CONNECTED CONTRACTS

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This Article proposes the metaphor of connected contracts for understanding collaborative economic activity. "Connected contracts" refers to the interrelating agreements and relationships among the participants in a business venture. From the perspective offered by this metaphor, there are no firms, no predetermined hierarchies, no organizations with personalities of their own, and no a priori notions of ownership or control; there is no shareholder or managerial primacy and no centralizing "nexus." The view is from the bottom up rather than from the top down. Boundaries and governance are not central issues, nor do they loom in the background. There are no boundaries and there is nothing to govern. The connected contracts perspective is applied to an important aspect of joint activity—the putative bargain over control. Looking at business activity as bargains among individuals who agree to undertake a specific project leads to the insight that control of the venture is not automatically allocated to equity. The concept of an owner has little value. The connected contracts perspective suggests, among other things, that, all else equal, different capital structures can be viewed as representing different bargains over control. Capital structure is not irrelevant but reflects unique bargains over control in general and future decisions about projects in particular. The inquiry then broadens to encompass more participants and types of contributions and to speculate on how the connected contracts metaphor might affect thinking about a variety of topics in corporate and tax law, including piercing the corporate veil, insider trading, executive compensation, the taxation of corporations, and the differential taxation of debt and equity. Finally, and tentatively, the Article offers a list of criteria that might be used to judge the value of models and metaphors and, by offering the list, suggests that scholars should be more conscious of the risks and rewards of reliance on models and metaphors.

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INTRODUCTION

A. Complexity and Simplification

People use a variety of simplifying mental devices to organize and describe complex realities. These devices—call them "models" and "metaphors"—are
useful and often unavoidable. We could not cope without them. Sometimes, when models and metaphors work especially well, they are used as the basis for law. Laws based on simple, easy-to-understand-and-use models serve such goals as accountability, legitimacy, and predictability. At the same time, such devices have the capacity to mislead. The most effective models and metaphors require simplifying assumptions and link something unfamiliar to something familiar. The assumptions that were vital in creating the models or metaphors may later, however, prove to be no longer applicable, inappropriate, or wrong. Moreover, a model or metaphor that serves as a valuable general concept may break down at the margins.

1. See J.M. Balkin, CULTURAL SOFTWARE: A THEORY OF IDEOLOGY 244 (1998) ("[A] metaphorical model not only describes but also structures understanding. It not only compares but produces cognitive coherence."). "Our tools of understanding enable us to grapple with our world, to understand what is happening in it, to interact with others, and to express and articulate our values." Id. at 286.

2. See GEORGE LAKOFF & MARK JOHNSON, PHILOSOPHY IN THE FLESH: THE EMBODIED MIND AND ITS CHALLENGE TO WESTERN THOUGHT 59 (1999) ("We do not have a choice as to whether to acquire and use primary metaphor.").

3. For a more complete listing and discussion of the criteria or goals of a good model, see infra Part VII.

4. As T.S. Eliot put it:
   The knowledge imposes a pattern, and falsifies,
   For the pattern is new in every moment.
   T.S. ELIOT, East Coker, in FOUR QUARTETS 11, 13 (1943).


[O]ur formulations of reality, however adequate for particular purposes, may also be dangerously incomplete. Reality ranges far beyond what is immediately accessible to human physical senses. . . . Even the most sophisticated descriptions tend to be metaphorical and, except for unrealistically constrained systems, are inadequate to permit long-term predictions of a complex system's behavior.

Id.; see also Balkin, supra note 1, at 286 ("[E]ach tool, no matter how useful, carries its own limitations, for no tool is perfectly adapted for each occasion. As a result, there are inevitable drawbacks and side effects as our tools of understanding are repeatedly employed for new purposes and inserted in new contexts and situations."). The use of metaphors in law and legal discourse has, of course, been extensively discussed (as well as criticized) elsewhere. See, e.g., Encyclopædia Britannica, Inc. v. Commissioner, 685 F.2d 212, 217 (1982) (Posner, J.) ("We deprecate decision by metaphor."); Berkey v. Third Ave. Ry. Co., 155 N.E. 58, 61 (N.Y. 1926) (Cardozo, J.) ("Metaphors in law are to be narrowly watched, for starting out as devices to liberate thought, they end often by enslaving it."); Thomas Ross, Metaphor and Paradox, 23 GA. L. REV. 1053 (1989); Elizabeth G. Thornburg, Metaphors Matter: How Images of Battle, Sports, and Sex Shape the Adversary System, 10 WIS. WOMEN'S L.J. 225 (1995); Michael J. Yelnosky, If You Write It, (S)he Will Come: Judicial Opinions, Metaphors, Baseball, and "The Sex Stuff," 28 CONN. L. REV. 813 (1996).

6. Robert Merton, at the conclusion of his Nobel address, provided the following caution: At times we can lose sight of the ultimate purpose of the models when their mathematics become too interesting. The mathematics of financial models can be applied precisely, but the models are not at all precise in their application to the complex real world. Their accuracy as a useful approximation to that world varies significantly across time.
In the legal and economic literature on business activity, two fundamental and complex general concepts are organizations and markets.7 In efforts to grasp and control the complexity behind these concepts, one powerful model or metaphor is that of the corporation as an entity or, in its slightly more realistic version, as a "legal fiction." The corporation is generally reified and often anthropomorphized. Reification, like the use of metaphor, can be useful. Indeed, it would be difficult to communicate effectively without it.8 Depending on its uses, however, reification can also be a barrier to effective analysis.9 It may be conceptually useful, for example, to depict corporations as paying taxes, but we delude ourselves and risk error if we do not appreciate that the burden of taxes is borne by individuals.

In economics, the concept comparable to the corporation is that of the firm, with a vast literature on the "theory of the firm."10 One aspect of this theory is the contrast drawn between organization within firms and organi-

and place. The models should be applied in practice only tentatively, with careful assessment of their limitations in each application.

Robert C. Merton, Applications of Option-Pricing Theory: Twenty-Five Years Later, 88 AM. ECON. REV. 323, 343 (1998); see also Richard A. Posner, The Problems of Jurisprudence 366 (1990) (analogizing the use of models and metaphors to the continued use of Newtonian physics, despite its flaws, for purposes of both pedagogy and comprehension); Eric Talley, Turning Servile Opportunities to Gold: A Strategic Analysis of the Corporate Opportunities Doctrine, 108 YALE L.J. 277, 310 (1998) ("Any model—be it economic, political, or sociological—is, by definition, a deliberate abstraction. It is designed to isolate the most intuitively compelling characteristics about a problem and to study their mutual interaction.").


8. Further, these fictional entities (at least the prominent ones) have identities that are also socially constructed (consider, for example, IBM, Microsoft, and Ford). Organizations often spend significant sums in attempts to control and manipulate their identities (consider, for example, recent beer company advertisements that tackle homophobia). For a historical treatment of the construction of the corporate identity, see, for example, Roland Marchand, Creating the Corporate Soul: The Rise of Public Relations and Corporate Imagery in American Big Business 7–47 (1998).

9. See Putterman, supra note 7, at 5 (arguing that while the characterization of the firm as "a primitive atom of the economy, an unindividuated, single-minded agent interacting with similarly unindividuated customers and factor suppliers in the market economy," may be useful in the analysis of one set of problems, it is likely to be inappropriate for another (citing Michael C. Jensen, Organization Theory and Methodology, 58 ACCT. REV. 319, 325–26 (1983))).

10. For two (relatively) accessible articulations of recent developments in the literature on the firm, see Patrick Bolton & David S. Scharfstein, Corporate Finance, the Theory of the Firm, and Organizations, 12 J. ECON. PERSP. 95 (1998), and Bengt Holmstrom & John Roberts, The Boundaries of the Firm Revisited, 12 J. ECON. PERSP. 73 (1998).
zation across markets (another useful but dangerous reification).\footnote{Perhaps the most well-known modern articulation of this distinction (at least in the law and economics literature) is that of Ronald Coase. See Ronald H. Coase, The Nature of the Firm, 4 ECONOMICA 386 (1937). As Putterman points out, one can find strikingly similar themes in Marx’s distinction between “the division of labor in society” and “the division of labor in manufacture” (or “the workshop”). See Putterman, supra note 7, at 5.} Some economists challenge this broad conceptualization,\footnote{Classic among the challenges in the economics literature are Armen A. Alchian & Harold Demsetz, Production, Information Costs, and Economic Organization, 62 AM. ECON. REV. 777 (1972); Harvey Leibenstein, Aspects of the X-Efficiency Theory of the Firm, 6 BELL. J. ECON. 580 (1975); Michael C. Jensen & William H. Meckling, Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure, 3 J. FIN. ECON. 305 (1976); Eugene F. Fama, Agency Problems and the Theory of the Firm, 88 J. POL. ECON. 288 (1980); and Benjamin Klein, Contracting Costs and Residual Claims: The Separation of Ownership and Control, 26 J.L. & ECON. 367 (1983).} but there is little doubt as to the powerful influence it has had and continues to have on economists and lawyers alike. Again, it may be useful, even essential, for example, to think of one firm entering into a transaction with, or competing with, another firm, but it is dangerous to ignore the reality that firms can transact only through individuals, whose motivations may be different from those imputed to the abstraction.\footnote{For example, take the following statement from an article by Alan Schwartz: “Firms . . . choose capital structures to solve agency problems between the firm’s managers or owners and outside investors.” Alan Schwartz, A Contract Theory Approach to Business Bankruptcy, 107 YALE L.J. 1807, 1811 (1998). This is no doubt a useful heuristic in its context. See MILTON FRIEDMAN, ESSAYS IN POSITIVE ECONOMICS 21 (1953) (arguing that while business people do not solve the simultaneous equations that economic models attribute to actions of firms, any more than expert billiard players calculate the laws of physics that control the outcomes of their play, it is often useful for predictive purposes to think of them “as if” they do so). But one must bear in mind that firms do not choose capital structures. The firm is fictional and the capital structure consists of the amount of capital contributed by the different participants in the venture. Competitive pressures, however, might drive firms with costly capital structures (i.e., ones that result in high levels of agency costs) out of the market. That Darwinian process, in turn, encourages observers to conceive that firms choose optimal capital structures.} In the economics literature, the dichotomy between firm and market responds to problems of conflict of interests, incentives, and opportunism. In contrast, the metaphor of connected contracts bypasses the firm and invites direct attention to the various devices, familiar to lawyers, for dealing with these problems through allocation and specification of control over the various aspects of relationships among the participants in an economic venture.\footnote{Among such legal devices familiar to lawyers are loan terms and bond covenants; employment contracts with provisions for noncompetition, incentive pay, job description, liquidated damages, etc.; and completion guarantees and other bonding and monitoring devices.}

The corporate entity and the firm are associated in legal academic literature with two important and useful related models. The first is the traditional hierarchical model of the firm. Here, shareholders are “owners”
of the corporation. The owners hire employees, who owe the owners duties of loyalty and care and enter into various contracts for the provision and sale of goods, services, and credit. The second model is the conception of the firm as a "nexus of contracts." This model has various incarnations. In the dominant application, the shareholders, primarily because of their status as residual claimants, bargain for ownership-type rights, such as the right to vote and fiduciary duties. The nexus model is then seen as placing a contractual gloss on the traditional hierarchical model to produce what is often referred to as the "shareholder primacy model." The shareholders elect


18. See, e.g., Macey, supra note 15, at 1267 (describing this "tension" between the shareholder primacy model that is the standard law and economics view and the purer form of the nexus view); see also Kent Greenfield, The Place of Workers in Corporate Law, 39 B.C.L. REV. 283, 288-95 (1998) (also noting this tension); Black, supra note 17 (same).

In the finance literature, there is a competing and often inconsistent model of "managerial primacy." In the finance model of managerial primacy, managers hire capital from shareholders and lenders, with their varying appetites for risk. See, e.g., Andrei Shleifer & Robert W. Vishny, A Survey of Corporate Governance, 52 J. FIN. 737, 773 (1997) (describing the central problem of corporate governance as the "separation of management and finance"). Managers calculate the prices that must be paid to various investors (the costs of capital) and arrive at the optimal mix. Managers also select investment projects so as to maximize the value of the firm. See PAUL MILGROM & JOHN ROBERTS, ECONOMICS, ORGANIZATION AND MANAGEMENT 449 (1992) (describing the classical theory of finance); see also Fama, supra note 12, at 292-95 (arguing that pressures from the managerial labor market cause managers to maximize value for the investors). Again, the model is powerful and valuable but, at the same time, can mislead. The firm is nothing but a construct. There are individuals who make up what we call "the firm" and who work in teams to compete with other teams. But individuals maximize their own interests. See Jensen & Meckling, supra note 12, at 311. Individuals might, however, gain utility from behaving altruistically. Cf. Julio J. Rotenberg, Human Relations in the Workplace, 102 J. POL. ECON. 684 (1994) (modeling the effects of altruistic behavior in organizations). As with the shareholder primacy model, the managerial model submerges the effects of conflicting interests of managers (agency costs) and the differing tastes for investment risk among managers, shareholders, lenders, blue-collar workers, secretarial workers, suppliers, and customers. Cf. MILGROM & ROBERTS, supra, at 594 (urging the move to a richer model).
directors, who select managers, who in turn are deemed to owe a fiduciary obligation to serve selflessly the interests of the shareholders or the corporation. The legal scholarship using the nexus model has focused generally on the shareholder-manager axis and, more particularly, on "agency conflicts," in which the shareholders/owners are deemed principals and those beneath them in the hierarchy (directors, managers, employees) are the agents.

Both of these models may be incomplete when they fail to consider the legitimate conflicting interests of individual parties to an economic arrangement—for example, when the models may suggest or assume that employees are passive, "take it or leave it" cogs in business enterprises, people who can easily be replaced, can easily find another job, and have no legitimate claim to some degree of control over the riskiness of the firm's investment strategies.  

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It should not be surprising that those who use the shareholder primacy version of the nexus model often describe shareholders as "owners." See, e.g., Van Der Weide, supra note 15, at 34. But see Stephen M. Bainbridge, Community and Statism: A Conservative Contractarian Critique of Progressive Corporate Law Scholarship, 82 Cornell L. Rev. 856, 863 n.22 (1997) (reviewing PROGRESSIVE CORPORATE LAW (Lawrence E. Mitchell ed., 1995)) (pointing out that the concept of ownership has little meaning within the contractual framework); Margaret M. Blair, Corporate "Ownership": A Misleading Word Muddles the Corporate Governance Debate, Brookings Rev., Winter 1995, at 16, 16 ("The problem with calling shareholders the owners of corporations is that the word 'owner' has such a powerful, almost moralistic meaning in U.S. culture. Its use in this context cuts off debate by implying that certain rights and prerogatives should, by the very nature of things, flow to shareholders.").

21. See, e.g., Oliver Williamson, Corporate Governance, 93 Yale L.J. 1197, 1207-09 (1984). For criticisms of the assumption that financial capital (primarily equity capital) sits at the top of the hierarchy, see, for example, MARGARET M. BLAIR, OWNERSHIP AND CONTROL: RETHINKING CORPORATE GOVERNANCE FOR THE TWENTY-FIRST CENTURY 238 (1995) (describing how employees bear the brunt of the risks associated with certain kinds of capital investments); Margaret M. Blair, Firm-Specific Human Capital and Theories of the Firm, in EMPLOYEES AND CORPORATE GOVERNANCE 58, 86 (Margaret M. Blair & Mark J. Roe eds., 1999) [hereinafter Blair, Firm-Specific Human Capital] (arguing that scholarly work on the theory of the firm needs to look more carefully into the complexities of human input into joint economic activity); Louis Putterman, On Some Recent Explanations of Why Capital hires Labor, in THE ECONOMIC NATURE OF THE FIRM, supra note 7, at 312 (critiquing the assumption in most economic models of the firm that capital hires labor (as opposed to labor hires capital)).
B. Connected Contracts

This Article seeks to sharpen the nexus of contracts model’s focus on the contractual relationship among individuals engaged in joint economic activity. We begin with a different perspective on joint economic activity. Instead of starting with a large entity with multiple claimants, defined boundaries, and an internal structure that needs to be governed, we begin with a simpler structure: a group of individuals who join together to pursue a defined business venture. The approach is bottom up rather than top down. Using a series of examples and then a model with debt and equity, we attempt to demonstrate how the concept of ownership loses much of its usefulness and why there is no natural allocation of control to equity investors.

In an attempt to shift focus away from firms, and the attendant questions of boundaries and governance, to the relationships among individuals engaged in joint economic activity, this Article offers a metaphor. This metaphor, called “connected contracts,” emphasizes the complex interactions among all of the participants in an economic venture. The word “contract” is used not in a legal but in a metaphorical sense, to evoke a sense of rights and obligations that are like contracts but are not necessarily embodied in legally enforceable claims. “Connected contracts” may be thought of as shorthand for a fluid, nonlinear, nonhierarchical set of interactions and interrelationships. It challenges the notion of ownership and the corporate

22. This is not to say that questions about boundaries or the nature of organizations are unimportant. But to focus exclusively on models of the firm can obscure relationships among individuals. Our model seeks to exaggerate these relationships and to de-emphasize the firm. Cf. JOHN H. HOLLAND, HIDDEN ORDER: HOW ADAPTATION BUILDS COMPLEXITY 11 (1995).

Modeling, it should be clear, is an art form. It depends on the experience and taste of the modeler. In this it is much like cartooning, especially political cartooning. The modeler (cartoonist) must decide which features to make salient (exaggerate), and which features to eliminate (avoid), in order to answer the questions (make the political point).

Id.

23. Cf. Black, supra note 17, at 22 (invoking COASE, supra note 7, at 30–31, and urging a similar focus on the specific relationships among individuals engaged in joint economic activity).

24. The contractarian literature commonly includes, under the rubric of “contract,” both legally enforceable (and usually formal) contracts and those bargains or understandings (usually, although not necessarily, informal) that might not be legally enforceable. For objections to this broad use of the term “contract,” see Melvin A. Eisenberg, The Conception that the Corporation Is a Nexus of Contracts, and the Dual Nature of the Firm, 24 J. CORP. L. 819 passim (1999), and Scott E. Masten, A Legal Basis for the Firm, 4 J.L. ECON. & ORG. 181, 184 (1988). To the extent that the term “contract” connotes only legally enforceable agreements, our use of it is misleading, and the term “bargain” might be preferable. Terms such as “bargain” or “understanding,” however, lack the referential values that “contract” has acquired since “nexus of contracts” became a popular and widely accepted idea.

While contracts may be incomplete, in that there are contingencies that parties do not specifically bargain over, there is a recognition of this at the outset of a relationship and a general understanding of how the parties are expected to behave in such a situation.
law model of shareholder primacy. It is virtually the antithesis of theories of the firm that seek to identify the boundaries of that fiction or artificial construct.25

The phrase "connected contracts" is perhaps akin to "nexus of contracts" or its cousins "web of contracts"26 and "set of contracts."27 But those terms have been used in ways that are inconsistent with connected contracts: to describe the firm ("the corporation is a nexus of contracts") or to focus on the potentially alterable nature of relationships among shareholders, directors, and managers within a hierarchical structure.28 Connected contracts broadens the scope of analysis to invite attention to the cooperation, conflict, competition, and compromise among equity investors, lenders, managers, workers, suppliers, customers, and all others who contribute to an economic endeavor—all those people or groups of people who acquire rights and obligations and who affect and are affected by the rights and obligations of all other participants.29

25. This contractual approach also avoids notions of noncontractual (for example, moral or ethical) fiduciary obligations. See infra Part V. Thus, though it rejects shareholder or managerial primacy and the traditional hierarchical concepts of employer and employee, it does not support communitarian claims of corporate obligations to employees. See, e.g., Richard Thompson Ford, Geography and Sovereignty: Jurisdictional Formation and Racial Segregation, 49 STAN. L. REV. 1365, 1421 (1997) ("The embrace of community is simply the logical end point of a critique of individualism manifested in a preference for collective decisionmaking and dialogue over market coordination of individual choice, altruistic norms over 'lifeboat ethics,' and flexible standards and ad hoc procedures that . . . do the opposite."); David Millon, Personifying the Corporate Body, 2 GRAVEN IMAGES 116, 125 ("Socially situated, contextually defined moral obligation supplements and sometimes supplants contract."); see also Blair & Stout, supra note 19, at 253 (describing the communitarian conception in corporate law). The rejection of the communitarian position is not to deny the need for various protections of workers or other groups involved in the corporate enterprise. Instead, it denies that the need for, or the existence of, such protections can be inferred from our model.


28. In addition to its use in connection with a hierarchical structure, the nexus of contracts approach has also been associated with a preference for private ordering and a rejection of public regulation. See William W. Bratton Jr., The New Economic Theory of the Firm: Critical Perspectives from History, 41 STAN. L. REV. 1471, 1516–17 (1989). As far as we are concerned, however, the use of the contract metaphor does not by any means necessitate a preference for hierarchy or a rejection of the need for public regulation in certain contexts. Indeed, we think there are numerous contexts in which a hierarchical model can mislead and in which there is a need for public regulation.

This conceptualization might be better understood when applied to a real-world example. Consider a start-up internet company that seeks to build web sites that will attract a community of followers and then to expose that community to enough advertising and to sell them enough products so that the company will rake in hefty profits. The founders serve as officers and as members of the board of directors and hold substantial stock ownership, both in shares and in options. Venture capital funds hold common and preferred stock and warrants and have board representation. A major internet service provider is responsible for a significant percentage of the company’s internet traffic. It also has substantial stock ownership, holds convertible debt and a seat on the board, and has a substantial equity investment in a major rival of the company. A major content provider also has a significant stock ownership position and board representation. The company generates a substantial percentage of its revenue through barter arrangements whereby it exchanges advertising space on its web site for advertising space on another web site.

We contend that traditional hierarchical models of the firm or the nexus of contracts variations will fail to capture the complex relationships between and among the participants in this internet venture and that legal rules based on simple models of the firm may provide results that are not satisfactory. In many modern ventures with dispersed claims and control

primacy model of the corporation to a model of governance that is the product of interactions among the various stakeholders).

30. This example is based loosely on the set of participants associated with iVillage Inc. For a complete review of the cast of characters, see iVillage Inc. Quarterly Report (SEC Form 10-Q) (Aug. 16, 1999) (on file with authors).

31. More familiar, and more traditional, examples are the construction industry and the motion picture industry (especially independent production). Each industry is characterized by contracts and subcontracts among many individuals and small firms, and by individual mobility. Projects—making a motion picture or constructing a building—are finite and of relatively short duration, but the industries endure and the individuals involved in them, though itinerant, are generally long-term participants. Much the same is true of the technology industry in Silicon Valley as described by AnnaLee Saxenian. See AnnaLee Saxenian, REGIONAL ADVANTAGE: CULTURE AND COMPETITION IN SILICON VALLEY AND ROUTE 128 passim (1994).

These industries may be the forerunners of the “virtual” firm, which is a small group of people who develop an idea, open an office, obtain some financing, and enter into contracts for research and development, manufacture (if called for), marketing, distribution, accounting, and all other aspects of the production process. It is, of course, the antithesis of the industrial form associated with Henry Ford and John D. Rockefeller and with the railroads described by Alfred Chandler. See ALFRED D. CHANDLER, JR., THE VISIBLE HAND: THE MANAGERIAL REVOLUTION IN AMERICAN BUSINESS passim (1977); see also Tim Jackson, Virtual Corporation with a Twist, FIN. TIMES, Feb. 5, 1996, at 11 (describing such a firm in Silicon Valley, in the business of “delivering moving pictures and sound across computer networks instead of telephone lines”); Robert J. Laubacher et al., Two Scenarios for 21st Century Organizations: Shifting Networks of Small Firms or All-Encompassing “Virtual Countries?” (visited Feb. 9, 2000) <http://ccs.mit.edu/21c/21CWP001.html> (describing “[s]mall [c]ompanies, [l]arge [n]etworks”).
it becomes futile to try to map out the boundaries of the firm or to apply traditional corporate law labels or concepts. Whether any particular firm is closer to the internet company or to the traditional, large hierarchical corporate structure is, of course, simply a question of fact. It is worth noting, however, that even General Motors and Ford Motor Company, which are often thought of as paradigms of the traditional hierarchical structure, have nontraditional equity structures and have restructured operations in such a way that the boundaries of the firms are no longer clearly demarcated. At an extreme, these boundaryless structures are often referred to as “virtual.”

Connected contracts can also be useful in thinking about more traditionally organized economic activities and might open new possibilities for legal rules. For example, consider the rules for piercing the corporate veil and, more broadly, for derivative or vicarious liability. To date, not only the narrow legal rules but also the policy arguments have focused almost exclusively on the possibility of shareholder liability or on the possibility of subordinating the claims of voluntary creditors to those of tort creditors. From the connected contracts perspective, this focus is far too narrow. This observation is examined more fully later in this Article. For the present it is sufficient to observe that the idea of holding shareholders liable seems to be derived in large part from traditional notions of shareholders as owners. Part of the general thinking associated with connected contracts is a challenge to the utility, and even the meaningfulness, of “ownership” as applied to complex, or even not so complex, economic activity.

An important element of any business relationship is the allocation of control. Control is related to and affected by risk, return, and duration, but

Another interesting and important example of an economic activity based heavily on contracting and subcontracting is the Japanese automobile industry. See Yoshiro Miwa & J. Mark Ramseyer, Rethinking Relationship-Specific Investments: Subcontracting in the Japanese Automobile Industry 4 (Dec. 21, 1999) (unpublished manuscript, on file with authors) (describing the Japanese automobile manufacturers as “assemblers”).

A final example is the typical mutual fund, which is nicely described as follows: “[M]utual funds have no physical assets and no employees. So they outsource all of their activities—paying a custodian for record-keeping and securities handling, an ‘investment adviser’ to manage the assets, and so forth.” Schools Brief: Moneyed Men in Institutions, ECONOMIST, Nov. 6, 1999, at 83, 83.

32. Cf. Anne E. Conaway Stilson, The Agile Virtual Corporation, 22 DEL. J. CORP. L. 497, 498 (1997) (describing the “wall-less” structure). But cf: Claire Moore Dickerson, Spinning out of Control: The Virtual Organization and Conflicting Governance Vectors, 59 U. PITT. L. REV. 759, 761, 803–04 (1998) (predicting that the so-called virtual firms will self-destruct because of their weak governance mechanisms). For us, the issue is not so much whether there are boundaries or not (the answer to that is surely both yes and no). Instead, our suggestion is that the use of a boundary-free metaphor or model provides valuable insights that may not be readily reached from the bounded perspective. See Riding the Storm, ECONOMIST, Nov. 6, 1999, at 63, 63–64.

33. The primary focus is generally on return or on return and risk, with an assumption that control is allocated to the owner. For a recent exception, see Black, supra note 17. See also Rafael
for present purposes a focus on control as such effectively illustrates and
applies the broader connected contracts approach. In the next three parts
(I, II, and III), we narrow the focus of allocation of control even further by
examining "variance control"—the power or right to alter the variance of
expected outcomes of the common endeavor. We begin with variance control
as between equity and debt and then proceed to other applications, cover-
ing broader applications (Part IV), applications in corporate law (Part V),
and tax applications (Part VI).

I. CONTROL, RISK, AND OWNERSHIP

In this part we use three simple hypotheticals to develop observations
about the meaning of ownership, about different types of risk, and about the
relationship between risk and control.

A. Case 1: No Risk

We begin with an admittedly unrealistic example in an effort to isolate,
ultimately, the distinction between variance and alteration of variance and
the relevance of that distinction to the allocation of control. Suppose that
a trust holds a zero-coupon U.S. Treasury obligation with a maturity date ten
years hence and a maturity, or terminal, value of $100,000.34 Suppose also
that the present value is $40,000, that the trust term is the same as that of
the asset and that no possibility exists of earlier liquidation, and that investors
invest one at a time. Abe buys the asset and sets up the trust. Betty acquires
from Abe, for $12,000, the right to all the proceeds on liquidation after Abe
has received $70,000 on the termination of the trust. Carl buys from Betty, for
$4000, the right to receive $10,000 after Betty has received $20,000. Thus,
there are three claims: $70,000, $20,000, and $10,000.35 From a traditional

LaPorta et al., Corporate Ownership Around the World, 54 J. Fin. 471 (1999) (using international
data to question the Berle and Means picture of ownership).
34. Treasury obligations are regarded as free of default risk because the government can
raise taxes to pay off the debt it incurs. See Stephen A. Ross et al., Corporate Finance 232
(4th ed. 1996). The example in the text is specified in such a way as to render analytically irrele-
vant the risk associated with changes in the market rate of interest or with inflation.
35. These facts may be summarized as follows:

<table>
<thead>
<tr>
<th>Asset</th>
<th>Abe</th>
<th>Betty</th>
<th>Carl</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominal Priority</td>
<td>1st</td>
<td>2nd</td>
<td>3rd</td>
</tr>
<tr>
<td>Net Investment</td>
<td>$28,000</td>
<td>$8000</td>
<td>$4000</td>
</tr>
<tr>
<td>Claim at Termination</td>
<td>70,000</td>
<td>20,000</td>
<td>10,000</td>
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</tbody>
</table>
Connected Contracts

perspective, given the sequence of the investments and depending on the formal language of the documents, one might conclude that Betty is the owner, Abe has a senior debt claim, and Carl has an option or a junior debt claim. But because there is no risk, no residual, no meaningful priority, and no concern for control, the concept of ownership loses much, if not all, of its meaning. There are simply three claims. Capital structure is patently irrelevant.

One can imagine a slightly more realistic version: Abe becomes the lessee of a parcel of land under a lease with a twenty-year term and a fixed annual rent. He then contracts with the U.S. Postal Service\textsuperscript{36} to construct a building for its exclusive use for twenty years (at the end of which time the building will be worthless) at a fixed annual rental, with the Postal Service responsible for all taxes (if any), expenses, repairs, insurance, and other costs. The rent paid by the Postal Service is calculated to cover the rent paid for the land, plus an excess having a present value equal to the cost of construction of the building plus a small return to Abe for his services. Abe then sells to Betty the right to all the rent to be paid by the Postal Service after the tenth year, and Betty sells to Carl the right to all the rents after the fifteenth year. Suppose one asks, for tax purposes, who should be entitled to the depreciation deduction? Generally, the depreciation allowance can be claimed by the owner of the depreciable property. But who is the owner? In this case the concept of ownership has lost its meaning—a reality that invites tax lawyers to work their tax-avoidance magic.\textsuperscript{37}

B. Case 2: Variance-Type Risk Only

Next suppose the facts are altered slightly to add some risk, so there may be a greater or lesser total return—a gain or loss, if you will. The risk

\textsuperscript{36} The point of using the U.S. Postal Service in the example is to create a risk-free obligation analogous to the T-bill.

\textsuperscript{37} A nontax example is the special purpose vehicle (SPV) used as a financing device to place certain assets of a firm in a bankruptcy-remote vehicle. The assets produce a stream of income, and participants contract for certain rights with respect to the income stream. The concept of an owner of an SPV is often of little value. See Robert Dean Ellis, \textit{Securitization Vehicles, Fiduciary Duties, and Bondholders' Rights}, 24 J. CORP. L. 295, 296–97 (1999) (arguing that with respect to SPVs it makes little sense to think of the board of directors as having fiduciary duties running to an owner); Jonathan R. Macey & Geoffrey P. Miller, \textit{Corporate Governance and Commercial Banking: A Comparative Examination of Germany, Japan, and the United States}, 48 STAN. L. REV. 73, 91 (1995) (observing that if information about assets is readily available, i.e., there are no moral hazard problems, those assets will be securitized).
gives rise to a true residual claim. The risk, however, can be determined at the outset and cannot be altered. We call it pure variance.\(^{38}\)

Begin with the same facts as in the trust example above, but suppose that the asset will be sold, the trust terminated, and the proceeds distributed after seven years (with an appropriate reduction in the amount of each claim\(^ {39}\)). Now, because a change in the market rate of interest changes the value of the asset, Carl's claim involves some uncertainty or risk. Perhaps Betty's does as well. This is why now it becomes useful to distinguish between fixed and residual claims. However, because the nature of the investment and the variance of its expected returns cannot be changed, control is still not an issue.

This example is essentially the model used in some of the fundamental theories of corporate finance. In these theories, to the extent that the element of control is recognized, it is incorporated into risk (variance) by adopting the assumption that the investment strategy is fixed (as in the Modigliani and Miller irrelevance of capital structure theorem\(^ {40}\)) or that the managers of the firm always seek to maximize firm value (as is done in analysis of the cost of capital\(^ {41}\)).

Again, a taste of reality may be comforting to the reader. Assume a fact situation like that of the Postal Service described above, but change the post office to a building that is built to specification for a high-volume, low-price retailer such as Wal-Mart. Again assume a twenty-year lease of land and a building with a twenty-year life, and a lease that imposes all the costs and risks on the lessee. But now assume the rent is a fixed amount plus some percentage of the gross sales of the lessee. Here there is uncertainty, or variance, in the expected return; there is a residual claim.\(^ {42}\) There is, however, no opportunity for any of the investors to alter that variance. There is nothing to control.\(^ {43}\)

\(^{38}\) Variance is used as a measure of the risk of an asset when the investor's portfolio consists of a single asset. See ROSS ET AL., supra note 34, at 241. When the portfolio includes many securities, the measure of risk changes to a function of an individual asset's covariance with other assets. See id. at 242.

\(^{39}\) With a 10-year zero-coupon bond the expected price at the end of seven years will be less than the price at maturity. After seven years, the bond becomes a three-year zero-coupon obligation, whose value depends in part on the market rate of interest at that time.

\(^{40}\) See MILGROM & ROBERTS, supra note 18, at 456–67, 476.

\(^{41}\) See id.

\(^{42}\) As discussed supra note 37, many SPVs also fit this model.

\(^{43}\) We refer here to control as among the investors. The investors as a group might wish to have some control over Wal-Mart's business strategy (though they are not likely to get it). They might be concerned, for example, that Wal-Mart will decide to sacrifice volume for a higher margin.
C. Case 3: Risk of Opportunism (Alteration of Variance)

The insight that emerges is that there is a difference between risk of the simple variance sort and risk of an alteration of variance. Because the latter type of risk can be used opportunistically, control becomes important. Control comes with the ability to alter the variance. Control, in turn, may be in part a function of duration, i.e., the time period for which one has control. The longer one has control, the greater one’s ability to alter variance. The larger and more complex an enterprise, the longer it may take to alter the variance. Once more, the title “owner” is not by itself helpful. One can equate control with ownership, but then “ownership” is just a label that adds nothing to the substantive analysis.

To illustrate, return to the original facts of Case 1 (no variance). Carl’s claim is last in line and might be considered a residual, and thus the equity or ownership, position, with Abe having a senior fixed claim and Betty a junior fixed claim. From this view one would typically assume that Carl has the right or power to alter the investment, because normally the residual or equity claim has control. If Carl can increase the variance of expected returns, for example, by selling the treasury bond and investing in the S&P 500, his claim becomes a residual (ownership) claim in a meaningful sense. His claim, disregarding risk aversion, becomes more valuable. The greater the variance, the greater the value of Carl’s claim (holding expected return constant). Thus, Carl may have an incentive to alter the investment to increase variance. By the same token, Betty, and possibly Abe, will be concerned about this aspect of control; they will be concerned that they will be the victims of Carl’s altering the variance. Given that, they will allow Carl to have control only if they can ensure, through a combination of monitoring and sanctioning, that he does not alter the variance, or if he compensates them for the risk that he might alter the variance. Any alteration of variance above and beyond the amount Carl paid for would constitute opportunistic behavior by Carl. There are two points here. First, the prospect of alteration of variance, not variance as such, makes control

44. Equating ownership with residual rights of control (as opposed to the traditional conception of ownership as the residual claim on assets) is central to a recent line of scholarship in economics referred to as the “property rights theory of the firm.” See Bolton & Scharfstein, supra note 10, at 98 & n.3.

45. Assuming risk aversion, if variance increases and if the variance is nondiversifiable, the present value of the total investment will decline. But because increase in variance also increases the relative value of Carl’s claim, his claim may increase in value.
important. Second, not all alterations of variance constitute opportunistic behavior—only alterations that have not been paid for.

As long as all three investors are alert to their opportunities and vulnerabilities, they should be able to agree on a common strategy. That strategy must take account of variance, its effect on each investor, and expected return. In this situation, Carl might be required to agree to make no change in investment unless it (1) maintains or increases the total value of the investment and (2) does not increase the variance. But note that Abe might be content to allow Carl to shift the variance in his own favor as long as that shift does not result in a decrease in the value of his claim. What about Betty? Here, duration might become important. As long as Carl’s claim is of a duration shorter than the time period in which he can make any significant change in the investment, Betty need not worry. To put that more realistically, if Betty can demand payment at any time, if her fixed claim is in the form of a demand note, she need not be concerned as long as she is willing and able to monitor Carl’s behavior. Duration may be used as a substitute for direct control.

But here is the rub: It is all well and good to state that Carl, or whoever has control, should not alter variance without properly compensating the claimants who might be adversely affected. It is quite another thing to apply that concept in a realistic situation in which Carl, as manager of a large, complex business, must, if he is to be effective, have considerable discretion over business decisions. This is where a fiduciary obligation, or contractual protection for which fiduciary obligation may serve as a generalized substitute, might come into play. But if that is the answer for investors, then it is difficult to see, other things equal, why it should not also be the answer for others who make a substantial specific investment that might be adversely affected by an increase in variance.47

Suppose one assigns control to Betty. In conventional terms one could then reconceptualize the example to posit that Abe holds debt, Betty holds

46. Investment in the S&P 500 will most likely, of course, alter the expected return (not adjusted for risk) as well as the variance, but we focus solely on the alteration of variance.

47. Cf: Stephen M. Bainbridge, Privately Ordered Participatory Management: An Organizational Failures Analysis, 23 DELOMB J. CORP. L. 979, 1069–73 (1998) (arguing that protection of workers should take the form of specialized provisions such as "severance pay, grievance procedures, promotion ladders, and the like" rather than representation on the board of directors); Blair & Stout, supra note 19, at 275 (noting that many participants in the modern business enterprise make firm-specific investments, and describing the firm as a "nexus of firm-specific investments"); Jonathan R. Macey, An Economic Analysis of the Various Rationales for Making Shareholders the Exclusive Beneficiaries of Corporate Fiduciary Duties, 21 STETSON L. REV. 23 (1991) (criticizing the argument that fiduciary duties should be extended to other stakeholders); Jonathan R. Macey & Geoffrey P. Miller, Corporate Stakeholders: A Contractual Perspective, 43 U. TORONTO L.J. 401 (1993) (same).
the equity, and Carl holds an option. Now Carl would need to be concerned about the possibility that Betty could impair the value of his claim by decreasing the variance in the investment. That concern diminishes as the duration of the option declines. That is one reason why holders of market options generally need not be concerned about control and why the original version of the Black/Scholes option pricing formula, which focuses on short-term market options, treats variance as fixed and effectively ignores control.48

Again, consider the real estate analogy for its hint of reality: Imagine a real estate investment in which a person has the ability to choose between high rents for a short period of time with an uncertain future and slightly lower rents for a longer term.

D. So What?

All this may seem obvious or trivial, or both. Others have observed that equity has an incentive to alter the variance in a way that diminishes the debt claims.49 Similarly, in the manager-centered view of the firm, others have noted that managers have equity-type incentives to engage in high-risk gambles when it appears that their firm is headed for bankruptcy and they are likely to lose their jobs.50 Within the traditional discussions of firm dynamics, whether shareholder- or manager-centered, the alteration-of-variance issue often occurs at the margins.51 Control is allocated to the equity and then delegated to managers, and alteration of variance is a problem that is typically thought to occur only when bankruptcy is imminent—a context often referred to as a “vicinity of insolvency” or a “final-period problem.”52

48. See Merton, supra note 6, at 327 (assuming that all investors agree on the variance). For the original derivation, see Fischer Black & Myron Scholes, The Pricing of Options and Corporate Liabilities, 81 J. POL. ECON. 637 (1973).
49. See, e.g., Eugene F. Fama & Merton H. Miller, The Theory of Finance 178–81 (1972); Milgrom & Roberts, supra note 18, at 495.
51. In other words, incentives are for the most part assumed to be aligned. Given that, one needs solutions only in those rare situations in which incentives move out of alignment. See, e.g., Steven L. Schwarz, Rethinking a Corporation’s Obligations to Creditors, 17 Cardozo L. Rev. 647, 648 (1996) (analyzing and suggesting a modification to the approach of some courts of imposing a fiduciary-type duty on a company’s board of directors when the company is in the “vicinity of insolvency”).
Note, however, that in our simple stylized examples, other things being equal, one would not necessarily allocate control over variance to the "equity" claimants. In these examples, the incentives of the different investors diverge from the start and, as a result, the issue of alteration of variance becomes central, as opposed to marginal. Thus, one would expect control over variance to be carefully bargained over, as opposed to being allocated in accordance with labels based on other considerations. This conclusion is consistent with the connected contracts perspective.

II. THE STANDARD MODEL

This part presents a stylized version of what may be called the "standard" model of the corporation or firm. Admittedly, the model that we distill is something of a straw person. Clarity of exposition requires glossing over nuances and differences in the literature.

Imagine a firm that has both debt and equity. Suppose also that the group that holds the debt claims differs from the group that holds the equity claims. In the traditional model, equity holds decision-making authority, consistent with the assumption that as the residual claim it has the greater incentive to maximize the value of the firm. In a small firm, equity holders may operate the firm themselves, but in a large, complex organization equity likely appoints specialists, such as directors, managers, and employees, to do so. Further, some portion of the decision-making authority will

 managers have incentives to misbehave even in non-final-period situations); Donald C. Langevoort, Organized Illusions: A Behavioral Theory of Why Corporations Mislead Stock Market Investors (and Cause Other Social Harms), 146 U. PA. L. REV. 101, 114-19 (1997) (arguing, in the context of securities disclosure, that the focus on last-period problems is too narrow to explain the full range of misbehavior).


54. See, e.g., Barry E. Adler, Finance's Theoretical Divide and the Proper Role of Insolvency Rules, 67 S. CAL. L. REV. 1107, 1119 n.41 (1994); Easterbrook & Fischel, Voting, supra note 17, at 403-06; Laura Lin, Shift of Fiduciary Duty upon Corporate Insolvency: Proper Scope of Director's Duty to Creditors, 46 VAND. L. REV. 1485, 1490 (1993). To put this in terms of a price, decision making is allocated to equity because one can be confident that equity is willing to pay the most for the right to control the firm's decision making. In addition to their being the residual claimants, there are three other reasons that are commonly given for why shareholders are likely to have bargained for control. Shareholders (1) as a result of their diversified holdings, have a greater commonality of interest than any other group, (2) because of the nonspecific nature of their claims, have the greatest need for protection, and (3) because of their dispersed nature, have the greatest collective-action problems. See, e.g., Romano, supra note 19, at 279 (citing OLIVER E. WILLIAMSON, THE ECONOMIC INSTITUTIONS OF CAPITALISM passim (1985), and Oliver Williamson, Corporate Governance, 93 YALE L.J. 1197 passim (1984)).
be transferred by explicit or implicit contract or by custom to those specialists. The initial series of contracts or customs describes the firm. The directors, managers, and employees are the agents of the shareholders, and they run the firm for the benefit of the shareholders. These agents, in turn, enter into contracts with independent contractors, suppliers, and distributors, who are third parties outside the firm. Figure 1 illustrates this basic shareholder-centered conception of the modern business firm.

The standard model yields several important insights. First, the firm operates to serve shareholders. Equity is the owner and, therefore, decides what fundamental direction the firm takes. Debt begins to exercise greater control only when the firm is in bankruptcy. Second, alteration of variance is not an issue, except to the extent that third parties contract to constrain

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55. See, e.g., MILGROM & ROBERTS, supra note 18, at 520; Blair & Stout, supra note 19, at 248.
56. See, e.g., Blair & Stout, supra note 19, at 262–63.
it, and equity, through its agents, has discretion over operations. Third, the central problems of the firm involve the delegation of authority to the specialist directors, managers, and employees. These agents may steal from their employers (the equity) or may fail to perform their tasks diligently.

This model serves many useful purposes. It is simple and elegant and captures the omnipresent moral hazard issue. Further, the shareholders-as-owners conception of the firm meshes with our everyday intuition that every nonhuman asset has a single owner who decides how it is to be used. Moreover, because a distinction between hierarchical and nonhierarchical relationships (even in the connected contracts model, individuals may accept hierarchical control) may be useful, separating contracts and activities into those inside the firm and those outside seems reasonable given boundaries between firms and the outside world. Moreover, firms do appear to work differently from ordinary markets. For example, the dynamics of “internal” labor markets are thought to be different from, albeit related to,

58. The assumption appears to be that nonshareholder constituencies such as workers and bondholders are easily able to bargain for protections and that, therefore, their failure to explicitly contract for these terms represents an unwillingness to pay the price for those protections. See, e.g., Stephen M. Bainbridge, In Defense of the Shareholder Wealth Maximization Norm: A Reply to Professor Green, 50 WASH. & LEE L. REV. 1423, 1434 (1993); Macey, supra note 47, at 36–39. It may be correct that shareholders are less able to bargain for protections than other constituencies. However, the strong version of the claim that the absence of explicit protective terms means that the parties did not pay for them lacks adequate empirical verification. It is plausible to suppose that there are a variety of circumstances involving even sophisticated parties such as bondholders, union representatives, and upper-level managers, in which there are transaction costs that prevent the parties from explicitly discussing certain terms. For example, in the bondholder case, it may be that the parties are reluctant to talk about what they might want to happen in the case of a default, because of the signals (whether accurate or not) that raising that issue might send to the other side. See, e.g., Lee C. Buchheit, Majority Action Clauses May Help Resolve Debt Crises, INT’L FIN. L. REV., Aug. 1998, at 13 (hypothesizing that the reason for the absence of sharing clauses in sovereign debt contracts is that neither the sovereign nor the underwriters are willing to raise the issue at the issuance stage); cf. Jeffrey Evans Stake, Mandatory Planning for Divorce, 45 VAND. L. REV. 397, 427 (1992) (making the analogous point with respect to the reluctance of couples to discuss prenuptial agreements). If, as seems plausible, a large set of these “difficult to communicate” circumstances exist, the implicit-contract/hypothetical-bargain framework should apply to the contracts among the nonshareholder participants. Moreover, recent experimental research has found evidence of a strong bias towards the status quo (in this case, that would mean standard-form terms). See, e.g., Stephen M. Bainbridge, Contractarianism in the Business Associations Classroom: The Puzzling Case of Kovacik v. Reed and the Allocation of Capital Losses in Service Partnerships, 34 GA. L. REV. (forthcoming 2000) (modifying his earlier position on the basis of evidence on the status quo bias); Russell Korobkin, Inertia and Preference in Contract Negotiation: The Psychological Power of Default Rules and Form Terms, 51 VAND. L. REV. 1583, 1597–99 (1998) (describing the evidence and looking at its implications for legal analysis). It may be too costly for a third-party adjudicator to make the hypothetical-bargain estimation. But that is a different point altogether.
"external" labor markets. Thus, there may be good reasons to try to identify the nature and boundaries of firms.

Perhaps most important, however, the model captures four essential characteristics of present-day U.S. corporate law. First, corporate law conceives that equity is the owner and that the single duty of the firm and its agents is to maximize shareholder wealth. Second, the law gives shareholders the authority to decide certain major issues, such as mergers, takeover bids, and the replacement of directors. Managers have authority over day-to-day decisions, but the reason given for this limited authority is that managers will make better decisions if they need not worry about constant second-guessing by their shareholder masters. Third, the law implies duties running from managers, directors, and employees to their shareholder masters that address two central problems in the master-servant or principal-agent model: loyalty and care. Fourth, the law conceives of firms as having cognizable boundaries and attaches significance to whether or not assets and human agents fall inside or outside of those boundaries.

In law, where predictability is accorded great importance, one should be loathe to abandon a model that predicts so well. Similarly, the notion of a firm and the notion of the corporation as a separate entity or as the core or focal point of a nexus of contracts are useful concepts. For example, if a chief executive officer enters into an employment contract, one might ask, "with whom?" and a sensible answer might well be "with the corporation" or "with the firm." It is important to bear in mind, however, that the corporate entity is a fiction, the notion of a core is arbitrary, and the firm is an artificial construct. In the following part, the connected contracts model is used to examine the allocation of control, the bargains over control, and the notion that various participants in the economic endeavor have various types of control.

61. See KLEIN & COFFEE, supra note 60, at 119.
62. See id. at 149.
63. See id. at 126.
64. Two contexts are bankruptcy law and employment law (the distinction between employees and independent contractors). On these, see, respectively, Lynn M. LoPucki, The Essential Structure of Judgment Proofing, 51 STAN. L. REV. 147 (1998), and David Charny, The Scope of the Firm and the Efficient Regulation of Employment Contracts (Nov. 7, 1997) (unpublished manuscript, on file with authors).
65. A chicken and egg problem may exist. It is not clear whether the model produced the law or the law produced the model.
III. CONTROL, ALTERATION OF VARIANCE, AND THE OPTION PERSPECTIVE

This part examines control—an element of the bargains comprising the organization of economic activity that merits greater attention. Ultimately, a broad view of control will be examined, but initially, for analytic purposes, the focus is narrowed in two respects: (1) It is limited to control over alteration of variance, and (2) it examines only the bargain between debt and equity over this limited aspect of control.

In its simple form this model ignores, or at least diverts attention from, the question of how the allocation of control varies as the ratio of debt to equity changes. In an effort to address this question, we draw on an insight of financial economics: the notion that equity can be viewed as an option. That insight, in turn, takes us to another useful tool of financial analysis: the formula for valuing an option.

A. Equity as an Option

Consider a simple two-period world and a firm with a debt claimant and an equity claimant. The two claimants have decided to engage in joint economic activity. The debt has first claim on the firm’s assets in period two, and the equity takes what remains. Assuming nonrecourse debt, the equity claim can be thought of as an option to buy the firm from the debt with an option exercise price equal to the amount due on the debt.

66. Bargains over control have traditionally not received much attention from academics, at least not in comparison to risk and return. An important exception to this tendency is the “property rights theory of the firm,” which focuses on residual control as the central determinant of ownership. For a discussion of how our approach relates to that of these economists, see infra note 89. The scholars most closely associated with this line of work are Sanford Grossman, Oliver Hart, and John Moore. See, e.g., Sanford J. Grossman & Oliver D. Hart, The Costs and Benefits of Ownership: A Theory of Vertical and Lateral Integration, 94 J. POL. ECON. 691, 692 (1986); Oliver Hart, An Economist’s Perspective on the Theory of the Firm, 89 COLUM. L. REV. 1757 (1989); Oliver Hart & John Moore, Property Rights and the Nature of the Firm, 98 J. POL. ECON. 1119 (1990).

67. For applications of the option perspective in law, see Philippe Aghion et al., The Economics of Bankruptcy Reform, 8 J.L. ECON. & ORG. 523 (1992), and Lucian Arye Bebchuk, A New Approach to Corporate Reorganizations, 101 HARV. L. REV. 775, 785 (1988).

68. Cf. Bebchuk, supra note 67, at 786 (describing an option model with equity, junior debt, and senior debt). The analysis is complicated by the inclusion of periodic principal and interest payments. Each of these payments can be thought of as a separate option. The same logic should apply, but the computations become more difficult.

As a technical matter, in this conceptualization the debt sells the option to the equity. Some readers may have difficulty with this structure because they may see the structure as suggesting that debt has control (because equity buys a call option). As we explain later, this initial conceptualization does not mean that debt winds up in control of the firm. However, for those who find
A simple example may help. Imagine a firm valued at $10,000,000 at the end of the term of the debt, with a debt amount due of $8,000,000. The equity holders have a call option on the value of the firm with an exercise price equal to the amount of the debt. They can pay $8,000,000 to the holder of the debt and acquire the sole claim to (if you wish, ownership of) the firm with a value of $10,000,000.

This is a familiar concept in financial economics. Recall that in the standard model, shareholders are the owners and a central problem is that of constraining opportunistic behavior by agents to whom the shareholders delegate authority. The option perspective turns things around. At first cut, it appears that "the debtholders are actually the ultimate owners of the firm's assets, having written a call option on them to the equityholders." More important, however, the shift in perspective helps to focus attention on the bargain over control—specifically, over the alteration of variance.

B. Pricing the Option

The first step in applying the option perspective recognizes that once a claim can be characterized as an option, it can be priced. Given four basic variables—risk-free discount rate, state-contingent values of the firm, exercise price, and duration—one can determine the amount the equity must pay for the option to buy the firm by paying the debt. This is the precise amount of equity that corresponds to a set amount of debt, given the other specified variables. The price that is determined is a unique price—one that can be determined easily in the simple cases that we will posit and with the Black/Scholes option pricing formula in more complex cases.


70. Robert A. Jarrow, In Honor of the Nobel Laureates Robert C. Merton and Myron S. Scholes: A Partial Differential Equation That Changed the World, 13 J. Econ. Persp. 229, 241 (1999) ("Of course, this contrasts with the traditional finance perspective that the sole owners of the firm are thought to be the equityholders.").

71. It would be possible to fit the analysis of allocation of control into the traditional hierarchical model. But that perspective sacrifices the elegance supplied by the use of the tools from financial economics and the connected contracts model.

72. Any deviation from this price is inconsistent with economic equilibrium; such deviations are, at least in theory, eliminated by the process of arbitrage.
Once again, consider a simple example. Imagine a firm with a present value of $200,000 at time zero \( (T_0) \), with two possible values at \( T_1 \), $275,000 or $165,000, with a 50 percent probability for each. The expected value at \( T_1 \) is $220,000, or 10 percent more than at \( T_0 \). Now imagine that you want to buy the firm but want to borrow as much as you can. And suppose a lender will lend $200,000 at a nominal 20 percent interest rate for the period.  

The amount of the debt claim at \( T_1 \) will thus be $240,000. 

Think of your claim as an option to buy the firm from the lender for $240,000 at \( T_1 \). What will be the price that the lender will insist upon? In other words, what will be the minimum equity demanded by the lender? Assume risk neutrality and a risk-free interest rate of 10 percent. It turns out that the amount of the minimum equity, or the price of the option, is $15,909. As we explain below, this assumes that the future state-contingent values of the firm remain fixed. In other words, at this price, equity cannot alter variance or change the risk level of the firm. This assumption is required because if the holder of the equity had the ability to alter variance through the exercise of control then the holder of the debt claim would rationally expect some higher variance. That, in turn, would result in a higher price for the option.

For further illustration, suppose that the person seeking the option wants to pay only $1000. That option price would be consistent with an interest rate of 36.4 percent, which would result in a terminal payment of $272,800.

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73. This interest rate includes both compensation for the use of money and compensation for the risk of partial default.

74. At time zero, \( T_0 \), equity holder E pays $15,909 to debt holder D. D adds $184,091 and buys the firm for $200,000. At \( T_1 \), there is a 50 percent chance that the firm will be worth $275,000, in which case D will receive $240,000 and E will receive $35,000. There is a 50 percent chance that the firm will be worth $165,000, in which case D will receive $165,000 and E will receive nothing. Thus, the expected value for D at \( T_1 \) is $202,500 (($240,000 + $165,000)/2). Assuming a discount rate of 10 percent (consistently with the expected rate of return on the investment), the present value is the original investment amount, $184,901. The expected value for E at \( T_1 \) is $17,500 (($35,000 + 0)/2), whose present value is the original investment amount, $15,909. The example here is taken from KLEIN & COFFEE, supra note 60, at 362-65, which presents a slightly more extensive analysis but does not employ the option perspective. For more complex problems, one would need to use the Black/Scholes formula. For a derivation of the formula, see Jarrow, supra note 70, at 244-45.

75. With the option perspective it actually makes no sense to separate the terminal payment into interest and principal in this way.

76. For D, the initial investment is $199,000 at \( T_0 \), and the expected return at \( T_1 \) is $218,900 (($272,800 + $165,000)/2), which has a present value at \( T_0 \) of $199,000. For E, the expected return at \( T_1 \) is $1100 (($2200 + 0)/2), which has a present value at \( T_0 \) of $1000.
C. Implications of Determining the Option Price

The option perspective makes clear that if we know the terminal amount of the debt, the state-contingent values for the firm, the risk-free discount rate, and the duration, then we can calculate the corresponding unique amount of equity. As will be explained below, this unique amount of equity can also be conceived of as the minimum amount of equity the debt will accept in order to grant the equity its call option. It is also, however, the maximum amount the equity would be willing to pay, with any given amount of debt (and other specified variables). This implies that there exists a single, unique amount of equity (price of the call option) for any given amount of debt and value of the firm. That implication is consistent with standard option pricing methodology, but because it ignores control and the possibility of altering variance, it is inconsistent with reality. As we demonstrate below, important insights emerge from a focus on control within the framework of a contractual approach that asks what was bargained for.

The standard option pricing methodology calculates the firm's variance by looking at its past variance and current projects. Control over

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77. See KLEIN & COFFEE, supra note 60, at 362–65.
78. When we refer to the "amount of the debt," we mean to incorporate the basic variables of terminal amount, state-contingent values of the firm, risk-free rate, and duration. This raises the question whether it is plausible to hold the interest rate constant as the amount of equity varies. We have two responses. First, as a mathematical matter, the interest rate can be held constant as the amount of equity is increased or decreased so long as some other variable can be changed. The fallacy in thinking that the interest rate must change with the amount of equity lies in focusing on only two attributes of an asset, risk and return, which ignores the element of control. Thus, for example, higher debt payment obligations may exacerbate existing moral hazard problems and thereby cause the lender to bargain for more control rather than a higher interest rate. A lender might think, for example, that the borrower is more likely to behave in a conservative fashion if the interest is both low and something that the borrower wants to continue to receive. Second, as an empirical matter, interest rates are often sticky, and one cannot always borrow more at a higher rate. See, e.g., Lawrence M. Ausubel, The Failure of Competition in the Credit Card Market, 81 AM. ECON. REV. 50 (1991) (modeling interest rate stickiness in the credit card market); Steven L. Schwarz, The Easy Case for the Priority of Secured Claims in Bankruptcy, 47 DUKE L.J. 425, 452–54 (1997) (arguing that secured credit fills a void caused by the frequent unwillingness of creditors to lend when a viable firm has liquidity problems); Peter Passell, A Mystery Bankers Love: How Do Credit Cards Stay So Profitable?, N.Y. TIMES, Aug. 17, 1995, at D2 (describing credit card market stickiness). On the dynamics of credit rationing more generally, see Dwight Jaffee & Joseph E. Stiglitz, Credit Rationing, in 2 HANDBOOK OF MONETARY ECONOMICS 837 (Benjamin M. Friedman & Frank H. Hahn eds., 1990), and Joseph E. Stiglitz & Andrew Weiss, Credit Rationing in Markets with Imperfect Information, 71 AM. ECON. REV. 393, 395–402 (1981) (arguing that adverse selection problems can cause lenders to ration credit for fear of attracting only the high-risk borrowing projects at higher rates).
79. See Jarrow, supra note 70, at 234 (describing the "constant volatility" assumption).
80. See MILGROM & ROBERTS, supra note 18, at 454 (noting the tendency of analysts to estimate returns by looking at past performance); ROSS ET AL., supra note 34, at 237, 248, 262–63
variance is not an issue. If, however, the equity does have control over investment decisions, it can increase the value of its claim and decrease the value of the debt by choosing projects that are riskier than the current projects.\textsuperscript{81} For example, a firm might move from the traditional telephone business into cellular or internet access, from newspaper into film, or from cookies into cigarettes. If that is a realistic possibility for a firm, then the debt will demand a higher price for the option. Because equity gains, at the expense of debt, from an increase in variance, it may be willing to pay for the opportunity to increase variance.\textsuperscript{82} This is essentially the point demonstrated by our stylized examples in Part I. Thus, assuming a fixed amount of debt obligation (including interest), if the equity increases above the minimum amount, and assuming economic rationality, the equity (viewed as an option) must be paying for something else, which is likely to be control over variance.\textsuperscript{83} More generally, the greater the equity, the greater the control—up to a point. At some point the amount of the equity becomes large enough that it is no longer consistent with common usage to refer to it as an option. At that point the incentives of the equity change. Equity has a sufficient stake in the firm that it no longer gains more than it loses from an alteration of variance. At this point we are in what may be thought of as the shareholder primacy range, as opposed to the call option range. In this range, the debt need not worry about alteration of variance and therefore does not need to limit control by the equity.

Suppose that the option price is lower than the minimum equity point. That would be consistent with a shift in control over variance to the debt. The shift would continue until the firm is all debt and debt has total control.

\textsuperscript{81} See \textit{Klein & Coffee}, \textit{ supra} note 60, at 256–67 (describing how control can be exercised to shift value between debt and equity not only by altering the riskiness of investments but also by decisions about additional capital and about dividends); see also \textit{Brudney & Bratton}, \textit{ supra} note 69, at 475–76; \textit{Gilson & Black}, \textit{ supra} note 69, at 231–50.

\textsuperscript{82} This is contrary to the standard story, in which investors are thought to dislike risk. Here, the option holder values risk and is willing to pay for the opportunity to increase it. Another way of making the same point is to observe that the debt holder demands a higher price from the equity holder. See \textit{Michael P. Dooley}, \textit{Fundamentals of Corporation Law} 107–10 (1995).

\textsuperscript{83} This point can be confusing because in many situations any increase in equity will be associated with a decrease in debt—which violates the assumption of a fixed amount of debt. Suppose, for example, that you are about to buy a house for $100,000, that a bank will lend $80,000, and that you have $30,000 in your bank account. Assuming that the $80,000 debt is fixed, you would be foolish to pay more than $20,000 for your share of the purchase price. That would be like paying more than the calculated price for an option. You might, of course, decide to invest your entire $30,000 in the house, but only if the debt were reduced to $70,000.
over the firm's project choice. Minimum equity then is the last point before which control over the firm's decision making passes to the debt.\textsuperscript{84}

Crucial to the construction of a continuum of prices is the separation of initial variance and the right to alter variance. Implicit in this construction is that the point of reference is \( T_0 \). At \( T_0 \), if the equity has bargained for some degree of control over variance, the debt will anticipate and exact a price for the expected changes. Once the price has been paid, it is likely that equity will want to make the moves that it paid for. When this happens, assuming no other possible changes in variance, we return to the minimum equity point. Thus, it would seem that anticipated alteration of variance collapses into initial variance. That is true, but it also remains true, nonetheless, that an understanding of the process, and of bargains over control, requires a separation, at \( T_0 \), of alteration of variance from the other variables.\textsuperscript{85}

\textsuperscript{84} As the reader will likely have observed, this analysis suggests that control over the firm's projects is likely to shift to the debt well before the point of bankruptcy. Cf. Kevin A. Kordana & Eric A. Posner, A Positive Theory of Chapter 11, 74 N.Y.U. L. REV. 161, 223–24 (1999) (articulating—as one possible explanation for why shareholders have the power to threaten to remove managers during the pendency of bankruptcy proceedings—the standard view that so long as the firm is not insolvent, shareholders should continue to have control—even when the firm is distressed—because the shareholders are still the residual claimants). There may, of course, be legal constraints on shifts of control to the debt, in bankruptcy law or in common law decisions that expose a creditor that takes control of a failing firm to liability to other creditors. See Stuart C. Gilson & Michael R. Vetsuypens, Creditor Control in Financially Distressed Firms: Empirical Evidence, 72 WASH. U. L.Q. 1005, 1007 (1994) (noting the structural barriers to creditors' exercising control prior to bankruptcy, but nevertheless finding that creditors do often exert substantial amounts of control in financially distressed (but not bankrupt) firms).

\textsuperscript{85} Conceptually, the alteration of variance might occur instantaneously at \( T_0 \), but one can imagine a fleeting moment, a scintilla juris, in which the firm exists without the alteration of variance. Alternatively, one might expand the model and imagine that the firm, and the duration of the debt, extend to \( T_1 \), and that the alteration of variance does not happen until \( T_1 \). In this case, the alteration of variance still would be translated, in a valuation model, into expected outcomes that would reflect the alteration (perhaps discounted by the probability of occurrence), which would in turn be reflected in initial values. Cf. MILGROM & ROBERTS, supra note 18, at 463 (describing common miscalculations of variance). Yet it is easy enough to see why it might be useful to examine outcomes with and without alteration of variance and thereby be in a position to shed light on the bargain over control.

The utility of thinking about investment in multiple stages is clearest when there is uncertainty about what will happen at these later stages. One might wish to wait and see what happens at these later stages before committing one's resources (e.g., prices might be better, demand might have changed, one might have learned more about the project). The traditional method of thinking about investment projects was to think of each project as a single-stage event (i.e., one would make a simple net present-value calculation as to the value of the project). Those simple net present-value calculations have given way to what is referred to as "real-options" analysis, which involves thinking of projects in terms of multiple stages, each stage presenting the option to continue as before, invest more, invest in something else, or abandon the project. As a number of scholars and practitioners have demonstrated, the valuation of a project can be radically different depending on whether one uses conventional valuation methods or a multistage options
In effect, the firm's capital structure allows an observer to determine the bargain over the right to alter variance. As the amount of equity increases, equity accumulates a greater right to alter variance but may have less incentive to do so. Movements away from the minimum equity point, therefore, represent the purchase or sale of rights to alter variance.\textsuperscript{86}

To illustrate, suppose we have five firms. Each has the same initial set of projects with, consequently, the same variance. In Firm A there is debt of $70,000 and equity of $30,000. The debt has a highly restrictive set of covenants, which eliminate any opportunity for alteration of variance absent renegotiation. The capital structure of this firm is at the minimum equity point; the $30,000 is the price of equity's option. Now consider Firm B. It has the same initial set of projects, with the same variance, but equity has now contributed an extra $5000, for a total of $35,000. Assume that the extra $5000 is held by the firm in the form of treasury notes. In Firm B, one would expect to find a relaxation of the covenants, leading to greater control by equity over alteration of variance—that is, equity will have the right to alter variance in its own favor as investment opportunities arise in the future. In Firm C, the equity contributes $40,000, and the covenants are further relaxed, giving equity even greater control. In Firm D, equity contributes only $25,000, reducing by $5000 the initial amount set aside as working capital. In this firm one would expect to find that debt will have some degree of control—that is, the right to alter variance in its favor. In Firm E, equity contributes $20,000, and debt has even greater control.

\textsuperscript{86} Thus far, for the sake of conceptual simplicity, the above analysis considers only bargains over the right to alter variance. The option perspective implies, however, that the parties are also likely to bargain over the right to alter the other determinants of option value such as duration, exercise price, and expected value. An equity amount higher than minimum equity might suggest that equity has bargained for the right to alter one or more of the variables affecting its option. See Keith J. Leslie & Max P. Michaels, The Real Power of Real Options, McKinsey Q., June 22, 1997, at 5, 9 (describing the factors that alter option value).
Thus, we have:

<table>
<thead>
<tr>
<th></th>
<th>DEBT</th>
<th>EQUITY</th>
<th>CONTROL IN EQUITY</th>
</tr>
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<tbody>
<tr>
<td>Firm A</td>
<td>$70,000</td>
<td>$30,000</td>
<td>0</td>
</tr>
<tr>
<td>Firm B</td>
<td>70,000</td>
<td>35,000</td>
<td>+</td>
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<tr>
<td>Firm C</td>
<td>70,000</td>
<td>40,000</td>
<td>++</td>
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<tr>
<td>Firm D</td>
<td>70,000</td>
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<tr>
<td>Firm E</td>
<td>70,000</td>
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![Diagram](image)

Figure 2

This analysis of the allocation of control is depicted graphically in Figure 2. At the center, dividing the debt side from the equity side, is the minimum equity point, where the variance is fixed and no claimant can alter the firm’s variance (Firm A). The S curve in the diagram depicts the change in the price that must be paid for control as the incentive to alter variance changes. As one moves upward to the right along the continuum of different amounts of equity, holding debt constant, equity’s right to alter the variance becomes higher, up to a point. The portion of the curve that
rises upward to the right can be called the “call option range.” In this range, as the equity increases (that is, as a higher price is paid for the call option), the right to alter the variance increases. As the amount of equity increases further (as the equity becomes thicker in relation to the debt), however, the incentive of the equity to alter variance diminishes; the curve flattens. The story for debt is symmetrical.

D. Implications of the Limited Analysis

The following general observations emerge from the above discussion.

1. To the extent that simpler versions of the traditional legal models or conceptions of business organizations assume or imply, however subject to qualification, that equity controls the investment decisions, these models or conceptions are, in many applications, inconsistent with a contractarian perspective and may not accurately portray the bargains among the various participants. 87 Equally inconsistent and unrealistic are models used in the finance literature that assume or imply that control rests with the professional managers. Similarly, the notion that equity is inside the firm and that debt is outside is unhelpful. The clearest and most obvious way in which control is shifted to a participant other than the equity holders or the managers is through restrictions imposed by loan agreements and bond indentures. 88 Other restrictions or allocations of control are discussed in the next part.

2. The connected contracts model invites attention to the question of how to allocate control among the individual participants.

3. Allocation of control is an important element of the multilateral bargain that comprises business organization. The degree of importance of control in general, and of control over alteration of variance in particular, is an empirical issue. Insights into this issue lie in an organization’s capital structure. At the very least, control, and the devices by which the allocation of control is accomplished, seem to deserve more attention than they have received. 89

87. In the more sophisticated models that are now widely used, investment decisions are made by managers, subject to varying degrees of control by equity investors. These models introduce the incentives of managers, which may diverge from those of equity holders. See infra note 89 and accompanying text.

88. See Gilson & Black, supra note 69, at 244–47.

89. This not to say that control, per se, has been ignored. Economists do pay attention to the question of control. For example, the central question tackled by property rights theorists such as Hart (building on work by Coase and Williamson) is: What is the source of a firm’s control, or, alternatively, what defines the boundaries of a firm? See, e.g., Hart, supra note 66, at 1765–66. Hart asserts that what defines a firm are the nonhuman assets over which it has control. See id.; cf. Raghuram G. Rajan & Luigi Zingales, Power in A Theory of the Firm, 113 Q.J. ECON. 387, 388 (1998) (expanding on the property rights conception, but arguing that access, i.e., the ability
4. In setting forth their theory of the irrelevance of capital structure, Modigliani and Miller posit a world in which it is possible to separate a firm’s investment decisions from its financing decisions. The irrelevancy proof assumes a firm’s investment portfolio, and, therefore, variance is fixed. If the assumptions as to a fixed investment portfolio are relaxed, then issues as to control, in general, and alteration of variance, in particular, become important. Financial economists note important reasons why the Modigliani/Miller theorem does not work in practice (most notably, bankruptcy costs, incentive effects, and tax effects) but have largely ignored the fact that as the capital structure changes, so will the bargain among the participants over control. Thus, at a fundamental analytical level—ignoring bankruptcy costs, incentive effects, taxes, etc.—it is not possible to imagine two identical firms with significantly different ratios of debt to equity. Consequently, the
to work with or use a critical resource, is the source of a firm’s power). Hart argues that, in a world of incomplete contracts, residual control (i.e., the power to decide how and where an asset will be used) is important because it protects the one with control against opportunistic holdups by another party. See Hart, supra note 66, at 1766–69. That protection against opportunistic behavior, in turn, provides the firm with the proper incentives to invest. See id. But cf. David de Meea & Ben Lockwood, Does Asset Ownership Always Motivate Managers? Outside Options and the Property Rights Theory of the Firm, 113 Q.J. ECON. 361, 384–86 (1998) (suggesting that, in the context of agents with outside options, asset ownership might not produce optimal investment decisions).

Unlike the property rights theorists, we are not concerned with defining the hypothetical boundaries of the firm. Our goal is to understand the bargains struck by those individuals who enter into joint economic activity. Along the lines of the argument made by Hart, we expect that in situations in which participants fear that the capital that they have invested will be at risk and they cannot protect themselves with specific contractual provisions, they will bargain for residual control. The individual participants may bargain for total control, partial control, state-specific control, and so on. Cf. Blair, Firm-Specific Human Capital, supra note 21, at 80–87 (describing recent work on the theory of the firm that understands “firms as institutional arrangements developed to elicit contributions by employees to the joint productive effort of the enterprise”); Bengt Holmstrom, The Firm as a Subeconomy, 15 J.L. ECON. & ORG. 74, 87–88 (1999) (making the point that the Hart-Moore model provides an explanation for why individuals, and not firms, control assets). The type of bargain will depend on the context.

The discussion of the importance of control, of course, precludes Hart, Coase, and Williamson.

Indeed, control was central to Marx’s theory of exploitation. Control over capital was what enabled capitalists to extract surplus from labor (whose lack of access to capital made their bargaining position weak). One might say, therefore, that while modern economists talk about control as important to protect against opportunism, Marx thought control was what enabled capitalists to act opportunistically. Cf. Stephen A. Marglin, What Do Bosses Do?: The Origins and Functions of Hierarchy in Capitalist Production, 6 REV. RADICAL POL. ECON. 33, 33–35 (1974) (describing the increases in bargaining power from limiting other agents’ alternatives).

Economists have come to this point somewhat differently. See, e.g., Sean Cleary, The Relationship Between Firm Investment and Financial Status, 54 J. FIN. 673, 673–74 (1999) (describing models of imperfect and incomplete capital markets in which financial structure can be relevant to the investment decisions of companies); Assem Safieddine & Sheridan Titman, Leverage and Corporate Performance: Evidence from Unsuccessful Takeovers, 54 J. FIN. 547, 548 (1999) (describing models in which corporate managers choose capital structure either as a signal to the market or as
arbitrage proof of the theory fails. While an investor can engage in self-help leverage at the investor level to undo a firm’s capital structure, it is not possible to undo, at the investor level, the bargains over control. In many real-world situations, ignoring how control changes as the ratio of debt to equity changes is not only unrealistic but logically impossible. As control changes, the nature of the firm changes, so firms with different debt/equity ratios are not comparable.

5. The simple option perspective provides a concrete example of the heretofore fuzzy and intuitive notion of minimum equity or maximum debt. Assuming credit rationing, minimum equity or maximum debt is the point at which neither side has any right to alter the firm’s projects.

IV. THE BROADER APPLICATION

This part extends the preceding analysis in two ways. First, it broadens the concept of control beyond alteration of variance. Second, it examines the allocation of control among the full panoply of participants in business

a commitment that promised improvements will take place). For example, Milgrom and Roberts point out that a limitation of the Modigliani/Miller theorem is that it fails to consider the impact different capital structures have on the incentives of the participants in the business venture. See MILGROM & ROBERTS, supra note 18, at 504 (“Changing the financing of the firm changes incentives, and the resulting real changes in behavior affect the returns that are generated.”). A high amount of debt is thought to discipline management by constraining its ability to (mis)use excess cash flow. See id. Given the different incentives that arise, an argument can be made that there exist context-specific optimal capital structures. See Jarrow, supra note 70, at 242 (“[T]he agency costs of debt generate the possibility for an optimal debt/equity ratio . . . .”). Thus, one might want to have high debt amounts in low-growth industries (i.e., in which management is likely to waste the excess cash) and low debt amounts in high-growth industries (i.e., in which there are lots of good projects available for the managers to invest in). See MILGROM & ROBERTS, supra note 18, at 504.

In contrast, we do not take capital structure as something that is chosen so as to maximize firm profits (although that might be the outcome in equilibrium). Instead, we see capital structure (and this includes human and reputational capital) as representative of the bargain that the participants in the venture have entered into. Put differently, instead of capital structure creating incentives, it is a function of the bargain that parties who recognize these incentives enter into. Thus, in our simple model, one might expect firms in high-growth industries to have high amounts of equity because equity has bargained for the option to take advantage of new opportunities that might come along.

91. The theory does remain useful in analysis of situations in which alteration of variance is not an issue and, oddly enough, in filtering out other aspects of the capital structure inquiry and thereby in helping to focus attention on the relationship between capital structure and control.

92. See, e.g., MILGROM & ROBERTS, supra note 18, at 504 (noting that there must be a minimal amount of equity so that it is never worthwhile for the equity holders or managers to destroy firm value as a bargaining ploy); ROSS ET AL., supra note 34, at 416 (describing the limits to the use of debt as being a function of bankruptcy costs and tax rates).

93. This is not to say that the two sides cannot later agree to an alteration (especially when they agree that an alteration of trajectory is to their mutual benefit).
activity, thereby broadening the connected contracts model beyond the initial, narrow analysis. Because the connected contracts model posits interrelationships among all the participants, with the actions of each affecting the interests of the others, the following discussion is potentially confusing. To clarify and simplify, we begin with a general discussion of types of control. We then examine investments by and exercise of control by various participants.

First, a caution. The connected contracts perspective deconstructs joint economic activity into formal and informal arrangements among individuals. Yet, the discussion in the prior parts deconstructs capital structure into a bargain between two aggregates, debt and equity. Similarly, as other participants, such as suppliers, customers, employees, and managers, are added to the business venture, they are described in the aggregate.

Describing the bargains among participants by reference to groups rather than to individuals sacrifices the opportunity to reach a richer understanding of the ways in which control works. For example, an individual who contributes both human and equity capital has an incentive to enter into a different bargain over control from others who contribute an identical

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94. In the real world, of course, the individuals who enter into joint economic activity often wear many hats. Creditors can and do hold equity or rights to acquire equity. Equity holders can be managers and employees. Customers can be suppliers, and both of them can be creditors and equity holders.

For some purposes, it is a mistake to ignore differences among members of the group and differences among types of groups. For example, commentators suggest that the functioning of enterprises in which the holding of equity is dispersed likely differs from the functioning of those in which there are large block holdings of equity and the large block holders take an active interest in the running of the company (often referred to as "relational investing"). See, e.g., Ian Ayres & Peter Cramton, Relational Investing and Agency Theory, 15 CARDOZO L. REV. 1033, 1062-63 (1994) (suggesting that relational investing can be a substitute for independent boards); John C. Coates IV, Measuring the Domain of Mediating Hierarchy: How Contesetable Are U.S. Public Corporations?, 24 J. CORP L. 837, 839 (1999) (asserting that capital structure does make a difference in the functioning of a firm); Romano, supra note 19, at 298-303 (describing theories of relational investing); William A. Sahm, The Structure and Governance of Venture-Capital Organizations, 27 J. FIN. ECON. 473, 508-09 (1990) (describing the active governance role played by venture capital investors). Although much of the discussion is in the context of equity holders (the venture capital context being one exception), the same rationale applies for other types of investors—in other words, the individuals entering into the bargains matter. For example, Lee Biehheit of Cleary, Gottlieb, Steen & Hamilton has pointed out to us the relevance to a debtor of whether the creditors are large repeat players or small and dispersed lenders. Large lenders often have an interest in the continued survival of the borrower and interact with the borrower on several fronts (providing investment advice, information, holding deposits, and so forth). That multifaceted relationship allows for the development of relationship-specific reputational capital. When repayment problems occur, the large lenders often work with the borrower to find a solution. This, however, tends not to be the case with a small lender, who generally just wants to be paid. For a model of reputational effects in the long-term credit market, see Douglas W. Diamond, Monitoring and Reputation: The Choice Between Bank Loans and Directly Placed Debt, 99 J. POL. ECON. 689, 689-91 (1991).
amount of equity but no human capital. Further, the individual who is both an employee and an equity holder is able to bargain for a different set of controls from a pure equity holder because of her greater ability to monitor and to sanction.\footnote{See, e.g., Macey & Miller, supra note 37, at 90–96 (contending that banks that wear multiple hats are better able to monitor because they have access to multiple and independent sources of information); Leonard I. Nakamura, Commercial Bank Information: Implications for the Structure of Banking, in STRUCTURAL CHANGE IN BANKING 131, 135–36 (Michael Klausner & Lawrence J. White eds., 1993) (same); Romano, supra note 19, at 300–01 (contending that relational investors who have multiple relations with a firm are better able to monitor because they have access to multiple and independent sources of information).} One can tell a similar story for suppliers who are creditors or equity holders who are customers.

A. Control Bargains

"Control" is used here to describe the power both to decide upon and to implement an action. The exercise of control can be divided into two broad categories: (1) "positive" control through active participation in the decision-making and implementation process, and (2) "negative" control through a combination of monitoring and sanctioning.\footnote{Our division parallels that made by Fama and Jensen in their examination of formal delegations of authority. See Eugene F. Fama & Michael C. Jensen, Separation of Ownership and Control, 26 J.L. & ECON. 301, 301–02 (1983). Our interest is in both the formal and the informal bargains (as opposed to delegations) of control. Cf. George Baker et al., Informal Authority in Organizations, 15 J.L. ECON. & ORG. 56, 62–69 (1999) (studying the informal delegation of authority in organizations).}

Positive control encompasses initiation, approval, and veto.\footnote{There is, however, no clear distinction between approval power and veto power. They are two sides of the same coin. Approval may be ex post, in which case it can best be referred to as "ratification."} Positive control may reside entirely in one person, as in a sole proprietorship, or may be divided among participants, with individual participants having control ranging from virtually all to virtually none. Initiation, approval, and veto control may similarly be divided among the different participants. For example, in the large corporation, professional managers may have control over initiation of projects, but large projects may require approval of the board, with creditors possibly having veto power.\footnote{Cf. Blair & Stout, supra note 19, at 290–92 (describing the role of the board of directors in a public corporation).} In a start-up firm, an entrepreneur may initiate and propose investment decisions but may require approval from a venture capital investor.\footnote{See, e.g., D. Gordon Smith, Team Production in Venture Capital Investing, 24 J. CORP. L. 949 (1999).} The bargain over positive control
is likely to be both formal and informal. For example, there is likely to be an implicit understanding as to how the venture capitalist or board of directors will exercise its approval or ratification authority. Similarly, an understanding is likely to have developed about what kinds of projects the managers and entrepreneurs may initiate. Managers and entrepreneurs, both of whose reputations are at stake, will make choices about the kinds of individuals or groups with whom they wish to share control, and vice versa.\footnote{100}

Negative control can be exercised through combinations of monitoring and ex post sanctioning or through ex ante prohibitions. Once again, the mechanisms for sanction and observation can be both formal and informal. Employers often cede decision-making and implementation authority to employees but retain the authority to evaluate and reward or penalize the employees’ behavior (for example, by bonuses, promotions, and firings). The degree of control is a function of both the likelihood of detection and the corresponding sanction. Less obviously, employees often exercise similar control. They grant the employer the power to set certain conditions of employment, to evaluate their performance, and to decide on bonuses and promotions, but then they evaluate the employer’s performance and penalize or reward the employer (for example, by quitting or exerting less or more effort in the future\footnote{101}). Other participants are also likely to exert some degree of control through monitoring and sanctioning. For example, creditors who are unhappy with how the firm is being run can decline to extend new credit, and debtors who are unhappy with how the creditors have behaved can take their borrowing elsewhere. Further, this exercise of control is likely to be an interactive process among the participants. For example, the decision of an important employee to quit may send negative signals to customers, suppliers, and lenders, thereby inducing them to quit as well, and vice versa.\footnote{102} The point is to remind ourselves that combinations of monitoring, penalizing, and rewarding by the entire panoply of connected participants can serve to control decision making by the others in the venture.


102. See Triantis & Daniels, supra note 29, at 1079–80 (describing such an interactive model of corporate governance).}
Negative control also can be exercised by imposing explicit prohibitions on certain actions. Good examples of prohibitions are found among the covenants in corporate bond indentures. These covenants range from restrictions on dividend payments and taking on new debt to restrictions on the types of businesses in which the borrower can engage. The covenants are backed by both formal and informal penalties such as debt acceleration, increase in the interest rate, and refusal to lend in the future.\footnote{See infra note 112 (citing articles on bond covenants).}

On occasion, negative control will slide into positive control. For example, a loan agreement may provide that if profits do not meet a certain benchmark, the lender becomes entitled to a seat on the board of directors. Convertible debt can be thought of as a form of sliding control. As a general matter, the instrument holder has the option to slide from what is primarily negative control (debt) to positive control (voting stock).\footnote{Sliding control instruments provide participants with one method of combating the risk of opportunistic behavior that is observable but not verifiable (e.g., you can see that someone else is cheating you, but you cannot easily prove it to a court or to an arbitrator). See, e.g., Erik Berglöf, A Control Theory of Venture Capital Finance, 10 J.L. ECON. & ORG. 247 (1994) (demonstrating why, in an incomplete contracting framework, one would expect contracting agreements that closely resemble those observed in venture capital markets, i.e., ones with a predominance of convertible instruments).} Participants may also decide to simultaneously hold combinations of instruments that individually provide for different degrees of control in different states of the world (for example, holding both debt and equity).\footnote{The most prominent example is that of banks in Germany and Japan, which will often hold large amounts of both the stock and the debt of a single company. See, e.g., Mark J. Roe, Strong Managers, Weak Owners 172–82 (1994).}

B. Participants in the Bargains

For ease of exposition, this part presents a detailed analysis of employees and introduces general principles in that context. The analysis of other participants can then be brief and suggestive. Also for ease of exposition, this part discusses employees in the aggregate, though the essence of our approach would require greater sensitivity to differences among employees. The employees described here are generally upper-level managerial and professional ones rather than the lower-level employees who might be parties to a collective bargaining agreement.\footnote{For a detailed (albeit dated) description of the microanalytics of labor agreements, see Peter B. Doeringer & Michael J. Piore, Internal Labor Markets and Manpower Analysis (1971). An interesting and important aspect of employee bargains that is beyond the scope of this Article is the extent to which employees systematically misunderstand the bargains they have entered into. See generally Pauline T. Kim, Norms, Learning, and Law: Exploring the Influences on Workers’ Legal Knowledge, 1999 U. ILL. L. REV. 447.}
1. Employees

This subpart examines the types of investments made by employees and shows why and how some degree of control might be allocated to them.

*Types of Investment.* Consider several types of nonfinancial investment that might be made by employees: reputational capital, firm-specific capital, client-specific capital, and intellectual capital. With each type of capital, as the investment increases, the employee's interest in bargaining for control also increases. This observation departs from the traditional conception of employees within the business firm. In that conception, control rests with the owner (the equity claim) and is delegated to the employees only to serve the owner's interests. When one views employees as investors of human capital, on a par with investors of financial capital, the prospect of a selfish interest in control becomes clear. The comparison to the simple debt-equity example and its implications becomes evident. With an investment at risk, employees have an interest in control over, among other things, alteration of variance. Depending on the circumstances, they may, like lenders, prefer less risk, or, like equity holders in the call option range, more risk. Whatever their preferences, they should care about, among other matters, the riskiness of the firm's investment strategies. They cannot be expected, without a quid pro quo, to subordinate their interests to those of the other participants. There is no a priori reason to suppose that others will value control more than will employees, nor that the relative value placed on control by various participants will inevitably result in denying selfish control to employees.

i. Reputational Capital—Many employees invest in their jobs not only time and effort but also their reputations. Consider a chief executive officer, a fund manager, or a director of research or marketing who is hired because of past accomplishments. That individual can be thought to have made a reputational investment in the firm. The future value of that investment, which can be thought of as really a loan of the individual's reputation because it reverts, is likely to vary with the success or failure of the new employer, even if the major decisions leading to that success or failure were

107. Employees do, however, also make traditional financial investments. They make equity investments in the form of traditional stock, stock options, and labor investments made in exchange for the promise (implicit or explicit) of future employment. Similarly, they make debt investments when they accept lower salaries when they are young (or in periods of economic distress) in exchange for the promise that they will be compensated later. See, e.g., LAZAR, *supra* note 59, at 39–43 (describing theories of deferred compensation); George Loewenstein & Nachum Sicherman, *Do Workers Prefer Increasing Wage Profiles?*, 9 J. LAB. ECON. 67 (1991) (testing the hypothesis that wages are deferred because workers prefer wages that increase with age).
made by the board of directors or by a predecessor. Or think about the coach of a basketball or football team, who has been successful in prior coaching jobs and who, out of a concern to preserve his or her reputation, may want some (or complete) control over decisions such as player personnel.

Employees in service sector firms, such as law firms, investment banks, and management consultants, provide perhaps the best illustration of the importance, and the nuances, of investments in reputation. With such employees, the human capital available for investment in a firm can be the result of (1) past experience, training, or success, or (2) reputation-enhancing credentials. Depending on the individual's success or failure in the current job, the human capital will be either enhanced or diminished. In certain situations, incentives of the organization and incentives of the individual employee to protect the value of her reputational capital may well diverge. For example, the organization may wish to take a high-risk gamble that could wind up destroying the employee's reputation. Given this possibility, the employee has an incentive to bargain not only for higher wages but also for control over decisions, such as hiring subordinates and making day-to-day decisions that will affect his or her reputation. In terms of the option model, then, higher contributions of reputational capital (holding other things such as wages constant) should correspond to higher amounts of localized control with the employee.

ii. Firm-Specific Capital—This type of human capital has productive value only within a specific firm. The standard example is the mastery of a unique production process, the implication being that skill in using that process is nontransferable. Again, as an employee's investment in firm-specific capital increases, so does his interest in having control over the firm's actions. The employee might, for example, be concerned about a merger or a plant closing. It is unlikely that an employee or a group of employees will bargain for significant direct decision-making control over merger or plant-closing decisions. More likely, the bargain will provide for a payment to the employee if, for example, the plant is closed, but the obligation to make such a payment will, of course, affect the decision whether to close.

iii. Client-Specific Capital—An employee's human capital may have productive value with respect to a specific client. For example, it might be a relationship of trust between the employee and the client or an intimate

108. For discussions of employee investments in reputation, see Klein, supra note 27, at 1536–37, and Wilkins & Gulati, supra note 101, at 1638–41 (discussing the concept and citing articles on the subject).

109. This may be as little as an informal understanding that employees will be included in the decision-making process. Although unlikely, such a bargain is not inconceivable.
knowledge of the client's production process. As with reputational capital and firm-specific capital, there will be situations in which the firm's incentives with respect to the client will differ from those of the employee. For example, the firm may not want a client to know that the firm is being investigated by the government for fraud, but the employee who has a relationship with the client may see nondisclosure as unduly harmful to his or her relationship with the client. This is especially true when the employee plans to quit the firm but maintain his or her relationship with the client. Therefore, when individual service providers have large investments of client-specific capital, they have an incentive to bargain for control over decisions vis-à-vis that client. And other things equal, higher amounts of client-specific capital should correspond to higher amounts of control by the individual.

iv. Intellectual Capital—An individual's knowledge and experience produce what may be called "intellectual" or "knowledge" capital. As employees bring greater amounts of such capital to the firm, one can expect to find them demanding greater amounts of financial compensation. However, these employees are also likely to be concerned about both preserving and enhancing their intellectual capital. While the organization might, for example, not want the employee to share ideas with people working at competitor organizations, the employee might see the ability to share ideas as vital to the preservation and development of his or her intellectual capital. Similarly, in settings in which one acquires human capital only through hands-on work experience, the employee may wish to ensure that she participates in projects that allow for the enhancement of her intellectual capital. Once again, when employees have large investments of intellectual capital that are not entirely compensated by financial returns, they are likely to have bargained for at least limited control over decisions that affect the value of that capital.

110. See Collaboration Among Competitors Redefining Capitalism, Professor Says, PALM BEACH POST, Aug. 8, 1999, at 10A (describing William Baumol's finding that scientists often demand—contrary to the wishes of their organizations—that they be allowed to share information with their peers at competitor organizations). See generally Saxenian, supra note 31 (contrasting Silicon Valley's system, which promotes collective learning among different specialist producers and in which boundaries between firms are porous, with Route 128's more traditionally divided structures).

2. Creditors

There are many types of creditors, such as senior, junior, trade, tort, bank, and commercial, with potentially divergent interests and incentives. Nonetheless, some general observations are possible. Investments by creditors, compared with those of employees, are relatively straightforward. They are largely financial investments, easily identified and quantified. Creditors exercise control most obviously through the terms of their loan agreements, which can be lengthy and detailed. The form of control consists mostly of prohibitions and minimal standards.\footnote{112}

Creditors can also exercise control informally by limiting the duration of the credit and by establishing a continuing relationship or the expectation of such a relationship.\footnote{113} For example, the lender with a demand note is in a position to exercise substantial control over a needy borrower (that is, over the borrower in the call option range).\footnote{114}

Lenders may also rely on the alignment of their interests with those of other participants.\footnote{115} A member of the board of directors may have a reputa-


113. There remains much to be learned about the relationships between creditors and borrowers. Banks, venture capitalists, and governments each bargain for different types of control. And, of course, those bargains vary according to context. While many corporate scholars focus on shareholders and managers, the degrees of control exercised by creditors and their interactions with other stakeholders also exercising control may be both interesting and important. For a recent treatment of the role of debt in corporate governance, see Triantis & Daniels, supra note 29, at 1093 (noting the need to move beyond what can be seen through the equity-focused lens). See also Yakov Amihud et al., A New Governance Structure for Corporate Bonds, 51 STAN. L. REV. 447, 450 (1999) (arguing that the corporate governance debate needs to focus on the governance role played by debt).

114. See Schwarz, supra note 78, at 426 (observing that firms often find credit to be rationed when they are especially needy). A lender's ability to exercise greater control with respect to a needy borrower relates to the more general point that one has greater leverage when the alternatives of the other party are unattractive. The relationship between control over an agent and that agent's alternatives has been extensively modeled in the labor literature. See, e.g., Gillian Lester, Careers and Contingency, 51 STAN. L. REV. 73, 131–36 (1999) (describing efficiency wage theories, one set of which posits that employers induce workers to work especially hard by paying them substantially more than they would receive elsewhere).

115. As noted earlier, they may purchase financial instruments that give them a greater amount of control in those states of the world in which there is no longer an adequate alignment of incentives, and that nonalignment presents the danger of opportunistic behavior by others.
tional interest leading to an aversion for risky investments. Or a chief executive officer may have such a large investment of firm-specific human capital and such a large equity stake as to make his level of risk aversion far greater than that of the typical shareholder.116

3. Suppliers

Suppliers may make substantial investments in firm-specific equipment or simply in general capacity when there are no other readily available customers. Thus, suppliers who invest significantly in a particular relationship with a purchaser firm are likely to seek, for example, to limit that firm's ability to do business with other suppliers, and they may seek evidence of a commitment of the firm to continue to do business in the same old way for at least some significant time period.117

4. Customers

Some customers may depend in their operations on a continuing output by the firm. Customers will often invest in learning how to use a particular product. Customers may also invest in developing relationships with suppliers. For example, the suppliers may depend on the customers to provide useful information, and, in turn, the customers may depend on the suppliers to respond to that information.118 Customers, therefore, may seek assurances that their suppliers will continue on their present courses.


116. Much of the modern effort to align the interests of managers with those of shareholders by granting stock options and by encouraging or requiring substantial stockholdings by directors and executives seems to ignore the point that when a person's equity holdings in a firm become a large part of his or her wealth, the person is likely to become excessively risk averse from the diversified shareholder's perspective. See KLEIN & COFFEE, supra note 60, at 266–67.

117. One way to ensure a continued relationship is to purchase the other firm. The question of when firms decide to integrate vertically and the specific example of General Motors's purchase of its supplier, Fisher, has motivated a significant body of literature in economics. See, e.g., Bolton & Scharfstein, supra note 10, at 102–06; Seth W. Norton, Information and Competitive Advantage: The Rise of General Motors, 40 J.L. & ECON. 245, 258 (1997); Susan Helper et al., The Boundaries of the Firm as a Design Problem (Sept. 1998) (unpublished manuscript) (abstract available at Social Science Research Network (visited Mar. 16, 2000) <http://www.ssrn.com/paper.taf?ABSTRACT_ID=138815>) (describing a variety of collaborative but nonintegrated supplier-producer relationships). For us, the decision to pay for total control lies at one extreme of a continuum of bargains over control.

118. See Helper et al., supra note 117 (noting the importance of such informational transfer relationships between suppliers and customers).
5. Equity

The control exercised by equity holders has been much discussed. Indeed, the thrust of this Article is that equity has less control than is commonly assumed—control is negotiated and governance is shared. It is useful, however, to point to the potential divergences among holders of equity over control in general and over alteration of variance in particular. It is likely, for example, that entrepreneurs and venture capitalists will, from the outset and during the course of the growth of a business, have significantly different attitudes towards risk, especially at the end-game time when they sell all or part of the enterprise to a third party. It follows, therefore, that they will engage in extensive negotiations over control.\textsuperscript{119}

Similarly, people with most of their wealth invested in a single firm (for example, the chief executive officer or a large block holder) may be considerably more risk averse than people with diversified portfolios.

6. Government

Government control is most obvious in the form of the statutes and regulations that constrain the behavior of individuals and organizations.\textsuperscript{120} One can think of these statutes and regulations as aimed both at enabling more efficient contracting among individuals and at protecting noncontracting third parties from externalities.\textsuperscript{121} Less obviously, government agencies often exercise control informally through long-term relationships with individuals at organizations.\textsuperscript{122} Cooperative behavior by the individual or organization results in benefits such as access to information. For example, one might be able to obtain an interpretation of a vague or unclear regulation and perhaps even a reduced likelihood of prosecution.\textsuperscript{123}

\textsuperscript{119} See, e.g., Smith, supra note 99, at 952.
\textsuperscript{120} See Klein, supra note 27, at 1554–55 (modeling government rules and regulations as constraints on private behavior).
\textsuperscript{121} Cf. Williamson, supra note 21, at 1214–15 (describing the interest of the community in protecting against externalities).
\textsuperscript{122} Our colleague Jody Freeman takes the concept of shared governance one step further and argues that the exercise of government control itself (i.e., implementation) is a process that is shared by both public and private parties. See generally Jody Freeman, The Private Role in Public Governance, 75 N.Y.U. L. REV. (forthcoming 2000).
\textsuperscript{123} In some countries (e.g., India) one often finds both current and former government officials as members of boards of directors. These directors serve double duty (at least in theory) in both articulating the public interest and providing organizations' managers with information and advice on negotiating their relationships with the relevant regulatory authorities. On the importance of thinking about the relationship between firm structure and dynamics on the one hand, and the role of bureaucrats and politicians on the other, see Curtis J. Milhaupt, Property
Governments, both local and central, can also be thought of as investing in specific individual firms. This investment can be in the form of providing facilities, special tax breaks, and even protection from financial ruin. In return, however, the government often expects to have a say in the operation of the organization. For example, the government may request that a strike be settled on terms that the company is not pleased with, or it may pressure a consortium of commercial banks to renegotiate the unpaid debt of a country that is important for political reasons. Governments both invest in private business activity and bargain for control.

C. Summary

In joint economic activity, every relationship includes a bargain over control. The so-called owners, whether they are shareholders, partners, or managers, seldom have total control or even total residual control. As suggested earlier, in significant part these bargains will be a function of the amounts and types of capital the parties have at stake.

V. Applications in Corporate Law

A. Piercing the Corporate Veil

The proprietor of an unincorporated business is personally liable for all of the debts incurred in the business, even if he or she has delegated all management responsibility to an employee. Similarly, inactive, or “silent,” partners are personally liable for the debts of the partnership. In either case the outcome is consistent with the law of agency, in which the proprietor or

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124. A recent example is the Federal Reserve Bank’s role in encouraging a bailout of Long-Term Capital Management. The U.S. government’s bailout of Chrysler was another highly publicized example. See Mark D. West, Information, Institutions, and Extortion in Japan and the United States: Making Sense of Sokaiya Racketeers, 93 NW. U. L. REV. 767, 786 (1999) (observing that these types of government interventions are far more common in Japan than in the United States).

125. Along the lines of the contract metaphor, Romano sees corporate charters as long-term relational contracts between the state and the firm. See Romano, supra note 19, at 314–15.

126. Williamson is one of the few to adopt such an approach. Williamson tackles the question of who should be on the board of directors by examining the bargain among the parties who enter into joint economic activity. See Williamson, supra note 21, at 1198. Asserting that to think that “ex post settling-up’ processes are always fully efficacious strain[s] credulity,” Williamson urges scholars to think about which constituencies have stronger claims to control and why. See id. at 1228–30.

127. See KLEIN & COFFEE, supra note 60, at 6.
the partner is the principal or owner.128 If the business is incorporated, however, the counterparts of the proprietor or partner are immune from personal liability; their liability is limited to their investment in the corporation.129 The exception to limited liability is found in the doctrine of "piercing the corporate veil" or "alter ego."130 The exception, however, applies only in extreme situations and never in the case of corporations with many shareholders.131 Personal liability is also to some degree a default rule. Proprietors and partners can bargain with voluntary creditors, though not with potential tort creditors, for limited liability.

In recent years, an exchange of scholarly articles has addressed the possibility of removing the barrier to the personal liability of shareholders of public corporations, in particular for tort liability.132 From the perspective of the connected contracts model, it is interesting and surprising that no one seems to have considered the possibility of applying the arguments for shareholder personal liability to other participants such as creditors,133 suppliers, customers, directors, officers, and employees. From that perspective, at first blush, all of these other participants might be fair game. Because there are no clear boundaries and no owners, however, the scope of potentially liable persons might be virtually infinite. Thus, the next step would be to examine each of the most proximate participants to determine which one, or which combination of them, would most likely respond to incen-

128. See id. at 61, 62.
129. See id. at 139.
130. See id.; see also STEPHEN B. PRESSER, PIERCING THE CORPORATE VEIL § 1.01 (1998).
133. But see Lynn M. LoPucki, The Unsecured Creditor's Bargain, 80 VA. L. REV. 1887, 1907–16 (1994) (arguing for subordination of voluntary creditors to tort creditors in bankruptcy). There are some situations in which a creditor has been held liable for the debts of a corporation, but only when the creditor has in effect taken over the management of the business. See A. Gay Jenson Farms Co. v. Cargill, Inc., 309 N.W.2d 285, 290 (Minn. 1981); J. Dennis Hynes, Lender Liability: The Dilemma of the Controlling Creditor, 58 TENN. L. REV. 635 (1991); Laura Lin, The Information Content of a Bank's Involvement in Private Workouts, 3 GEO. MASON INDEP. L. REV. 97, 120–30 (1994) (reviewing various risks of lenders, including those arising under the Comprehensive Environmental Response, Compensation, and Liability Act, the federal securities laws, etc., as well as under agency theories).
tives to take the optimal level of care. This would seem to be the kind of inquiry that is the linchpin of standard economic analysis of contracts and externalities. The connected contracts model invites this kind of inquiry directly, whereas other models seem to have foreclosed it or, at best, to have reached it indirectly.  

B. Insider Trading

At common law the majority rule was that corporate officers and directors ("insiders") were free to rely on nonpublic corporate information in deciding to buy or sell shares of stock. In a classic justification of this rule, the Massachusetts Supreme Judicial Court, relying on an extreme notion of reification of the corporation, stated that the insiders owed a duty to the corporation but not to its shareholders. Whatever the merits of the arguments for or against permitting trading by insiders on nonpublic information, the ultimate normative judgment cannot properly be derived from a model or a fiction. Any such derivation is necessarily conclusory. A model can, however, open our minds to policy alternatives and to normative considerations. Thus, the shareholder primacy model opens our minds to the argument that, in a well-functioning economy, shareholders must rely on the honesty and integrity of the employees to whom they entrust their investments. The shareholder primacy model is consistent with the modern rule embodied in the Securities and Exchange Commission's Rule 10b-5. At the same time, rigid adherence to that model can blind us to related problems. The connected contracts model suggests that there may be other

134. See, e.g., Hansmann & Kraakman, Shareholder Liability, supra note 132, at 1907–09.
135. See Goodwin v. Agassiz, 186 N.E. 659, 660–61 (Mass. 1933) (describing the rule). This was the rule for market transactions. The exception to the majority rule was the "special circumstances" rule that applied in face-to-face transactions. See Strong v. Repide, 213 U.S. 419, 430–33 (1909). Under the minority rule, which was adopted in a number of jurisdictions, corporate insiders had a duty to disclose material information before trading. For a concise discussion of the development of the doctrine, see STEPHEN M. BAINBRIDGE, SECURITIES LAW: INSIDER TRADING 7–14 (1999) (describing the doctrine of insider trading).
136. See Goodwin, 186 N.E. at 660. There were, however, other justifications cited by the court, including that the information was of uncertain value and that a contrary rule would, it was claimed, have had an adverse effect on the willingness of talented people to serve as corporate officials. See also Alan Strudler & Eric W. Orts, Moral Principle in the Law of Insider Trading, 78 TEX. L. REV. 375, 390 (1999) ("Technically, corporate directors, officers, and employees do not owe fiduciary duties to shareholders but rather to the corporation as a legal entity.").
137. As Boris Bittker put it: "There is no surer way to discredit scholarship than to claim that value judgments can be plucked out of a definition, or even out of an expert." Boris I. Bittker, The Tax Expenditure Budget—A Reply to Professors Survey & Hellmuth, 22 NAT'L TAX J. 538, 542 (1969).
138. See 17 C.F.R. § 240.10b-5 (1999); BAINBRIDGE, supra note 135, at 29–41.
participants in a business enterprise that deserve protection from self-serving behavior by those with special access to information. As we have suggested, the model does not provide the information and insights on which a policy choice should rest. Thus, it cannot resolve the question of whether participants such as holders of bonds, options, and convertible debt should be protected from insider trading. The connected contracts model may, however, predispose people to be more open-minded about that possibility than may a model of extreme reification or of shareholder primacy. The connected contracts model rejects the notion that shareholders deserve special protection. It encourages people to focus on implied contracts or bargains, default rules, and opportunistic behavior, rather than on traditional, sometimes sterile, notions of fiduciary obligation.

139. See, e.g., Strudler & Ors, supra note 136, at 392 (pointing out the failure of the extant theory to provide any sound legal, economic, or moral rationale for a distinction between insider trading in public debt and in stock).

The discussion in the text focuses on the classical theory of insider trading. As a doctrinal matter, both Steve Bainbridge and Bob Thompson have pointed out to us that nonshareholder capital investors (bondholders, option holders, etc.) might be protected against trading by corporate insiders under the misappropriation theory articulated by the Supreme Court in United States v. O'Hagan, 521 U.S. 642 (1997). The reason for this is that for liability to arise under the misappropriation theory, there is no need for a breach of a fiduciary duty between the trader with nonpublic information and the counterparty on the trade. Instead, it is enough that the trader misappropriates information (hence breaching a fiduciary duty to the source of the information) and then trades. See BAINBRIDGE, supra note 135, at 92 n.89. O'Hagan, however, was decided in the context of an outsider to the corporate entity trading against shareholders to whom he did not owe a duty. See 521 U.S. at 648. The tricky question is whether O'Hagan's misappropriation theory will be read to cover trades against nonshareholder capital investors by the classical insiders. Cf. Saikrishna Prakash, Our Dysfunctional Insider Trading Regime, 99 COLUM. L. REV. 1491, 1510–16 (1999) (suggesting that O'Hagan's misappropriation theory will be read to cover trades by classical insiders as well). But cf. Stephen M. Bainbridge, Insider Trading Regulation: The Path Dependent Choice Between Property Rights and Securities Fraud, 52 SMU L. REV. 1589, 1646–48 (1999) (expressing skepticism that O'Hagan will be read quite so expansively).

140. Ideas about default rules and opportunistic behavior can be, and have been, applied in the framework of fiduciary obligation and shareholder primacy. However, we think they have been applied far less comfortably and compatibly than in the framework of the connected contracts model. For articles on this topic, see, for example, Victor Brudney, Contract and Fiduciary Duty in Corporate Law, 38 B.C. L. REV. 595, 622–24 (1997) (arguing that there is much more to fiduciary duties than contractual gap filling); Frank H. Easterbrook & Daniel R. Fischel, Contract and Fiduciary Duty, 36 J.L. & ECON. 425 passim (1993) (articulating the view that fiduciary duties are no more than contractual gap fillers); Melvin A. Eisenberg, Corporate Law and Social Norms, 99 COLUM. L. REV. 1253, 1272–73 (1999) (criticizing the contractual conception of fiduciary duties because it ignores the expressive function that the law plays); Scott FitzGibbon, Fiduciary Relationships Are Not Contracts, 82 MARQ. L. REV. 303 passim (1999) (arguing that there is much more to fiduciary duties than contractual gap filling); and John H. Langbein, The Contractarian Basis of the Law of Trusts, 105 YALE L.J. 625, 657–60 (1995) (articulating the view that fiduciary duties are no more than contractual gap fillers).
C. Compensation of and Risk Avoidance by Managers

It has become a commonplace in the academic literature that the problem of conflict of interest inherent in separation of ownership and control can and should be addressed by ensuring that officers and directors have equity or equity-like stakes in the enterprise.\(^{141}\) That is, of course, consistent with the shareholder primacy model, as the goal is to maximize the interests of the equity. The connected contracts model calls attention to other possible rationales for providing equity-based compensation to managers.\(^{142}\) First, as already observed, when a manager's shareholdings, combined with his or her human-capital investment, represent a substantial portion of the manager's wealth, the manager's risk preference may be more like that of the creditors than like that of shareholders with diversified portfolios.\(^{143}\) From the perspective of the shareholders this may not be a bad thing: It may reduce the cost of borrowing and save on transaction costs of other forms of creditor protection.\(^{144}\) This observation challenges the conventional rationale for stockholdings and stock options for officers and directors, a rationale positing that the goal is simply to provide an incentive for managers to focus on raising the stock price.\(^{145}\)

141. See, e.g., Charles P. Himmelberg et al., Understanding the Determinants of Managerial Ownership and the Link Between Ownership and Performance, 53 J. FIN. ECON. 353, 353–55 (1999) (arguing that low levels of managerial equity in a firm often reflect the fact that the moral hazard problem there is minimal).

142. See also Gilson & Black, supra note 69, at 249–50 (making similar observations without the benefit of the connected contracts model).

143. See supra Part IV.B.2; see also Eli Ofek & David Yermack, Taking Stock: Does Equity-Based Compensation Increase Managers' Ownership 1–3 (New York Univ. Ctr. for Law and Bus. Working Paper No. CLB-98-014, 1997) (finding evidence that managers who are given equity-type compensation often hedge the additional risk, hence countereacting the attempt to tie their compensation to the value of the equity); cf. Lynn M. LoPucki & William C. Whitford, Compensating Unsecured Creditors for Extraordinary Bankruptcy Reorganization Risks, 72 WASH. U. L.Q. 1133, 1149–50 (1994) (finding that managers of companies in an insolvency reorganization adopt strategies that are a compromise between the interests of shareholders and those of creditors).


145. See, e.g., Frances Cairncross, A Survey of Pay: The Best . . . and the Rest, ECONOMIST, May 8, 1999, after p.56; Share and Share Unalike, ECONOMIST, Aug. 7, 1999, at 18, 19. For a recent survey of the research on employee compensation and incentives, see Canice Prendergast, The Provision of Incentives in Firms, 37 J. ECON. LITIG. 7, 7–12 (1999). As with the other applications, our discussion here does no more than scratch the surface of what is a rich and complex topic. Among other things, the effectiveness of a stock-option-based compensation plan may depend on variables such as the nature of the option (e.g., is it a restricted option?) and the nature of the organization's investment options (e.g., does it have a rich set of high-risk projects it could invest in?). See Stephen Bryan et al., CEO Stock-Based Compensation: An Empirical Analysis of Incentive-Intensity, Relative Mix, and Economic Determinants (Nov. 1999) (unpublished working paper, Zicklin
Second, the shareholder primacy model diverts attention from the legitimate interests of managers—for example, their interest in reducing risk by hedging. Managers often defend, and use, hedging and diversification as devices for reducing corporate risk. Some observers have criticized such risk-reducing activity on the ground that shareholders can often avoid risk at less cost simply by holding diversified portfolios. This view is consistent with the shareholder primacy model. The rebuttal is that the benefit from reduction of the risk for participants other than shareholders may be greater than the detriment to shareholders. This possibility, which would come immediately to the mind of an aficionado of the connected contracts model, is obvious in the case of creditors and many low-level as well as high-level employees. It stands to reason that creditors may be willing to accept a lower interest rate and employees a lower rate of compensation in a low-risk firm than in a high-risk firm and that, consequently, hedging and diversification might be an optimal strategy. Again, this point can be accommodated by the shareholder primacy model, but in that model it is an accommodation, not a natural feature.

D. Capital Structure

The standard finance literature largely ignores the relationship of capital structure to the bargain over control. The connected contracts per-
spective, with its emphasis on control, provides insights into why capital structures vary from one setting to another. In some situations, control may be of less concern. For example, in traditional regulated industries, ratios of debt to equity are relatively high; equity need not pay for much control. For venture capital investments in start-up enterprises, control is of great importance and the traditional line between debt and equity blurred as the holders of debt-like instruments bargain for control. Less obviously, the types of control bargains are also likely to vary within specific industry settings. These bargains will be a function of market pressures, as well as of the preferences of the individual participants.

E. Disciplining Effects of Debt

Scholars in corporate finance have observed that increases in a firm’s leverage often correlate with fundamental business changes; the people in control become more careful and conservative in their investment choices. A common explanation for this phenomenon is that higher amounts of debt discipline managers by reducing the amount of free capital that is available for them to use for self-serving projects or to waste. The connected labor market, it seems to us unlikely that capital structures will converge to a single optimal point. Belief in such an outcome would seem to require an unrealistic level of faith in the precision of market pressures. When there are large inefficiencies, the markets probably will impose discipline. Cf. Shleifer & Vishny, supra note 18, at 738 (making a similar point with respect to the market for corporate control). But that still leaves a large range of possible control bargains (capital structures) that can exist simultaneously. Cf. Coates, supra note 94, at 840–41 (noting that ownership structure matters and that there is a large diversity of structures within the U.S. economy); David Charny, The Politics of Corporate Convergence, at 1–2 (Dec. 5, 1997) (unpublished manuscript, on file with authors) (making the point that there are likely to be a large number of viable capital structures on the continuum between total worker control and no worker control).

Charny makes the further point that the kinds of large-scale data on ownership structure that are often used by scholars in economics and finance reveal only a part of the governance story, in that the data tell us nothing about the informal mechanisms that play a role in governance. See id. at 17–20; cf. George P. Baker et al., Relational Contracts and the Theory of the Firm (Dec. 29, 1997) (unpublished manuscript) (abstract available at Social Science Research Network (visited Mar. 16, 2000) <http://www.ssrn.com/paper.taf?abstract_ID2211> (describing a theory of the firm in which relational contracts take center stage).

150. See supra Part IV.

151. See, e.g., Berglöf, supra note 104, at 248 (noting the importance of bargaining for control shifts in the venture capital context); Black & Gilson, supra note 100, at 257–64 (same).

152. See, e.g., Safieddine & Titman, supra note 90, at 547–49 (explaining that increased leverage results in lay-offs, reductions in research and development expenditures, and more focused businesses generally); cf. ELA'ZAR BERKOVITCH ET AL., MANAGERIAL COMPENSATION AND CAPITAL STRUCTURE (Tel Aviv Univ. Working Paper No. 29-96, 1996) (modeling the effects of increased leverage on management compensation and management incentives).

contracts perspective, with its attention to bargaining, provides a different explanation. Other things equal, one would expect firms with higher amounts of debt to adopt more conservative investment strategies. This is because the debt holders will have demanded greater control, and conservative investment strategies suit them better. This is not to say that the debt-disciplining story is either wrong or lacking in usefulness. But the different perspective may generate a different story, one that may add to the existing understanding.

VI. TAX APPLICATIONS

The tax law relies heavily on models and metaphors and often borrows liberally from property and corporate law concepts. These aids are necessary both in defining tax problems and in framing solutions. In many instances, relying on models and borrowing concepts greatly helps in designing a workable and understandable tax regime. It is important, however, to remember the limitations of simple models and concepts.

This part examines three tax settings. The objective is to show how the connected contracts approach helps explain the current unsatisfactory state of tax rules. Tax lawyers and academics are familiar with the frustration over designing tax rules consistent with idealized models. We seek to show how changing the focus away from the standard models of the firm and from property or corporate law labels changes the way one understands certain tax problems. We consider the determination of ownership for tax purposes, the tax regime for corporations, and the tax treatment of debt and equity.

A. Ownership and Tax Law

The concept of ownership, generally applied on an all-or-nothing basis, permeates tax law. The owner is taxed on the income from the property, recognizes gain or loss on transfer of ownership, and is exclusively entitled to various tax incentives. Property owned at death is subject to the estate


155. See generally Walter C. Cliff & Philip J. Levine, Reflections on Ownership—Sales and Pledges of Installment Obligations, 39 TAX L.J. 37 (1985); Peter L. Faber, Determining the Owner of an Asset for Tax Purposes, 61 TAXES 795 (1983); Peter L. Faber et al., The Ownership and
tax. Simply put, in many areas of tax law, determining ownership dictates tax results. Thus, it is not surprising that some taxpayers strive for ownership status while other taxpayers go to great lengths to try to avoid it.156 Similarly, taxpayers often try to remain owners for tax purposes while disposing of their economic interests.157 For many purposes, relying on all-or-nothing ownership concepts to dictate or clarify tax consequences yields results that seem intuitively correct. But not always.

In a simple ownership model, one party is the owner and may carve out claims and transfer them to others. Thus, the owner can lease the property, transfer mineral rights, give away a life estate, and borrow on a nonrecourse basis. The owner is the center or focal point and generally will be perceived as controlling the interests of other claimants. In simpler times this model worked well for tax and other purposes. As transactions became more complex, however, identifying a single owner became more difficult. For example, it was and still is difficult to distinguish between a lease and a financing, a sale and a secured loan, and a management contract and a disguised sale. In tax law, as in many other areas, the response was to develop tests that sought to identify the “true” owner or the party with the greatest similarity to the classic owners of old. This often proved to be an exercise in distinguishing the indistinguishable.

Consider again Case 1 in Part I. In that hypothetical, a trust holds a zero-coupon treasury obligation and three parties hold claims in the trust. There is no risk, no residual (in any meaningful sense), and no concern for control—just three simple claims or contractual rights. In this situation, applying ownership concepts does not help to identify or evaluate tax alternatives, and deeming one party an owner as compared to the other two parties may confuse more than clarify.

This is not to deny that this simple example raises important tax issues. Rules are required to determine when to tax income, the character of income, and, for many purposes, the source of income. It is also important that the tax system produce universality and consistency.158 Universality requires that the tax system specify a tax treatment for every possible transaction. Consistency

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requires that every cash flow pattern have a unique tax treatment. But in
the current complex economic environment, concepts of ownership derived
largely from property law fail to serve even these limited goals.

In the discussion of Case 1, we changed the nature of the asset to a parcel
of land subject to a lease to the U.S. Postal Service. Here again, ownership
concepts add little or nothing to the analysis. If the use of an ownership con-
cept were unavoidable, perhaps the most effective approach would be to treat
each party as an owner and move on from there. But in many situations, tax
law allows just one party or class of parties to be treated as the owner.

The IRS and the courts have used a variety of tests to apply the own-
ership concept in the tax law context, usually by looking to the “benefits and
burdens” of ownership—benefits and burdens that may be important for
nontax purposes but that may have little, if any, relevance for purposes of
sound tax outcomes. In addition, in many cases courts search for the busi-
ness purpose or economic substance of the transaction to determine whether
the appearance is consistent with the reality. This approach is notori-
ously indeterminate and troubling, largely because it is often not clear what
aspects of reality are important and how to weigh one aspect against another.
The courts and the IRS seek to determine who looks more like the owners
of old, without stepping back and determining why ownership is important
for tax reasons.

We can illustrate our concern by briefly looking at the availability of a
tax benefit such as an allowance for depreciation, which provides tax deduc-

159. The ability to repackagae cash flows into different financial instruments creates the potential
for tax arbitrage. See id. at 573; see also Randall K.C. Kau, Carving Up Assets and Liabilities—

160. See Noel B. Cunningham & Deborah H. Schenk, Taxation Without Realization: A
“Revolutionary” Approach to Ownership, 47 TAX L. REV. 725, 733 (1992). Cunningham and Schenk
note that current tax law provides for the possibility of multiple owners in the case of a bond with
coupons attached. See id. at 727; see also Joan M. Youngman, The Role of Valuation in Determining
Ownership for Tax Purposes, 43 TAX LAW. 65, 119 (1989) (examining the feasibility of incorporat-
ing property law categories to aid in designing income tax rules for taxing partial interests in property).

161. These tests list a variety of factors that relate to ownership. A partial listing includes: the
intention of the parties, whether legal title is transferred, the form of the transaction, who bears
responsibility for payment of operating expenses, which party bears the risk of loss or damage to
the property, the existence of an option to acquire the property at the end of the lease term, and the
reasonableness of rental payments in the case of sale/lease-back arrangements. No single factor
controls, and there is no guidance on how to weigh the different factors. See, for example, in the
C.B. 715.

162. See, e.g., Frank Lyon Co. v. United States, 435 U.S. 561, 573 (1978); Hilton v. Com-
mmissioner, 74 T.C. 305, 346 (1980), aff'd, 671 F.2d 316 (9th Cir. 1982); see also Bernard
Wolfman, The Supreme Court in the Lyon's Den: A Failure of Judicial Process, 66 CORNELL L. REV.
tions that are not necessarily consistent with economic reality (that is, with the true decline in the value of the asset). Disregard for a moment some important considerations such as economic theories of depreciation and complications that arise when property is funded with debt financing, particularly nonrecourse debt financing. In our simple post office case, it is by no means obvious which claimant should be entitled to the depreciation tax benefit. Each has contributed funds and each has a claim against a stream of income, but the relationship between the investment and claim and the physical decline in value of the asset is unclear. Looking at the initial investments, the projected cash flows, and the bargain among the parties does not provide a clear answer as to whether only one party should be able to claim a depreciation deduction or whether the deduction should be shared by all claimants in accordance with some allocation.

From the connected contracts perspective, the tax law may have taken a wrong turn in placing such heavy reliance on the concept of ownership. As we argued in earlier parts, searching for the true owner may distract appropriate attention from the underlying economic relationships of the parties or from factors that should bear on the question of sound tax treatment. Under a connected contracts approach, the ownership label loses much of its significance. So, for example, in looking at a sale/lease-back arrangement for an office building or an airplane, or at an apartment development with nonrecourse financing, the current law searches for the person who is most like a sole owner of the property. The underlying assumption in many of these settings is that it is possible to decide cases in some way that is consistent with simple concepts, such as ownership, options, or equity, and at the same time consistent with sound principles of taxation. At the margin, the assumption does not hold, and taxpayers and their advisors are constantly searching and stretching the margins for ways to reduce or avoid taxes.

It may be that the current approach of finding the owner and allowing only that party to claim tax benefits is the best we can do. Reasons may exist to award all depreciation benefits to one party. After all, once the rule is known, in Coasian tradition the parties will bargain and structure their affairs to make greatest use of the tax benefit. Depending on one’s appetite for free transferability of tax benefits, the initial award of the entire deduction to one party may have certain advantages. But it is important to realize that using the ownership concept to arrive at this outcome may generate results that correspond only roughly with rational economic analysis.

163. The single-owner approach often allows taxpayers to choose the party to be treated as the owner for tax purposes.
B. The Standard Model of the Firm and Corporate Taxation

The standard model of the firm set forth in Part II provides the starting point for taxing corporations. That model accepts the notion of the firm as a legal fiction. It then builds from this make-believe foundation and treats the firm as owned by the equity participants, who receive what remains after the debt is paid. This model of the firm colors the tax treatment of corporations and shareholders. Corporate income is determined according to the shareholder primacy model; payments to all other participants, such as labor, suppliers of raw materials, and suppliers of debt capital, are deducted from total revenues, and whatever is left is the income of the corporation, as proxy for the true owners.\footnote{See Alvin C. Warren, Jr., The Corporate Interest Deduction: A Policy Evaluation, 83 YALE L.J. 1585, 1586–89 (1974) (examining alternative models of the corporate entity and the implications for designing corporate tax rules).} Our corporate tax system rests on this artificial construct.\footnote{See Anthony P. Polito, Useful Fictions: Debt and Equity Classification in Corporate Tax Law, 30 ARIZ. ST. L.J. 761, 762 (1998); see also Saul Levmore, Recharacterizations and the Nature of Theory in Corporate Tax Law, 136 U. PA. L. REV. 1019, 1059–65 (1988). The operating rules for Subchapter C may rest on several principles that lack a normative foundation. See Robert Charles Clark, The Morphogenesis of Subchapter C: An Essay in Statuory Evolution and Reform, 87 YALE L.J. 90, 90–94 (1977).}

Suppose we change the focus and reject the shareholder primacy model while retaining the concept of the firm as a separate entity. From this perspective, the corporation enters into a series of bargains and relationships with a variety of parties, such as providers of capital (debt or equity), labor, suppliers, and customers. If this is the right perspective, the firm might be allowed to deduct payments to all parties, including equity participants. Integration proposals that provide for a dividends-paid deduction for payments to shareholders are consistent with this approach. So are several other proposals that seek to equalize the treatment of debt and equity.\footnote{For example, Edward Kleinbard's proposal for a cost of capital allowance, similar to a deduction for depreciation, treats the corporation as the center and allows a formula deduction for the cost of capital. See Edward D. Kleinbard, Beyond Good and Evil Debt (and Debt Hedges): A Cost of Capital Allowance System, 67 TAXES 943, 957 (1989); see also William D. Andrews, Reporter's Study of the Taxation of Corporate Distributions, in AMERICAN LAW INST., FEDERAL INCOME TAX PROJECT, SUBCHAPTER C: PROPOSALS ON CORPORATE ACQUISITIONS AND DISPOSITIONS AND REPORTER'S STUDY ON CORPORATE DISTRIBUTIONS 327, 367–70 (1982) (presenting Andrews’s classic proposal for making the tax treatment of debt and equity uniform).}

But now view the corporate tax system according to the connected contracts approach. Here, we avoid reifying the corporation and reject firm-centric and shareholder-centric determinations. There is no firm. Instead, there is simply a series of bargains and relationships, some more formal than...
others. This view supports the oft-stated notion that the corporation is not a proper subject of taxation. The corporate tax under the connected contracts approach, if it exists at all, is merely a withholding tax for payments made to various parties. So we could extend the current wage withholding for employees to several other types of relationships, such as independent contractors, suppliers of capital, and perhaps even all suppliers of goods and services to the firm.\(^{167}\)

We have previously questioned the wisdom of linking forms of business organization to particular tax regimes or allowing taxpayers to choose among competing tax regimes either by adopting a particular business form or by merely checking a box.\(^{168}\) Similarly, it makes little sense to allow the tax regime to substantially affect the choice of business form or to encourage individuals to adopt suboptimal terms and conditions merely for tax reasons.\(^{169}\) The connected contracts approach supports adopting a regime for taxing business income that is independent of form and does not rely on corporate law concepts that may have little, if any, relevance to measuring income tax liability.

If corporations are taxed, then perhaps the best we can do is recognize the fictional nature of our current system of thought and abandon our efforts to achieve consistency with basic economic principles. From this perspective, designing corporate tax rules becomes more an effort in consistency, administrative feasibility, and economic efficiency,\(^{170}\) and less an attempt to divine coherent tax regimes based on idealized models and corporate labels.

C. Attempts to Distinguish Debt and Equity

The standard model of the firm requires a distinction between debt and equity investments. Shareholders are treated as owners of the firm and creditors as lenders. Interest on debt is deductible by the corporation; payment of dividends on equity is not. That simple statement captures the incentive to disguise equity instruments as debt.


\(^{169}\) See id. at 1007.

\(^{170}\) See David A. Weisbach, Line Drawing, Doctrine, and Efficiency in the Tax Law, 84 Cornell L. Rev. 1627, 1627–30 (1999) (examining the deficiencies of using the Platonic meanings of terms or traditional tax norms or criteria for line drawing in tax laws, and advocating the use of efficiency considerations in designing tax rules).
The standard model implies an ability to separate true debt from true equity. At the extremes, it is easy to differentiate between common stock and a debt instrument providing for the payment of a set amount, at a time certain, with a specified interest rate. However, a large number of financing instruments fall between the two simple cases, and no attempt to provide a clear, workable test to distinguish between debt and equity has succeeded.

If one discards the simple model of the firm and the corporate law labels, one can, consistent with a connected contracts approach, abandon the search for true equity and true debt and plausibly consider the possibility of taxing debt and equity alike, as nothing more than claims on cash flows and bargains over other elements. Under this view, one can more easily recognize the futility of allowing corporate law concepts and accounting principles, with their focus on the income of the firm and on shareholder equity, to control the design of tax rules. The basic perspective and the rules derived from it were wrong all along, but it only became obvious when corporate capital structure moved from a few stylized types of interests, such as common stock, preferred stock, and straight debt, to the current infinite range and combinations of financial claims.

So where does this lead? First, it reveals, as many observers have come to recognize, the futility of searching for true debt and true equity and the impossibility of devising tests that will provide a principled distinction. Similarly, it implies that efforts to integrate or bifurcate instruments in an attempt to separate out debt and equity components will not fare much...


173. Note that this does not mean that debt and equity raise identical tax issues. We may still have difficulty achieving similar treatment of debt and equity in whatever tax regime we choose (mark-to-market, yield-to-maturity). The differences, however, do not result because of debt and equity labels and characterization, or different conceptions of the firm.

174. See Polito, supra note 165, at 777–84, 790–811 (noting the impossibility of using tax rules to distinguish between debt and equity, but proposing a risk and return structure to make the fictional distinction between debt and equity); Weisbach, supra note 170, at 1631–32; Emmerich, supra note 171, at 142–47 (recognizing that tax and finance theory do not support a principled distinction between debt and equity, but proposing the establishment of strict criteria for qualifying as debt for tax purposes and treating instruments that stray from the “classic debt” formula as equity).
better.\textsuperscript{175} Second, proposed tax regimes that apply a single generic treatment to all investments regardless of corporate or property law labels fit squarely in the connected contracts approach and merit serious consideration.\textsuperscript{176} Finally, if it is necessary to have different tax treatment for debt and equity because of political realities, the cost of change, or other factors, then it may be that administrative or efficiency reasons should guide the design of tax rules. This may be preferable to believing that it is possible to distinguish between debt and equity or, even if it were possible to draw a clear distinction, that the differences would justify different tax treatment.

VII. Criteria

The availability of different and sometimes competing models raises the question: How does one decide which models to use and when? Legal scholars spend much time constructing and criticizing models and metaphors. It is rare, however, to find an explicit articulation of the criteria by which to judge these models and metaphors.\textsuperscript{177} An articulation should provide (1) a common ground for discussion and (2) a framework within which to relate the different models and metaphors to each other.

What follows is a brief and tentative list of criteria that might be used to judge the usefulness of a model in business law.\textsuperscript{178} The various criteria may, unfortunately, be in conflict with one another in some applications. For any model, the most fundamental conflict may be the one between accuracy, or realism, and simplicity, comprehensibility, or manageability.

1. Descriptive Accuracy. For a model to be incorporated into the law (for example, by a court or a legislature), it must have legitimacy.\textsuperscript{179} Models that are obviously inaccurate will not be perceived as legitimate.\textsuperscript{180}


\textsuperscript{176} See Strnad, \textit{supra note 158}, at 572. Strnad labels this approach “global pattern taxation” and offers examples of tax regimes that focus on cash flow rather than on labels of financial instruments. See id. One proposal, known as “expected value taxation,” would separate assets into a noncontingent portion of expected cash flows and a residual contingent portion and apply an accrual approach to the noncontingent portion and a realization approach to the residual contingent portion. See Reed Shuldiner, \textit{A General Approach to the Taxation of Financial Instruments}, 71 TEX. L. REV. 243 (1992).

\textsuperscript{177} For two exceptions, see John C. Coates IV, \textit{"Fair Value" as an Avoidable Rule of Corporate Law: Minority Discounts in Conflict Transactions}, 147 U. PA. L. REV. 1251, 1312 (1999), and Talley, \textit{supra note 6}, at 310–11.

\textsuperscript{178} As opposed to in economics or finance.

\textsuperscript{179} There is an extensive debate over the meaning and value of “legitimacy,” but the term is used here in a limited sense to refer to public or political acceptance.

\textsuperscript{180} See Ronald Coase, \textit{The Nature of the Firm: Meaning, in THE NATURE OF THE FIRM: ORIGINS, EVOLUTION, AND DEVELOPMENT}, \textit{supra note 7}, at 48, 52 (referring to the position...
2. Predictive Power. Predictability is valuable in that it enables individuals to arrange their affairs without the risk that their transactions will run afoul of the law. Knowing what theoretical models judges, administrative agencies, and legislators are using to think about the law enhances predictability. 181

3. Comprehension. A model is of little value in the law if no more than a few experts can understand and use it. This is especially true in a system of generalist judges and lawyers. The value of a model increases with use as it becomes better understood and provides a common ground for communication. 182 This argues for simplicity, which, unfortunately, may conflict with descriptive accuracy.

4. Accountability. Good models enhance the public’s ability to evaluate decisions of judges and arbitrators.

5. Isolation of Key Issues. Models and metaphors help identify important issues. That, in turn, may lead to new and more effective methods of addressing problems. 183

6. Exposure of Embedded Value Judgments. Models vary in the degrees to which they can hide value judgments. A model that hides value judgments, or is perceived to do so, is likely to create distrust and is unlikely to gain widespread acceptance.

7. Ease of Manipulation. As simplifying devices break down in the face of complexity, so will the laws based on those devices. In some cases, the inconsistencies between model and reality will allow for the construction of

taken in his famous article, The Nature of the Firm, supra note 11, and stating that “it is desirable that the assumptions we make in economics should be realistic”). But see FREEDMAN, supra note 13, at 41 (arguing that “a theory cannot be tested by comparing its ‘assumptions’ directly with ‘reality’”). It is worth noting, however, that Friedman’s views relate to criteria for economics—in which he considers prediction to be the paramount objective.

181. But cf. Coase, supra note 180, at 52 (arguing against the sacrifice of realism for the sake of predictive power and manageability). Coase wrote:

In effect what this comes down to is that when economists find that they’re unable to analyze what is happening in the real world, they invent an imaginary world which they are capable of handling. It was not a procedure that I wanted to follow in the 1930s. It explains why I tried to find the reason for the existence of the firm in factories and offices rather than the writings of economists, which I irrevocably labeled ‘bilge.’

Id. This argument supports the observation that criteria for good models, like criteria for good laws, may be at war with one another in their applications. Thus, for example, it is a commonplace in the tax literature that equity or fairness may conflict with administrative feasibility.

182. In a critique of team production models, John Coates draws a distinction between the role of a model in rationalization and in explanation. See Coates, supra note 94, at 840 n.14. Coates articulates the distinction with the example of a judge who sees a particular model as “explaining” corporate law. See id. That judge, he says, runs the risk of committing error by applying the model in cases in which it is inapplicable. See id. Putting Coates’s point somewhat differently, models are always simplifications that focus on certain elements of a phenomenon and ignore others. To adopt models as if they fully reflect reality is to misunderstand them and to risk error.

183. See Talley, supra note 6, at 310.
wasteful arbitrages. Models that allow for fewer and smaller arbitrages are preferable.

8. Flexibility. Models differ in their ability to adapt to changes in circumstances or preferences.

Although we think that the connected contracts approach compares favorably with other models according to these criteria, we do not mean to suggest that the other models should be discarded. Models and metaphors such as the firm as a person, the firm as a community, the nexus of contracts, shareholder primacy, team production, separation of ownership and control, and separation of management and finance, capture and isolate some key aspects of joint economic activity that the others (including the connected contracts model) do not. For example, it is near impossible to discuss some aspects of business activity without talking about firms. Our point is that a different perspective—a nonhierarchical, nonfirm one—can add new insights.

CONCLUSION

Study of the organization of economic activity by legal scholars has focused largely on shareholders, directors, managers, and corporations. For decades, the central problem of what is called “corporate governance” has been the separation of ownership and control and the conflict of interest between owners and managers—the problem more recently referred to by the phrase “agency costs.” The traditional model is essentially hierarchical, with managers owing fiduciary obligations to shareholders, and with managers in turn handing down directions to workers within large firms that integrate many activities. That model is consistent with Alfred Chandler's once dominant view of the economic organization of large, centralized, hierarchical firms. It is also consistent with reification of the corporation and with simplistic notions of ownership, concepts that have proved extremely useful in developing legal doctrine but that now may prove to yield, at least at the margins, results that are not satisfactory.

The traditional mode of thinking is also compatible with the reality of the organization of law school curriculums: the need to divide the study of law into manageable segments, with insufficient opportunity to relate subjects to one another and to take a broad view of the organization of economic activity. Courses often focus largely on state corporation codes, paying little attention

184. See CHANDLER, supra note 31, at 1–12 (describing the growth of the large corporation and the move from market coordination to administrative or managerial coordination); see also ALFRED CHANDLER, JR., THE ESSENTIAL ALFRED CHANDLER: ESSAYS TOWARDS A HISTORICAL THEORY OF BIG BUSINESS 396 (Thomas K. McCraw ed., 1988).
to privately drafted documents and to economic relationships, or to the impact of other legal regimes such as employment law or bankruptcy law. Moreover, in the traditional model, ultimate control is assigned to shareholders and their elected representatives, and whether or not they have a more sophisticated model in mind, judges often seem to treat the shareholders' legal entitlement to control as uncontroversial, except perhaps at the margins of insolvency. 185

Meanwhile, among economists, the finance experts have focused on problems of management, with managers hiring capital from contributors of equity, debt, and hybrids. Economists in the field of industrial organization have been concerned with efficiency and with the seemingly abstract issue of why economic activity is sometimes organized within firms and sometimes across markets, a dichotomy whose utility has become increasingly questionable over time. Neither group of economists, however, has paid much attention to the details of the system of laws, contracts, and quascontractual and noncontractual relationships that are the guts of economic activity, at least for practicing lawyers.

185. See Smith, A Neotraditional Interpretation, supra note 19, at 220. Take, for example, the following discussion of fiduciary duties in a recent bankruptcy court opinion:

[D]irectors of solvent corporations owe fiduciary duties to shareholders, but not to creditors. The shareholders, after all, own the corporation and management of the corporate assets is vested in the directors. The directors are therefore entrusted with the control and management of the property of others. As frequently happens when a person is so entrusted with the property of others, the law imposes fiduciary obligations on that person. Creditors, on the other hand, deal with corporations by entering into contracts. Satisfaction of their claims against the corporate assets requires only compliance with their contracts. So long as the corporation is solvent, they require no additional protection; by definition, a solvent corporation, no matter how badly managed otherwise, is able to satisfy its contractual obligations.

In economic terms, this rule of “managerial allegiance [to shareholders] is justified by the status of shareholders as the residual claimants on the corporation's cash flow. So long as the corporation is solvent, business decisions made by managers directly affect the income of the shareholders.” The value of creditors' claims to corporate earnings and assets, however, is fixed by contract. The business decisions of managers will therefore have no affect on the income of creditors.

Therefore, “the general rule is that directors do not owe creditors duties beyond the relevant contractual terms absent 'special circumstances . . . , e.g., . . . insolvency . . . .' [W]hen the insolvency exception does arise, it creates fiduciary duties for directors for the benefit of creditors.” The economic rationale for the “insolvency exception” is that the value of creditors' contract claims against an insolvent corporation may be affected by the business decisions of managers. At the same time, the claims of the shareholders are (at least temporarily) worthless. As a result it is the creditors who "now occupy the position of residual owners."

Recent years have witnessed the arrival of a freshening metaphor, nexus of contract, which may now be the dominant perspective among legal scholars. We view this as progress, but because of the relatively narrow conception this metaphor has come to represent, and the implicit notion of a core or centralizing entity, we go a step further with a connected contracts model. In this model there is no primacy, no core, no hierarchy, no prominent participant, no firm, no fiduciary duty. Instead, there is a set of interrelated agreements or relationships among all participants in an economic activity—equity holders, debt holders, managers, workers, suppliers, and customers. The model encourages attention to documents as well as codes, to relationships as well as laws.

To illustrate the value of the model, we examined the allocation of control, beginning with the narrow question of how one might expect equity holders and debt holders to allocate control over alteration of variance. That analysis formed the basis for a broader inquiry into allocation of control and into conclusions that may be inconsistent with traditional thinking and that, to that extent, may offer new insights and new testable propositions.

The value of the connected contracts mode of thinking, like any other model or metaphor, should be judged by reference to some set of criteria. Because we are not aware of any canonical list, we devised our own, though tentatively and with considerable diffidence. Connected contracts is certainly not the only way of thinking about the organization of economic activity. It may not be the best way. One of the ironies of the use of models is that, because they are used to identify and help to solve problems, if they are successful they outlive their usefulness. The old problems get solved, and

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186. The nexus of contracts model is by no means universally accepted. The objections come in part from those who cling to the traditional model and its corollary, shareholder primacy. They also come in part from communitarians, who seek to preserve the central role that that model assigns to fiduciary obligation and to turn that obligation to the advantage of workers and other "constituents." A similar strategy has been adopted by champions of the rights of creditors when the creditors have failed to protect themselves by contract, despite the apparent ease with which needed protection could have been identified.

187. Similarly, corporate law scholarship lacks any widely accepted and frequently used articulation of a set of criteria for good corporate laws. Maybe that explains why participants in corporate law debate are so often like ships passing each other in the night. See Bainbridge, supra note 20, at 860. For an exception to this general pattern, see Roberta Romano, Metapolitics and Corporate Law Reform, 36 STAN. L. REV. 923 (1984). In this respect there is a contrast between corporate law and tax law scholarship, in which it is common to assess policy proposals by reference to a widely recognized, and frequently examined, set of criteria for good tax laws. See Joseph A. Pechman, Federal Tax Policy 8–37 (5th ed. 1987). See generally Joseph T. Sneed, The Configurations of Gross Income (1967).
the new problems often require new models. Moreover, the usefulness of a model changes with changes in the reality that it seeks to portray. It is entirely appropriate that there be a competition among models and that the gold medal pass from one to another over time. But the role of models and the need for competition among them deserves conscious recognition.