

118. *See id.* at 273.

119. A core part of Knudsen's strategy at Chevrolet was to locate Fisher Body assembly plants adjacent to the plants that assembled the rest of the car. The move reduced transportation costs, reduced the chance of damage en route, and allowed for a higher level of coordination. *See* HOUNSHELL, *supra* note 55, at 263-301; Knudsen, *supra* note 55, at 68. Moving Fisher's car body assembly plants required a capital investment of about $5 million. *See* Ronald H. Coase, *The Acquisition of Fisher Body by General Motors*, 43 J.L. & ECON. 15, 29 (2000). This was a trivial sum compared with Chevrolet's annual operating expenses of half a billion dollars. Body assembly plants require little more than open factory space and a conveyor system. There is almost no asset specialization. *See* Baird, *supra* note 16.

Once Fisher and Chevrolet assembly plants were physically connected with each other and coordinated production day by day and hour by hour, however, it made little sense for Fisher to be anything other than a wholly owned part of General Motors. Economists who have sought to explain the Fisher Body-General Motors merger by invoking notions of specialized assets are mistaken. Ronald Coase, who did not make this mistake, had the benefit of visiting the plants shortly after the merger. *Compare* Klein, Crawford & Alchian, *supra* note 15, *with* Coase, *supra*.

120. *See generally* STEPHEN A. HERZENBERG, JOHN A. ALIC & HOWARD WIAL, NEW RULES FOR A NEW ECONOMY: EMPLOYMENT AND OPPORTUNITY IN POSTINDUSTRIAL AMERICA 30 (1998).

and workers are now more mobile because the skills they acquire at one firm are readily transferable to another.

Each computer programmer focuses on only a specific part of a program. That programmer does not need to know much about any other part of the program, only the task that her portion of the program contributes and the way to access the other portions of the program her part needs to function. As long as a software writer knows how to invoke other parts of the program, she does not need to know much about anything else. As a result, a software writer can move among different projects at her own firm or at a new one relatively easily. We can see the same force at work across the entire service sector. Lawyers develop highly specialized practices, but they can move from one firm to another. Accountants can audit books as easily at KPMG as at Ernst & Young. A surgeon develops skill in doing one type of operation, but she can perform that operation at many different hospitals.

The economic value of a firm may turn not so much on the discrete contribution of any individual, but rather on the way in which workers form an effective team.[121] The team Ford acquired from Keim Mills is one such example. Teams possess value over and above the value that each worker brings to the enterprise. The great investment banks have a complete turnover of their top employees every twenty years, but the firm's value remains locked inside the team that is in place. Cravath remains one of the world's finest law firms with a culture that has been sustained for more than a century. From the animators at Walt Disney in the 1940s to the engineers at NASA in the 1960s to the software writers at Microsoft in the 1990s, one can identify teams across a large range of activities. The histories of most successful enterprises tell of the group of individuals crucial to their successes. Often these individuals will have had little success in earlier or later ventures with other people. Being a successful team-builder is one of the most important skills of an effective manager.

Preserving the value of a team is often a challenge that a firm faces when it is in economic distress. The possibility of financial collapse can lead talented employees to look for another employer. When turnaround firms are brought in to run a firm that is in financial distress, one of the first challenges is discovering the key people who run the technology or who make the sales. Rarely do they discover managers with great strategic vision or financial acumen, but teams who effectively run the operation do exist. In the first few days of a large Chapter 11, one of the first issues before the judge is often the approval of a set of contracts designed to keep the key employees on board. The judge faces the task of distinguishing between self-dealing on the one hand and preserving a valuable asset of the firm on the other.[122]

121. For an economic model of team production, see Sherwin Rosen, *Learning by Experience as Joint Production*, 86 Q.J. ECON. 366 (1972).

122. For example, Enron proposed spending millions to keep key employees. *See* Jef

Even with respect to teams, however, one must be careful to distinguish the team from the firm. The organizational form and the team are independent of one another. The Keim Mills team contributed to the success of the Model T over many years, both when they worked for Keim and when they worked for Ford. Their identity as a team was independent of the legal entity that employed them and independent of that entity's relationship to the Model T.

The traditional law firm was a partnership of individuals that dissolved and reformed whenever someone entered or left the partnership. A law firm might also be a partnership of professional corporations. Such tax-driven organizational forms have little effect on the way in which the team works. Nor is the team coextensive with the enterprise itself. A law firm often possesses a number of different practice groups. Each practice group may work independently of the others and each can leave the firm as a unit and join another firm.

Indeed, in firms where the future revenue is simply the product of the work of the team, there is no magic to any particular firm. The ownership interests in the firm are nothing more than a claim on the future cash that the firm produces. There are no hard assets. Such firms often write contracts to ensure that a single individual member does not leave the firm and attempt to take clients with him to another firm. But the entire group can often move to a different organization. Put differently, teams have value, but their value need not be tied to any particular firm.

To be sure, we do see particular firms that exist for an extended period of time even though, at first glance, there is nothing to tie this group of workers to this firm. These firms owe their existence to providing a focal point for maintaining the team. Teams do not depend upon each member remaining. Indeed, successful teams are self-replicating. The string section of the Philadelphia Orchestra still possesses the distinctive sound that Leopold Stokowski created when he became its conductor in 1912.[123] Teams are formed with the idea of turnover in mind. Members come and go. Losing everyone on a team is much, much more than ten times the loss of ten percent of the team. When a team is successful, staying in a particular firm provides a convenient location for the bargaining necessary to maintain the enterprise. Each team member lacks comparable opportunities elsewhere, and those who hold out stand to lose if they fail to make a deal. The cost of keeping a team together turns on legal rules that are independent of those of the law of

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Feeley, *Enron Offering up to $130 Mln in Bankruptcy Bonuses*, BLOOMBERG NEWS, Mar. 29, 2002. Retention bonuses have become commonplace in the Chapter 11 cases in the telecommunications and high-tech industries. *See* Ann Davis, *Want Some Extra Cash? File for Chapter 11*, WALL ST. J., Oct. 31, 2001, at C1. On the general need to rewrite managers' contracts to induce them to stay with the enterprise, see Baird & Rasmussen, *supra* note 30, at 948-50.

123. *See generally* JOHN ARDOIN, THE PHILADELPHIA ORCHESTRA: A CENTURY OF MUSIC 9-11 (1999).

corporate reorganizations, such as the law governing restrictive covenants and covenants not to compete.[124]

But these are successful firms. They continue to exist only because they are successful. If they were not successful, there would be no reason to remain with this particular firm. To link the need to preserve a team with preserving a particular firm that is in financial distress, one needs to posit that the firm has assets that the team needs in order to flourish. One can readily identify firms where the firm has an asset that the team needs. Microsoft software writers need access to the Windows code; Disney animators needed the permission to render Mickey Mouse. A sales force may have value only if it is able to sell the firm's branded product or serve its client base. A software producer needs its key technology people to protect the value of its intellectual property. A robust law of corporate reorganizations must focus on firms that have valuable teams yet face financial distress.

In sum, the place in our economy where synergies most likely matter—teams of individuals focused on the same enterprise—is also a place where oftentimes little value is locked up inside and conditioned on the continuing existence in a particular firm. For a particular firm to be an integral part of the value of the team, it has to contribute unique assets to the mix. In the next Part, however, we show that even in such circumstances, the law of corporate reorganizations has little relevance. As we shall see, the ability of investors to contract among themselves and the presence of liquid markets for going concerns undercut the need for a law of corporate reorganizations still further.

IV. CONTROL RIGHTS, GOING-CONCERN SALES, AND THE NATURE OF THE FIRM

The law of corporate reorganizations requires a number of conditions to be present at the same time. In the previous two Parts, we focused on two of these. There must be assets dedicated to a particular economic activity, and, for some reason, these assets must be together in a firm. In Part IV, we explore two more conditions. A viable firm requires Chapter 11 only if those who control it cannot collectively make coherent decisions outside the bankruptcy forum. For the traditional account of corporate reorganizations to make sense, there must be firms whose owners are unable to write effective investment contracts.

Even if control rights are not allocated coherently, there is still no need for a collective forum that decides the fate of the firm if the firm can be sold in the marketplace as a going concern. The rise of such markets further undercuts the need for a traditional law of corporate reorganization. Indeed, the ability of

124. *See* Ronald J. Gilson, *The Legal Infrastructure of High Technology Industrial Districts: Silicon Valley, Route 128, and Covenants Not to Compete*, 74 N.Y.U. L. REV. 575, 627-28 (1999).

modern bankruptcy judges to take advantage of these markets explains many of the Chapter 11 filings in recent years.

A. *The Primacy of Control Rights*

A law of corporate reorganizations is needed only when the investors cannot make sensible decisions when the firm encounters trouble. When control rights are allocated coherently, no legal intervention is needed to ensure that decisions about the firm's future are made sensibly. Most large firms now allocate control rights among investors in a way that ensures coherent decisionmaking throughout the firm's lifecycle.[125] Just as modern cars are designed to take account of the possibility that they might crash, modern capital structures are designed with the possibility of financial distress in mind. For most firms, there is a coherent contract among investors that keeps financial distress from destroying the firm.[126] As the cost of contracting over control rights—the rights to deploy a firm's assets—continues to fall, we should expect the risk of costly internecine fights among investors to matter even less. In other words, the ability of investors to contract among each other over the control of a firm's assets further limits the value of a law that ensures that a firm's assets remain together.

Financial distress is an artifact of the capital structure the investors in a firm select. When a firm has a sole owner (as Ford essentially did for its first fifty years), there is no need for bankruptcy. Barring tort claims or other misadventures, the entrepreneur decides on her own whether to close the doors if there are too few buyers of its goods or services. Coherent decisionmaking can also take place even when a firm has multiple owners. Control rights are allocated among investors in any given enterprise through various investment contracts. If these rights are allocated sensibly, the shutdown decision will reside in the hands of those with the best information and the appropriate incentives to exercise it correctly.[127] If the transaction costs associated with such contracting are low enough, we once again have no need for a law of corporate reorganizations as traditionally understood.

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125. This observation, like others this Article brings together, has been made before. Barry Adler in particular has emphasized the way in which ex ante planning on the part of investors anticipates financial and economic distress and allocates control rights accordingly, so that, even without bankruptcy, few viable firms are threatened with the risk of inefficient liquidation. *See* Barry E. Adler, *A Theory of Corporate Insolvency*, 72 N.Y.U. L. REV. 343, 345, 367-75 (1997). In the same spirit, Alan Schwartz has shown how appropriately structured contracts can induce managers to make the value-maximizing decision whether to reorganize or liquidate the firm. *See* Schwartz, *supra* note 12.

126. Again, others have made this point. *See, e.g.*, Randal C. Picker, *Security Interests, Misbehavior, and Common Pools*, 59 U. CHI. L. REV. 645, 647-48 (1992).

127. As to the optimal time for shutting down an enterprise, see Douglas G. Baird & Edward R. Morrison, *Bankruptcy Decision Making*, 17 J.L. ECON. & ORG. 356 (2001).

Cash-flow rights parcel financial claims among various investors. As such, they do not affect or imperil going-concern surplus. They simply specify how the returns from an enterprise should be distributed. Control rights are another matter. Control rights allocate decisionmaking authority over the firm's assets and by their nature are more complex than cash-flow rights. Cash is a single metric; control is not. Control is the ability to make decisions regarding the deployment of assets, including human capital. These include decisions both large and small. They can range from the decision to merge with another firm, to stop producing a current product, to change suppliers, and so on. These rights are spread among various actors.

Control rights are state-contingent. When things are going well, control rights tend to be exercised by those inside the firm. The day-to-day decisions are made by the firm's managers and those to whom they delegate responsibility. The board of directors has the authority to remove control rights from one set of managers and give them to another. The board can be replaced by the shareholders.

When things are going poorly, however, control rights can shift to parties not traditionally viewed as inside the firm. Some of these shifts are intentional. A debt contract may give a lender the right to put a person on the board of directors in the case of financial distress. A board of directors can decide to remove the extant managers and bring in a turnaround firm. The traditional conception of corporate reorganizations starts with the belief that when a firm is in distress control rights will not be vested in the hands of someone who exercises them sensibly. Once the firm defaults on one or more loan covenants, creditors acquire control rights and may have the power to shut the firm down. It is the fear of the improper exercise of such power that lies at the heart of reorganization law.

Again, the railroads are the paradigmatic case. As already noted,[128] the capital structures of the great railroads were a mess, and this, in addition to the specialized and firm-specific nature of the firm's assets, required a law of corporate reorganizations. There were thousands of bondholders, scattered across the world, with security interests in dozens of different pieces of the firm.[129] These investors were incapable of speaking with a single voice, and it often was not clear how the railroad should be restructured. Which lines should be kept, whether the same managers should be in charge, and what capital structure made sense were questions to which the answers were often unclear. No part of the contract between the firm and its investors provided a mechanism for addressing these questions.

But the capital structures of the railroads were atypical for the firms of the time. As we saw in Part II, firms such as Ermen & Engels and Cadillac had only a handful of investors in their capital structures, and they effectively could

128. *See* sources cited *supra* note 31.

129. *See* DAGGETT, *supra* note 31, at 196-200.

speak with a single voice. The capital requirements of the railroads were on a scale that was never seen before and seen seldom since. This need drove the investment bankers to raise capital in the form of debt from thousands of individuals. Dozens of groups of creditors had the right to seize physically different assets of the railroad, including its bridges, its terminals, and the rails themselves. When the firms failed to generate the expected revenues, some mechanism was needed to place control into the hands of someone who could make the hard decisions, and the equity receivership was the forum created for this task.

The law of corporate reorganizations matters only when the capital structure of a firm fails to lodge control rights in the hands of someone who can exercise them competently. To be sure, there are times when the investment contracts fail to allocate control sensibly. Those with power may have incentives to exercise it inappropriately. The manager whose personal wealth is tied up in the firm's stock will have an incentive not to shut the firm down, even if the assets are worth more if sold piecemeal. The secured creditor who can only recover what it is owed has the incentive to force an inefficient sale of its collateral when the proceeds of the sale will pay the creditor in full. If either is vested with control rights, bad decisions can be made.

Yet how likely are investors to agree to contracts that misallocate power in this way? Railroads had primitive investment contracts. Initial investors had no idea what shape the railroad would take or even what other investors would participate in the enterprise. The best they could do was trust that J.P. Morgan and Robert Swaine would sort matters out for them if things turned out badly.[130] But we have learned a lot in the last century. Investors are now better able to anticipate financial distress. When writing investment contracts, they know not to allow managers unfettered control when things go poorly. By the same account, junior investors know that senior creditors should not be able to act opportunistically when the firm is worth keeping intact.

Many firms simply lack the sort of capital structure that makes a law of corporate reorganizations even relevant. Nearly a third of small businesses have no institutional debt.[131] The enterprises whose future is most uncertain tend to be small businesses when they are just starting. Early in their life cycle, these firms rely largely on equity investments and loans from insiders. The assets are often leased. Hundreds of restaurants may open and close in a given year in a large metropolitan area, but only a handful ever end up in bankruptcy.[132]

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130. *See* Baird & Rasmussen, *supra* note 30.

131. *See* Mitchell A. Petersen & Raghuram G. Rajan, *Trade Credit: Theories and Evidence*, 10 REV. FIN. STUD. 661, 670 (1997).

132. There are over 7000 restaurants in the Chicago area. *See* U.S. CENSUS BUREAU, ILLINOIS: 1997 ECONOMIC CENSUS: ACCOMMODATION AND FOODSERVICES GEOGRAPHIC AREA STUDIES 15 (showing 7392 restaurants and eating places in Cook County), *available at* http://www.census.gov/prod/ec97/97r72-il.pdf. Hundreds close their doors each year, but

High-tech firms may have capital requirements that require outside investors, but they also have sophisticated contracts expressly designed to ensure that control rights lie in the appropriate hands.[133] These startups have very little debt; moreover, those who extend debt do not look to the ability to grab collateral to ensure repayment.[134] Most financing comes from venture capital in the form of equity. But the venture capital contracts specify when control shifts to the venture capitalists. The venture capitalist selects the management team and can change it when the firm fails to meet specified milestones.[135]

To see how contracts can allocate control rights coherently in a failing enterprise, consider the demise of Webvan.[136] The assets of Webvan were dedicated to a grocery delivery business. The CEO was a successful businessman who enjoyed the confidence of the investors. If Webvan was going to succeed, it was with this CEO. The only question was the level of demand for Webvan's services. The investors decided exactly how long they were going to give the CEO to ascertain whether or not there was sufficient demand to suggest that Webvan may have a going-concern surplus. Only when it became clear that there was no market niche to fill did Webvan file for bankruptcy. All the important decisions were made outside of bankruptcy. Webvan had exhausted all its options before it filed for Chapter 11. The Chapter 11 was instituted not to reorganize but to sell off the assets in an orderly fashion. From beginning to end, control of Webvan's assets rested with those in the best position to make the strategic decisions.

Much of the law of corporate reorganizations (and indeed corporate law generally) is premised upon the idea that contracts set out control rights over the assets of the firm in a way that is fixed and rigid. Under this view, legal processes and rules are needed because exogenous events create a mismatch between incentives of the individual investors that possess control rights and what is in the best interests of the firm as a whole. As Barry Adler has pointed

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fewer than two dozen will try to reorganize in Chapter 11 and, of these, only a handful will succeed. *See* Morrison, *supra* note 8 (describing how, in 1998, only 20 restaurants filed for Chapter 11 in the Eastern Division of the Northern District of Illinois, a region encompassing Cook County and several others).

133. *See* STEVEN N. KAPLAN & PER STRÖMBERG, FINANCIAL CONTRACTING THEORY MEETS THE REAL WORLD: AN EMPIRICAL ANALYSIS OF VENTURE CAPITAL CONTRACTS 1-2 (Nat'l Bureau of Econ. Research, Working Paper No. 7660, 2000).

134. *See* Ronald J. Mann, *Secured Credit and Software Financing*, 85 CORNELL L. REV. 134 (1999).

135. *See* KAPLAN & STRÖMBERG, *supra* note 133, at 1-2; Thomas Hellmann, *The Allocation of Control Rights in Venture Capital Contracts*, 29 RAND J. ECON. 57, 57-61 (1998); Steven N. Kaplan & Per Strömberg, *Venture Capitalists as Principals: Contracting, Screening, and Monitoring*, 91 AM. ECON. REV. 426, 427 (2001).

136. On the initial conception and financing of Webvan, see RANDALL E. STROSS, EBOYS: THE FIRST INSIDE ACCOUNT OF VENTURE CAPITALISTS AT WORK 30-47, 195-205 (2000).

out, however, control rights are typically defined dynamically.[137] They change as the firm's fortunes change, typically in ways that ensure that such mismatches do not occur.

Control rights are allocated through the corporate charter, the securities the firm issues, and the debt contracts into which it enters. Legal rules themselves also grant control rights. Many of these are default rules that investors change by agreement. Equity investors exercise control rights by voting their stock and by sitting on the board of directors. Holders of debt instruments exercise control through their power to declare defaults. The power to declare defaults can give them the de facto power to hire and fire the managers and the ability to review decisions the managers make about how the assets are to be used.

Those who exercise control rights can be incompetent. Part of the challenge is to devise a robust mechanism to dislodge them at the right time. Incentives alone do not ensure a successful decisionmaker. Some managers are simply not up to snuff.[138] Even the most carefully crafted compensation contract cannot turn every manager into Jack Welch.[139] The trick is to allocate control rights in a way that ensures that the managers can stay when they perform well but are ousted when they do not.

The configuration of control rights at a firm at any moment turns on both the nature of the business it is in and the economic conditions in which it finds itself. Consider, for example, a firm that makes fashions for teenagers. Because the clothes themselves are made overseas, the firm's suppliers (or their intermediaries) are likely to insist on a standby letter of credit that insures they will be paid.[140] To obtain such a letter, the firm will have to have a credit line with a bank. Apart from this credit line, however, the principal challenge facing the owners when designing the capital structure is to find the right CEO, to give that person the right set of incentives, and to put a governance structure in place that removes the CEO if necessary.

While the investors can make judgments about the sort of person most likely to make these decisions well, they cannot know perfectly nor can they review decisions as the CEO makes them. Quite the contrary, to give any investors the ability to micromanage the CEO's fashion judgment invites disaster. The CEO is hired precisely because she is supposed to have a

137. *See* Adler, *supra* note 125, at 345.

138. Indeed, some may be corrupt. *See, e.g.*, *'Crazy Eddie' Sentencing Is Weighed*, N.Y. TIMES, Mar. 23, 1994, at D4 (describing how Eddie Antar, founder of the Crazy Eddie electronics chain, was convicted of illegally pocketing $75 million by selling stock when he knew that its price was artificially inflated through bogus inventory and sales figures).

139. *See* Hal Lancaster, *Succeeding a Legend Is Tough on a CEO*, WALL ST. J. EUR., Nov. 13, 2001, at 11 ("Rarely has any CEO garnered the reverential and universal acclaim heaped on Mr. Welch, who built GE into the role model for modern corporations."). For an account of Welch's experiences at General Electric, see JACK WELCH, STRAIGHT FROM THE GUT (2001).

140. For an example of litigation growing out of such an arrangement, see *P.A. Bergner & Co. v. Bank One (In re P.A. Bergner & Co.)*, 140 F.3d 1111 (7th Cir. 1998).

comparative advantage on this score over the investors. These investors need a capital structure that gives the CEO slack for a season or two, but still allows the investors to dump her if she has not been successful. Apart from the credit line (which may never be drawn upon), the firm may consist largely of equity, but held by a relatively small number of investors who also sit on the board.[141]

By contrast, consider a startup firm that is designing a new piece of software. The expertise to build and design the software resides with the entrepreneur who founds the firm. The only question for the outside investors is how long to continue to develop the product before giving up. Such a firm may also consist entirely of equity, but the investors will insist upon a contract that shifts control rights over the firm to them in bad states of the world.[142] Moreover, when additional capital is required (either from the old investors or a new one), the equity interest of the owner-manager is diluted according to a fixed formula. This structure puts the liquidation decision in the hands of the venture capitalist, and the dilution mechanism allows the firm to continue to access capital markets as long as its venture is worth pursuing.

For a mature firm with steady cash flows, investors might prefer a different arrangement of control rights. The danger here is that those in charge will fail to focus on maximizing cash flow.[143] The investors will put in place a capital structure that requires the people running this firm to distribute cash on a continual basis. They can do this by having the firm issue short-term debt that requires the managers to go to the market repeatedly.[144] Alternatively, they may have the firm pay cash dividends to the stockholders.[145] Finally, they can put substantial leverage in the company that requires the payment of periodic interest on the pain of default. Failure to live up to any of these obligations—the ability to turn over short-term debt, the payment of dividends, or the default on long-term debt—can spell the beginning of the end for the current managers.

The primacy of control rights can explain what otherwise appear to be anomalous capital structures. Return, for example, to Iridium. The largest single shareholder was Motorola. It was also building all the equipment for the system and would run it once it was built. Iridium initially had no debt in its capital structure, and Motorola guaranteed the initial round of outside debt.[146] The equityholders apart from Motorola were investors who would control

141. *See* Harry DeAngelo, Linda DeAngelo & Karen H Wruck, *Asset Liquidity, Debt Covenants, and Managerial Discretion in Financial Distress: The Collapse of L.A. Gear*, 64 J. FIN. ECON. 3 (2002).

142. *See* Kaplan & Strömberg, *supra* note 133.

143. *See* Michael C. Jensen, *Agency Costs of Free Cash Flow, Corporate Finance, and Takeovers*, 76 AM. ECON. REV. 323 (1986).

144. *See id.*

145. *See* Frank H. Easterbrook, *Two Agency-Cost Explanations of Dividends*, 74 AM. ECON. REV. 650, 654 (1984).

146. *Motorola Guarantees Iridium's $750M Debt Deal; $2.4B Deal Pending*, MOBILE SATELLITE NEWS, May 2, 1996, *available at* 1996 WL 8615253.

ground stations for the system across the world. The revenues that Motorola and the others would enjoy would turn not only on the value of their investment instruments, but also on how much business the firm did. During this period Iridium was not so much a discrete firm as it was a joint venture among partners that each stood to gain were the venture to prove successful. Iridium, like a railroad, required a large up-front commitment of capital, but unlike the nineteenth-century railroad, the capital markets were sufficiently liquid to allow control rights to be coherently allocated at the outset.[147] As Iridium's financial troubles deepened, Iridium entered into an $800 million credit facility with bank lenders who insisted on a number of new covenants. These established quarterly milestones for both revenues and subscriber levels. Breach of these covenants would make the principal on the loans due and owing and effectively give control of the firm to the banks.[148]

Iridium is an unusual case, but the appearance of a secured credit facility that gives power to banks in the event the debtor's fortunes fail to improve is increasingly the norm. In the typical case, there is a revolving credit facility put in place when financial distress appears on the horizon. The facility operates as follows. The lead lender receives all the accounts and releases cash to the debtor according to a prescribed formula. It can terminate the arrangement (and close down the firm, as it will have no operating capital) in the event of default, and a default can be declared when the lead lender finds that there are "reasonable grounds for insecurity." With such a facility in place and the control that the lead lender has over cash collateral, a single entity can decide how to use the firm's assets. It can monitor the firm's cash flows closely. Its ability to declare a default allows it to insist that the firm hire a turnaround specialist who supplements or in some cases replaces the existing managers.[149]

The revolving credit facility, installed as the firm begins to have trouble making debt payments, also gives the lender who runs it the ability to control the firm inside of Chapter 11 as well as out. Most large firms that enter Chapter 11 lack enough free cash flow to operate without debtor-in-possession (DIP) financing.[150] The control that the lender has over cash collateral makes it hard to enter into a financing arrangement without its explicit blessing.[151] Its blessing can be contingent upon many things, including a requirement that the

147. There is, however, a curious similarity between the railroads and Iridium. Like the railroads, Iridium's largest investors also owned the firm that put the assets in place. This exposed the public equity investors in the underlying firm to substantial risk. Indeed, the financing of the Union Pacific Railroad (the Crédit Mobilier affair) was one of the great financial scandals of the nineteenth century. *See* BAIN, *supra* note 32, at 171-72.

148. *See* BENJAMIN C. ESTY, FUAAD A. QURESHI & WILLIAM OLSEN, IRIDIUM LLC (Harvard Business School Case Study 9-200-039).

149. *See* Douglas G. Baird, DIP Financing and Corporate Governance (July 2002) (unpublished manuscript, on file with author).

150. *See id.*

151. *See* 11 U.S.C.A. § 364 (West 2002).

firm be sold as a going concern within a fixed period of time.[152] At other times, the lender may give the current managers one more chance to turn around the fortunes of the firm, but it may be time constrained. A sale of assets may not be required immediately, but the DIP lending agreement may require that the assets be sold if the firm is not cash flow positive in a relatively short time. In other words, it is the lender, and not the Bankruptcy Code or the bankruptcy judge, that is deciding how long the managers will have to make a go of things.

These revolving credit facilities and the practical control they give lenders over a firm are some of the most striking changes in Chapter 11 practice over the last twenty years. The reorganization law set out in the United States Code has remained largely unchanged, but the control that the debtor's managers once possessed in Chapter 11 proceedings has been greatly reduced.[153] For the firms that are likely to survive as going concerns, professional investors ensure that they remain in control, regardless of whether the firm is inside of bankruptcy or out.[154]

We are not troubled by such a shift in bankruptcy practice. As a comparative matter, the senior lender who will not be paid in full will more likely exercise control in a sensible fashion than will managers whose net worth depends on continuation or a bankruptcy judge whose training is usually not in business operations. Regardless of this normative judgment, however, little can be done to change this state of affairs. A change in the Bankruptcy Code to limit creditor control is unlikely to be effective. The senior lenders largely control the time of the Chapter 11 petition. Their investment contracts ensure that when the firm approaches financial distress, its continued operations depend on the willingness of the lender to continue the financing of ongoing operations. Hence rewriting the bankruptcy laws to limit the lenders' control inside of bankruptcy will simply make them increase the control they exercise outside of bankruptcy. Our principal point here, however, concerns the central premise of reorganization law—that firms in financial distress lack a coherent allocation of control rights. To be sure, a firm might find itself caught up in a sudden crisis, and no single investor may be able to take control. But these cases are increasingly rare. Even when they do arise, the traditional reorganization is still unnecessary as only the assets can be sold readily.

152. The financing of TWA's Chapter 11 was contingent upon a sale of the firm being consummated within 90 days of the filing of the petition.

153. The ability of managers to control the Chapter 11 process was one of the constant criticisms of Chapter 11 during the 1980s. For example, see Lynn M. LoPucki, *The Debtor in Full Control—Systems Failure Under Chapter 11 of the Bankruptcy Code?*, 57 AM. BANKR. L.J. 247, 272-73 (1983).

154. This is true, of course, only as a first approximation. Chapter 11 still allows the managers and out-of-the-money creditors to exert some influence.

B. *Going-Concern Sales and the Changing Bankruptcy Forum*

Going-concern sales have long been the method of choice for dealing with firms that could not pay their debts. They were commonplace in the textile industry during the era of Ermen & Engels. Given the developments in capital markets, such sales are increasingly possible. Thus, asset sales can occur either when control rights are allocated to those with their money on the line, or when control rights are not so well-assigned. In either case, the buyer of the assets takes them and applies a new capital structure.

The market for selling firms as going concerns is well-developed.[155] In such a world, a straightforward path exists for keeping the assets of the firm together and reestablishing coherent control rights. In Sweden auctions are the only path available for financially distressed firms that end up in bankruptcy, and they seem to work well there even for small firms.[156] Indeed, the principal obstacles standing in the way of selling a financially distressed firm outside of bankruptcy in this country may stem from impediments the legal system puts in place.

Under state law, if the firm that is being sold merges into the buyer, the buyer gets the assets and the liabilities of the old firm. In theory, however, one can buy all the assets in return for cash.[157] Several obstacles stand in the way, however. First, a buyer of the assets takes them subject to what security interests the firm's creditors enjoy.[158] Second, the de facto merger doctrine may give even unsecured creditors the right to reach the assets after they have been sold. In some jurisdictions, a court enjoys the power to recharacterize a transaction that the parties labeled as an outright sale of assets as a merger in which the buyer assumed the liabilities of the old firm as well as the assets.[159]

155. *See* Robert G. Hansen, *Auctions of Companies*, 39 ECON. INQUIRY 30, 30 (2001) ("From 1989 to 1998, 19,593 private companies were reported to be bought and sold in the United States, many through an auction process. The total value of these transactions was in excess of $315 billion. In addition, from 1989 to 1998, there were 13,134 reported divestitures of divisions, subsidiaries, or product lines; the value of these transactions was in excess of $900 billion.").

156. *See* Karin S. Thorburn, *Bankruptcy Auctions: Costs, Debt Recovery, and Firm Survival*, 58 J. FIN. ECON. 337, 340 (2000) ("This study concludes that the Swedish auction bankruptcy system promotes firm survival rates, bankruptcy costs, and debt recovery rates that compare favorably with the reorganization system in the U.S.").

157. *See* ROBERT CHARLES CLARK, CORPORATE LAW § 10.5, at 437 (1986).

158. *See* U.C.C. § 9-315(a) (2001). Buyers of goods in the ordinary course take free of security interests, *id.* § 9-320(a), but a buyer of all of the firm's assets is not a buyer in ordinary course, *id.* § 1-201(9).

159. For cases discussing the de facto merger doctrine, see *Philadelphia Electric Co. v. Hercules, Inc.*, 762 F.2d 303 (3d Cir. 1985); *Knapp v. North American Rockwell Corp.*, 506 F.2d 361 (3d Cir. 1974). For a general discussion of the doctrine, see CLARK, *supra* note 157, § 10.7; 3 JAMES D. COX, THOMAS LEE HANZEN & HODGE O'NEAL, CORPORATIONS § 22.7 (1995).

A potential buyer of the assets of a distressed firm may balk at a purchase that can bring with it more liabilities than assets.

When the number of creditors of a financially distressed firm is small enough, sales do proceed. When the number of investors is large, however, those in control of the firm (typically its senior creditors) are likely to use Chapter 11 to sell the assets of the firm as a going concern. Chapter 11 provides a mechanism for selling assets free and clear of all claims even before a plan of reorganization is put in place.[160] A firm in financial distress that seeks to sell itself may thus turn to Chapter 11 not to rehabilitate a failing enterprise but rather to dispose of it.[161]

The case of Qualitech Steel is a typical modern Chapter 11 case.[162] Formed in 1996, Qualitech was supposed to exploit new technologies for manufacturing specialty steel. The two plants it built cost more than $400 million; both took longer than expected to build and were more expensive to operate than anticipated. By early 1999 it was still spending $10 million a month. The firm filed for bankruptcy. Everyone agreed that it should be sold as a going concern. A buyer was found and the sale was consummated within four months. This new use of Chapter 11 is one in which the decisions about the highest and best use assets are quickly removed from the process. It bears no resemblance to the reorganization of a large railroad or the restructuring of a large manufacturing operation.

In addition to the use of Chapter 11 to sell firms as going concerns, it is also used to implement a restructuring that those who control the firm cannot effect outside of bankruptcy because of barriers that a nonbankruptcy law puts in their way. The Trust Indenture Act prevents investors from writing contracts that allow investors to act as one. It stipulates that the payment terms on publicly held debt cannot be altered without the consent of the note holder.[163] Even when all would agree that a firm has a going-concern value, but that the

160. *See* 11 U.S.C.A. § 363 (West 2002). The general standard governing such sales is set out in *Committee of Equity Security Holders v. Lionel Corp. (In re Lionel Corp.)*, 722 F.2d 1063 (2d Cir. 1983).

161. The art of conducting such sales is far from simple, of course, in bankruptcy as elsewhere. Global Crossing, the second largest bankruptcy ever, entered bankruptcy in early 2002 with the idea of a speedy sale. *See Global Crossing Ltd. Files for Bankruptcy*, WALL ST. J., Jan. 29, 2002, at A3. In response to this filing, other investment groups launched bids for Global. *See* Lisa Bannon, *Sibling Rivalry: Gores Brothers Vie for Buyouts*, WALL ST. J., Apr. 9, 2002, at B1. The bankruptcy judge approved a sale by mid-summer. *See* Seth Schiesel, *2 Companies Agree to Buy Control of Global Crossing*, N.Y. TIMES, Aug. 10, 2002, at C3. But as quick as this sale was, in hindsight, it was not fast enough. Had Global Crossing's investors taken the first bid, they would have received much more for the firm's assets. *See id.*

162. The facts are recounted in *In re Qualitech Steel Corp.*, 276 F.3d 245 (7th Cir. 2001).

163. *See* Trust Indenture Act of 1939, § 316(b) (codified at 15 U.S.C.A. § 77ppp(b) (West 2002)). Its importance is the theme of Mark J. Roe, *The Voting Prohibition in Bond Workouts*, 97 YALE L.J. 232 (1987).

cash flow commitments of the firm are too high, the Trust Indenture Act makes an out-of-court restructuring difficult. Each note holder has an incentive to balk at writing down her note, hoping that the other note holders will make the necessary sacrifice. A prepackaged bankruptcy allows firms to overcome the holdout problems that the Act creates.[164] It allows a majority of the note holders holding over two-thirds of the debt to bind the minority.[165] Here again, rather than a traditional role, one for which it is no longer needed, Chapter 11 is instead being used to implement the wishes of those who control a firm's assets.

CONCLUSION

Chapter 11 can play its traditional role only in environments in which specialized assets exist, where those assets must remain in a particular firm, where control rights are badly allocated, and where going-concern sales are not possible. Our primary focus here has shown that large corporations no longer fit this paradigm. Chapter 11 cannot justify its continued existence on its ability to "save" such firms.

To the extent that any firms contain the necessary ingredients for an old-fashioned "successful" Chapter 11, they are likely to be small enterprises.[166] Firm-specific assets can exist in these environments, often in the form of the human capital of the owner-manager. The restaurant is worth much less without the celebrity chef, as is the jewelry store in a small city that rests upon the relationships the jeweler has developed over the course of decades.

Small firms are also more likely to have haphazard capital structures. Their size makes them more vulnerable to exogenous shocks. Unusually bad weather, a single lawsuit by a disgruntled employee, or a cost overrun on a building project can render them insolvent. Some creditors have had long-term relationships with the firm, but lack control rights or speedy recourse to legal remedies. Apart from the tax collector, these most commonly include small landlords and unions that are owed pension payments. Other creditors are owed money from a one-time interaction. In many small Chapter 11 cases, the

164. Prepackaged bankruptcies were initially authorized by the Bankruptcy Code when it came into effect in 1979. The routine use of such proceedings, however, only arose in the 1990s. *See* Robert K. Rasmussen & Randall S. Thomas, *Timing Matters: Promoting Forum Shopping by Insolvent Corporations*, 94 NW. U. L. REV. 1357, 1374-76 (2000). Roughly 10% of the Chapter 11 cases filed by publicly traded firms are prepackaged bankruptcies. *See* 2001 BANKRUPTCY YEARBOOK & ALMANAC 134.

165. One can thus view bankruptcy law as a shadow provision in all debt contracts specifying the circumstances as to when principal can be reduced without the bondholder's consent. The obvious question is why the law should mandate the voting requirements—half of the debtholders owning two-thirds of the debt—rather than allowing investors flexibility on this point.

166. For an empirical study of small Chapter 11 filings and the small extent to which Chapter 11 still serves its traditional role in this context, see Morrison, *supra* note 8.

precipitating event is someone other than an institutional lender trying to enforce a judgment (a disgruntled ex-employee, dissatisfied customer, contractor from a failed expansion effort). These are precisely the types of claimants who may not be the best at making sensible and level-headed decisions about the future of the firm.

Bankruptcy judges are asked to identify quickly who can make it and who cannot. There is evidence that bankruptcy judges do this job well.[167] But even granting that they do, we have to be realistic about the types of firms that are being saved. We have electrical subcontractors, mom-and-pop restaurants, and retailers with high mark-ups. There are few employees, and turnover of employees in these firms tends to be high. The principal value of preserving such small firms is that it allows their owners to continue to enjoy the psychic benefit of running their own business. The costs fall disproportionately on nonadjusting creditors. One can make the case for a law that facilitates the survival of such firms, but the case is not an easy or compelling one. The days when reorganization law promised substantial benefits are gone.

167. *See id.*

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