The Perpetual Corporation

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The Perpetual Corporation

Andrew A. Schwartz*

Abstract

Courts and commentators take for granted that the ultimate objective of a business corporation is long-run profitability, not immediate profits. But a corporation is a creature of statute, so a statutory source for this rule must be found—or it is not really a rule. Yet prior literature has not identified any such legal basis, leaving a gap in corporate theory. This Article fills that gap by showing that the modern corporation is obliged to act with a long-term view because it has “perpetual existence” under the law. This Article then explains that because they must plan for a perpetual future, corporations should invest like immortal entities, namely with a long time horizon and low discount rate. This method of “immortal investing” offers a number of fundamental advantages to the corporation, and is also in the public interest, as immortal investors can be expected to highly value the future and act as stewards for natural resources and other assets.

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* Associate Professor of Law, University of Colorado Law School. For helpful and challenging comments on earlier drafts, I thank Margaret Blair, Bill Carney, Vic Fleischer, Todd Henderson, Mark Loewenstein, Scott Peppet, Allison Schwartz, Richard Squire, and Fenner Stewart, as well as those that participated in the following: the Junior Business Law Conference at the University of Colorado, the Vanderbilt Law and Business Workshop, the Midwest Corporate Law Scholars Conference at the Ohio State University, the Young Legal Scholars Paper Presentations at the Federalist Society Annual Faculty Conference, and law faculty workshops at the University of Colorado and the University of Denver. For superb research assistance, I thank Shira Cooks. This Article is dedicated to my recently departed Dean, David Getches, who was a source of great inspiration and support for me and our entire faculty.

April 2012 Vol. 80 No. 3
INTRODUCTION

Courts and corporate commentators agree that the ultimate goal of a business corporation is to generate value and wealth over the long term. This seems quite sensible, especially at this moment in history, when "short-term thinking" has been identified as a major cause of the recent financial crisis and economic recession. But where is the

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1 See, e.g., Katz v. Oak Indus. Inc., 508 A.2d 873, 879 (Del. Ch. 1986) ("It is the obligation of directors to attempt, within the law, to maximize the long-run interests of the corporation's stockholders . . ."); Principles of Corporate Governance § 2.01 cmt. f (1994) (asserting that "long-run profitability and shareholder gain are at the core of the economic objective"). By "corporation," this Article means to refer to the business corporation, as opposed to, say, an educational, nonprofit, ecclesiastical, or municipal corporation (unless otherwise stated).

statutory or theoretical justification for the idea that corporations should seek to generate long-run value, as opposed to immediate profits? This question has not been asked—let alone answered—until now. Courts and commentators have been content to simply state the proposition as a first principle. But the corporation is a creature of statute that "possesses only those properties which the charter of its creation confers upon it," so the idea that corporations should seek to enhance wealth in the long term cannot simply be plucked from thin air. There is no natural law of corporations. Rather, a positive legal basis is needed, and one is provided herein.

This Article claims that the principle that corporations should strive for long-term gain derives directly from the statutory provision that a corporation shall have "perpetual existence." Natural persons can get sick and die, and similarly, other forms of business organization, such as the partnership or sole proprietorship, have only limited lifespans. But one of the defining legal characteristics of the corporation is its capacity to live forever. This perpetual nature of the corporation means that it must plan for an infinite future and therefore strive to enhance value over the long term.

Recognition that the corporation must, as a matter of statutory command, plan for a perpetual future has important practical implications for corporate management. At the most basic level, it means that corporations should invest in a manner befitting an immortal entity. And, as explained below, an immortal entity should invest with a longer time horizon and lower discount rate than a mortal ever would. These features offer fundamental advantages to the immortal investor, as they allow it to invest in illiquid and volatile assets, see opportunities where mortals would not, and cooperate reliably with others. Beyond these private benefits, immortal investing is also in the public interest as immortal investors can be expected to value the future and act as a steward for natural resources.

spjun2411.html ("[T]he overarching lesson of the crisis is the pervasive short-term thinking that helped to bring it about.").


5 See, e.g., DEL. CODE ANN. tit. 8, § 102(b)(5) (Supp. 2010) (providing that "the corporation shall have perpetual existence" unless otherwise provided in its certificate of incorporation).
In theory, then, corporations should act as immortal investors. In practice, however, there are significant hindrances to actually doing so. Corporate directors and officers are human beings; they may have a difficult time managing the corporation from an immortal perspective. And even if they wanted to, shareholders and creditors are, likewise, natural persons whose mortal demands may constrain the ability of the corporation to invest on an immortal basis. This Article recognizes these challenges and recommends responses to ameliorate them. It also provides several examples of contemporary corporate practices that demonstrate immortal investing in action.

This Article offers at least three novel contributions to the corporate law literature. First, it provides the statutory basis for the idea that the essential goal of the corporation is to generate wealth over the long term. Second, it describes immortal investing and demonstrates its corresponding private and public benefits. Third, it shows that corporations are distinctly appropriate vehicles for engaging in immortal investing.

The structure of this Article is as follows: Part I describes the nature of the corporation, with a focus on its perpetual existence. Part II introduces the concept of immortal investing and describes its advantages. Part III brings together the previous Parts to explain why the perpetual corporation can, should, and must act as an immortal investor, as well as discusses some of the factors that hinder its ability to do so in practice. Part III concludes with a few anecdotal reports of contemporary corporate behavior that demonstrate immortal investing in action, suggesting that any obstacles to a perpetual corporation acting as an immortal investor can be overcome.

I. THE PERPETUAL CORPORATION

What is a corporation? The most eloquent and frequently cited definition is probably the one set forth by Chief Justice Marshall in the famous Trustees of Dartmouth College v. Woodward case: "A corporation is an artificial being, invisible, intangible, and existing only in contemplation of law . . . . [I]t possesses only those properties which the charter of its creation confers upon it . . . ." Similarly, Black's Law Dictionary defines "corporation" as an "entity . . . having authority under law to act as a single person distinct from the shareholders who own it." A leading treatise concurs, defining the corporation as

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7 Id. at 636.
8 BLACK'S LAW DICTIONARY 391 (9th ed. 2009).
"a legal unit with a status or capacity of its own separate from the shareholders who own it."\textsuperscript{9}

Thus, a corporation can be conceptualized as a legal entity defined by a set of core legal attributes. Scholars differ as to the terminology, but all essentially agree that the defining features of the corporate entity are (1) limited liability, (2) centralized management, (3) alienable shares, and (4) perpetual existence.\textsuperscript{10} Of these four attributes, scholars have focused intently on the first three, but have had very little to say about the fourth.\textsuperscript{11} This Article claims, however, that important insights about the nature and purpose of the corporation can be gleaned by focusing on perpetual existence. Before getting there, this Part briefly summarizes all of the four traditional legal characteristics that define the corporation.\textsuperscript{12}

A. The Defining Attributes of the Corporation

1. Limited Liability

Limited liability refers to the concept that shareholders of a corporation ordinarily are not liable for the corporation's obligations or

\textsuperscript{9} James D. Cox & Thomas Lee Hazen, Corporations § 1.02 (2d ed. 2003).

\textsuperscript{10} E.g., Thomas Lee Hazen & Jerry W. Markham, Corporations and Other Business Enterprises: Cases and Materials 25 (3d ed. 2009) (listing these four attributes as "advantages" of corporations); Roberta Romano, Foundations of Corporate Law 61 (1993) ("Four characteristics distinguish corporations from the other principal forms of business organizations (proprietorships and partnerships) . . ."); see also Melvin Aron Eisenberg, Corporations and Other Business Organizations: Cases and Materials 106 (9th ed. 2005) (adding "[e]ntity status" to these four); Lynn A. Stout, On the Nature of Corporations, 2005 U. Ill. L. Rev. 253, 254 n.1 ("Any student of corporate law is likely to recognize this list of characteristics as the four factors often cited as the essential and distinguishing marks of the corporate form."); cf. Stephen M. Bainbridge, Corporate Law § 1.1 (2d ed. 2009) ("[T]he corporation [is] a legal fiction characterized by six attributes: formal creation as prescribed by state law; legal personality; separation of ownership and control; freely alienable ownership interests; indefinite duration; and limited liability.").

\textsuperscript{11} Robert Charles Clark, Corporate Law § 1.2.3 (1986) (legal personality is "often ignored by lawyers because it generates less litigation" than other corporate attributes); see also Romano, supra note 10, at 61 ("Of the four characteristics, commentators' attention has focused most on limited liability . . ."). On the other hand, the work of Professors Margaret Blair and Lynn Stout on "capital lock-in," a corporate characteristic that is closely related to perpetual existence, is a notable exception. See Margaret M. Blair, Locking in Capital: What Corporate Law Achieved for Business Organizers in the Nineteenth Century, 51 UCLA L. Rev. 387, 387-88 (2003) [hereinafter Blair, What Corporate Law Achieved] (arguing that capital lock-in is a critical feature of the corporate form); Margaret M. Blair, Reforming Corporate Governance: What History Can Teach Us, 1 Berkeley Bus. L.J. 1, 13, 15 (2004) [hereinafter Blair, What History Can Teach] (same); Stout, supra note 10, at 253.

\textsuperscript{12} See supra note 10 and accompanying text.
debts. Therefore, shareholders’ liability is limited to the investment they made in purchasing company shares. The concept of limited liability is derived from the notion that the corporation is a separate entity, and therefore, “it is the corporation that incurs the debts, not the shareholders.”

Limited liability is vital to the corporate structure. The aggregation of individual investments is what permits corporations to operate and invest on a large scale, but the risk and uncertainty of investing without limited liability would deter individual investors and hinder a corporation’s ability to operate. Without limited liability (as in a partnership), it would likely be impossible to find anyone to invest in a corporation, as investors would be deterred, rationally, from putting their entire net worth at risk for firm debts. For this reason, limited liability is commonly described by scholars as “the most important feature of the corporation.”

Beyond the traditional notion of limited liability of shareholders for corporate debts, Professors Henry Hansmann and Reinier Kraakman have broadened the concept to a more general idea of “asset partitioning,” that is, the legal separation of firm assets from the personal assets of its owners and managers. In these scholars’ view, asset partitioning is not only an important attribute of the corporation. Rather, it is “the only essential contribution that organizational law makes to commercial activity” because other aspects of organizational law can be achieved by contract. Thus, there is no need for the state to establish those aspects by statute.

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16 Id. at 147.
17 Id. at 106, 147.
18 Id. at 145; Posner, supra note 14, § 14.2 (observing problems that arise when “each partner is personally liable for the debts of the partnership”).
19 Easterbrook & Fischel, supra note 14, at 40 (“Limited liability is a distinguishing feature of corporate law—perhaps the distinguishing feature.”); Gevurtz, supra note 14, § 1.1.3(d).
21 Id. at 393.
22 See id. (describing asset partitioning as “the only basic attribute of a firm that could not
Limited liability is also a necessary precondition to the free alienability of shares\textsuperscript{23} because it renders the identity and wealth of shareholders irrelevant.\textsuperscript{24} Without the protection of limited liability, a shareholder would not be able to sell his shares freely without the consent of other shareholders, who would then become liable for the actions of the new buyer.\textsuperscript{25} In other words, limited liability makes shares fungible, which they must be in order to be traded on a liquid market.\textsuperscript{26} Further, those who invest under a regime of limited liability need not expend significant resources to monitor the business or their fellow shareholders.\textsuperscript{27}

In sum, limited liability is widely viewed as the most important characteristic of the corporation and has been carefully studied and analyzed for that reason.\textsuperscript{28}

2. Centralized Management

Centralized management describes the corporate structure in which shareholders own the corporation, but control over its management is centralized in the hands of a board of directors, which generally delegates day-to-day decisionmaking to executive officers and their subordinates.\textsuperscript{29} Centralized management is necessary for both its expertise and efficiency. Management’s expertise helps ensure that those who make complicated business decisions for the corporation are qualified to do so.\textsuperscript{30} Also, centralized management is much more
efficient than the alternative of asking thousands or millions of shareholders to make business decisions collectively.31

By its nature, centralized management grants discretion to the board of directors and those to whom the board has delegated power.32 Although shareholders—as owners of the corporation—are entitled to profits made by the corporation, managers make the discretionary decisions about how to spend the corporation’s earnings.33 As a result, it is possible for managers to exercise that discretion in ways that benefit their own interests rather than those of the corporation or its shareholders.34 When managers make decisions that are in their own self-interest, they not only hurt the interests of the shareholders, but they also hurt the health of the corporation and thus the broader economy.35

This fundamental conflict of interest has been examined for generations and drives much of corporate law.36 Some of the many approaches to dealing with the conflict between shareholder and managerial control include reliance on market forces, structural changes that empower the shareholder, and vigorous enforcement of fiduciary duties.37 Due to the effects that managerial discretion can have on individual corporations and the economy as a whole, centralized management—like limited liability—has been widely studied.38

3. Alienable Shares

Shares of stock in a corporation are alienable, which is to say that they are freely transferrable and may be bought or sold at any time.39 Thus, once a corporation sells or conveys shares to investors, it creates a secondary market in which those shares may be sold to willing buyers.40 The secondary market makes the corporation’s shares liquid.

32 PRINCIPLES OF CORPORATE GOVERNANCE pt. VI, intro. note, at 384.
33 BAINBRIDGE, supra note 10, § 1.1(C).
34 PRINCIPLES OF CORPORATE GOVERNANCE pt. VI, intro. note, at 384–85.
35 GEVURTZ, supra note 14, at 236–37.
36 BAINBRIDGE, supra note 10, § 1.1(C); see EASTERBROOK & FISCHEL, supra note 14, at 90–91.
37 GEVURTZ, supra note 14, at 237–44.
38 See, e.g., BAINBRIDGE, supra note 10, chs. 5–6; COX & HAZEN, supra note 9, chs. 9–11; GEVURTZ, supra note 14, chs. 3–4.
39 KLEIN ET AL., supra note 15, at 109; see also MODEL BUS. CORP. ACT § 6.27 (2008). This is certainly true of publicly traded corporations. The shares of closely held corporations, by contrast, are sometimes subject to contractual restrictions on alienability. KLEIN ET AL., supra note 15, at 109. But even in that context the default rule remains free alienability. Id.
40 See BAINBRIDGE, supra note 10, § 3.1. This is so regardless of which state regulates the
allowing those who buy them to sell just as easily. Free transferability means that the buying and selling of shares can be done by a simple phone call or instantly on the Internet. The alienability of shares gives shareholders the ability to sell their shares freely without restrictions or permission from the corporation.

An important aspect of the corporation is its facilitation of passive investments by individual investors, which the corporation can then aggregate to permit large-scale investments and operations. Making shares easily transferrable attracts passive investors and facilitates their further investment in corporations.

Although the alienability of shares is necessary for a secondary market, it can create issues for management, shareholders, and the corporation because the same shares that are so easily sold represent voting interests in the corporation. A shareholder with a controlling block of stock carries proportional voting rights, and therefore, has the power to control the corporation by selecting directors. Such a controlling shareholder would also have the right to sell the control block could, generally at a premium over a single share price.

Another issue that emerges from the alienability of shares is that a disaggregated group of small shareholders who collectively comprise a majority could jointly sell their shares (again at a premium) in response to a tender offer. At the same time, this creates positive incentives for management to act in the shareholders' interest. That is, the ability of investors to buy a controlling stake in a corporation on

corporation or whether an initial public offering was held. For example, shares in Facebook and other successful dot-com companies do not trade on any stock exchange, such as NASDAQ or the New York Stock Exchange, but do trade on a secondary market. See, e.g., Peter Delevett, *What, No Facebook? Just Wait a While*, MERCURYNEWS.COM, http://www.mercurynews.com/sv150/ci_17863481 (last updated Oct. 4, 2011) (noting that trading alienable shares in secondary markets allows several nonpublic dot-com companies, such as Facebook, Twitter, and Yelp, to remain private). *But cf.* Nick Wingfield & Lynn Cowan, *Virtual Farms, Rich Harvest*, WALL ST. J., July 2–3, 2011, at B1 (reporting on Zynga's proposed initial public offering).

41 See BAINBRIDGE, supra note 10, § 3.1.
43 See id.
44 Id. at 106.
45 See id. at 109.
46 See GEVURTZ, supra note 14, at 15.
47 See id. at 4.
48 See id. at 15.
49 See, e.g., COX & HAZEN, supra note 9, § 22.18 (discussing problems that have arisen when majority shareholders seek to sell shares).
50 A tender offer is an offer to purchase shares made by a bidder directly to the shareholders of a target corporation, through an advertisement or otherwise, generally with the goal of acquiring control of the target. See, e.g., BAINBRIDGE, supra note 10, § 12.1(B)(3), at 340.
the secondary market makes possible the "market for corporate control," which helps discipline managers to put forth great effort on behalf of the corporation. A tremendous body of law has grown up around this concept, including the important Unocal Corp. v. Mesa Petroleum Co. line of cases.

In conclusion, the alienability of shares is a key attribute of the corporation and has been a central topic of study in corporate law.

4. Perpetual Existence

The last, and least studied, defining attribute of the corporation is perpetual existence. There is no limit on the duration of a corporation. Rather, it has an indefinite legal existence, which can be terminated only in a few circumstances.

In the premodern era, perpetual existence was viewed as the leading attribute of corporations. In the famous Dartmouth College case, Chief Justice Marshall observed that the genius of the corporate form was that it allowed "a perpetual succession of individuals" to act "for the promotion of the particular object, like one immortal being." Similarly, in his Commentaries, Blackstone described the corporation as "a person that never dies." Its shareholders and

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53 See, e.g., R. Franklin Balotti et al., Unocal Revisited: Lipton's Influence on Bedrock Takeover Jurisprudence, 60 BUS. LAW. 1399, 1406-07 (2005) (stating that Unocal serves as the bedrock of modern takeover jurisprudence).
54 See supra note 11 and accompanying text; see also Adams v. Adams, 945 N.E.2d 844, 868 (Mass. 2011) (observing that "corporations are defined, in part, by their infinite existence").
56 Bainbridge, supra note 10, § 1.1(D) (explaining that a corporation's existence may be terminated by (1) a voluntary dissolution requiring the recommendation of the board of directors and approval by a majority of the shareholders, (2) merger with another corporation, (3) insolvency in a bankruptcy proceeding, or (4) judicial decree, which requires that there be a deadlock or oppressive behavior by the corporation's controlling shareholders).
57 Henry Sumner Maine, Ancient Law 181 (Henry Holt & Co. 4th ed. 1960) (1861); William Sheppard, Of Corporations, Fraternities, and Guilds 1 (Garland Publ'g, Inc. 1978) (1659) (defining a corporation as "a Body, in fiction of Law . . . that indureth in perpetuity"). The same might be said for the postmodern era. See, e.g., D. E. Brown, Corporations and Social Classification, 15 CURRENT ANTHROPOLOGY 29, 40 (1974) (defining, at the outset, a corporation as a "presumptively perpetual status" and, again later, as a "presumptively perpetual social unit").
59 1 William Blackstone, Commentaries 468 (Oceana Publ'ns Inc. 1967) (1769); see also, e.g., Case of Sutton's Hosp., (1613) 77 Eng. Rep. 937 (K.B.) 973; 10 Co. Rep. 1 a, 32 b
managers may change, but it is still the same corporation, just "as the river Thames is still the same river, though the parts which compose it are changing every instant."\textsuperscript{60}

Today, the corporate code of every state expressly provides for corporate perpetuity.\textsuperscript{61} For example, the Delaware General Corporation Law provides that "the corporation shall have perpetual existence" unless the certificate of incorporation provides otherwise.\textsuperscript{62} Using nearly the same language, the New York Business Corporation Law states that every corporation "shall have power . . . to have perpetual duration," subject to any limitations in its certificate or imposed by statute.\textsuperscript{63} And although it is theoretically possible for a charter to provide for a limited corporate lifespan, such a provision is rare in practice.\textsuperscript{64} The uniform statutory support for corporate perpetuity is an important point, as corporations are "creatures of statute" that possess only the attributes assigned to them by law.\textsuperscript{65}

Corporate law scholars, however, have not paid much attention to perpetual existence as one of the four traditional features of the corporation. Limited liability, centralized management, and alienable shares have been the subject of extensive and thoughtful analyses and scholarship.\textsuperscript{66} Perpetual existence, by contrast, has been so marginalized that many major treatises barely mention perpetuity at all. The 800-page treatise by Professors Cox and Hazen, for example, spends

(Defining a corporation as an "aggregate of many [that] is invisible, immortal, & resteth only in intendment and consideration of the Law").

\textsuperscript{60} BLACKSTONE, supra note 59, at 468.

\textsuperscript{61} E.g., MODEL BUS. CORP. ACT § 3.02 (2009). Note that early nineteenth-century state corporate statutes required the certificate of incorporation to include a limited term of corporate existence, with a maximum term of twenty, thirty, or fifty years. GEVRURTZ, supra note 14, at 20; see also, e.g., Act of May 18, 1892, ch. 691, 1892 N.Y. Laws 2042, 2042–43 (limiting business corporations to fifty years). By the turn of the twentieth century, however, legislators amended their corporate law statutes to permit perpetual existence. See GEVRURTZ, supra note 14, at 21; Douglas M. Branson, Corporate Governance "Reform" and the New Corporate Social Responsibility, 62 U. PITT. L. REV. 605, 615 (2001) ("The last 'limited life' charters were granted early in the 20th century by western states such as Arizona and Washington."); see also, e.g., Act of Apr. 21, 1896, ch. 185, 1896 N.J. Laws 277, 280 (providing for perpetual corporate existence).

\textsuperscript{62} DEL. CODE ANN. tit. 8, §§ 102(b)(5), 122(1) (2001 & Supp. 2010). This Article focuses on Delaware because it is generally considered the most prominent forum for American corporate law. See generally, e.g., Rochelle C. Dreyfuss, Forums of the Future: The Role of Specialized Courts in Resolving Business Disputes, 61 BROOK. L. REV. 1, 2 (1995) (noting frequency with which other states emulate Delaware corporate law due in part to "the esteem in which many commentators hold Delaware corporate law").

\textsuperscript{63} N.Y. BUS. CORP. LAW § 202(a)(1) (McKinney 2003).

\textsuperscript{64} KLEIN ET AL., supra note 15, at 109.

\textsuperscript{65} See infra note 119 and accompanying text.

\textsuperscript{66} See supra Part I.A.1–3
one chapter on limited liability,\textsuperscript{67} four chapters on centralized management,\textsuperscript{68} and seven chapters on alienability of shares\textsuperscript{69}—yet devotes just a single paragraph to perpetual existence.\textsuperscript{70} Other treatises do the same,\textsuperscript{71} and at least one omits the concept entirely.\textsuperscript{72} Even when the subject is addressed, its importance is often minimized.\textsuperscript{73} For instance, in \textit{The Economic Structure of Corporate Law}, authors Chief Judge Frank Easterbrook and Professor Daniel Fischel object to the term “perpetual existence” as “misleading” because it apparently means nothing more than that “the corporation lasts until dissolved.”\textsuperscript{74}

There are at least two notable exceptions to the trend of corporate scholars ignoring or marginalizing the corporation’s perpetual existence. First, in the 1970s, consumer advocates and others concerned about a “race to the bottom” among states for corporate charters\textsuperscript{75} proposed a shift from state to federal chartering of corporations.\textsuperscript{76} One of the key tenets of the federal chartering movement was to end perpetual existence in the name of the public interest: “Rather than allowing the corporation to exist indefinitely, a federal law should require the corporation to renew its charter every thirty years [and only] after determination by [a federal agency] that such renewal would not contravene the public interest.”\textsuperscript{77} This proposal went nowhere, how-

\textsuperscript{67} Cox & Hazen, supra note 9, ch. 7.
\textsuperscript{68} Id. chs. 8--11.
\textsuperscript{69} Id. chs. 12--14, 16--18, 21.
\textsuperscript{70} Id. at 7.
\textsuperscript{71} E.g., Bainbridge, supra note 10, § 1.1(D) (addressing perpetual existence in one brief paragraph); Gevurtz, supra note 14, at 21--22 (mentioning perpetual existence in passing during a discussion of the history of corporations and the fact that limits on duration were eliminated in the later nineteenth and early twentieth centuries); Klein et al., supra note 15, at 109 (same).
\textsuperscript{73} See, e.g., Fletcher, supra note 13, § 6.
\textsuperscript{74} Easterbrook & Fischel, supra note 14, at 11.
\textsuperscript{75} William L. Cary, Federalism and Corporate Law: Reflections upon Delaware, 83 Yale L.J. 663, 666 (1974); see also Louis K. Liggett Co. v. Lee, 288 U.S. 517, 559 (1933) (Brandeis, J., dissenting) (describing the competition for corporate charters as a “race . . . not of diligence but of laxity”).
\textsuperscript{76} See Ralph Nader et al., \textit{Taming the Giant Corporation} 70 (1976) (“For [corporate] structural problems we need the structural reform of federal chartering, not merely some tinkering alterations.”); Cary, supra note 75, at 663 (“Perhaps now is the time to reconsider the federal role.”); Donald E. Schwartz, Federal Chartering of Corporations: A Proposal, 61 Geo. L.J. 89, 89 (1972).
\textsuperscript{77} Branson, supra note 61, at 615--16 (“Nader [and his collaborators] proposed a return to limited life charters. . . . Their proposal was that corporations would have to run the federal regulatory gauntlet every twenty or twenty-five years.”); Schwartz, supra note 76, at 101.
ever, and perpetual existence remains a core defining legal attribute of the corporation.78

The second, and more important, exception to the trend of corporate scholars ignoring or marginalizing the corporation's perpetual existence is the scholarly work led by Professors Margaret Blair and Lynn Stout. Over the past decade, Blair and Stout have argued that "capital lock-in" is a "critical feature of the corporate form."79 Capital lock-in refers to the idea that stockholders "commit their financial contributions irretrievably to the firm."80 Capital lock-in provides an advantage to the corporate form by enhancing its ability "to invest in long-lived, highly specific assets."81

In contrast to Hansmann and Kraakman, who asserted that the only feature of the corporation that could not be achieved by contract was "asset partitioning,"82 Blair and Stout argue that capital lock-in is another such feature.83 Unlike partnerships, sole proprietorships, or other alternative forms of business organization, "the corporate form is the only form that provides effective lock-in of the capital used in the business."84

78 As this Article argues in Part II.B–C, it was fortunate that the movement to eliminate perpetual existence as a feature of the corporation failed. Had the proposal been adopted, it would have represented a throwback to the historic limited-life charter of the nineteenth century and earlier. And, to the extent that market demand exists for nonperpetual corporations, it is a simple matter to draft a certificate of incorporation that specifies a lifespan.


80 Stout, supra note 10, at 255 (emphasis added) ("A corporation's assets belong to the corporation, and not to its equity investors. As a result, those assets cannot be unilaterally withdrawn from the firm by either its shareholders, or the creditors of its shareholders."); id. at 256 ("Like a tar pit, a corporation is much easier for an equity investor to get into, than to get out of.").

81 Blair, What History Can Teach, supra note 11, at 3; accord Blair, What Corporate Law Achieved, supra note 11, at 387.

82 See supra notes 20–23 and accompanying text.

83 See Blair, What History Can Teach, supra note 11, at 4 ("[T]he corporate form is the only form that provides effective lock-in of the capital used in the business . . . ."); Stout, supra note 10, at 258. Alternatively, however, Blair's and Stout's scholarship can be seen as equating capital lock-in with asset partitioning. See Stout, supra note 10, at 254–55 (suggesting that capital lock-in is a synonym—a "pithy term"—for what Hansmann and Kraakman call "affirmative asset partitioning").

84 Blair, What History Can Teach, supra note 11, at 4. Others, notably Professor Larry Ribstein, dispute Blair's idea and contend that capital lock-in is effective in contexts beyond the corporation because "lock-in has always been available in the partnership form" via contract. Larry E. Ribstein, Should History Lock In Lock-In?, 41 Tulsa L. Rev. 523, 523 (2006). Although Blair's work acknowledges that "the law of limited partnerships has always made it somewhat easier, relative to other partnership forms, for business organizers to lock in the capital initially contributed to the enterprise by the limited partners," it ultimately concludes that
Blair and Stout’s concept of capital lock-in is related to the perpetual nature of the corporation because the purpose of locking in capital is to make long-term investments. And the longer lived the entity, the better its ability to do so. At the extreme, an entity with perpetual existence, i.e., the corporation, is in the best position to lock in capital for long-term investing. Even so, the progenitors of capital lock-in theory have not placed much emphasis on the perpetual existence of the corporation.

In short, many scholars ignore perpetual existence, some criticize it, and very few others laud it. But none has explained that the corporation’s perpetual existence provides the legal basis for the idea that its ultimate objective is to generate wealth over the long term. The next Section of this Article begins that exposition.

B. Perpetual Corporate Existence Implies a Long-Term Focus

Among scholars, courts, and legislators, there exists a broad consensus that the ultimate objective of the business corporation is “long-run profitability and shareholder gain,” as opposed to current profits, the betterment of humanity, or anything else. The legal source for this principle has not been clearly identified in prior literature. This Section aims to fill this gap by suggesting that the long-term orientation of the corporation derives directly from the perpetual existence endowed on it by statute and charter.

Legal commentators are unified in their view that the objective of the corporation is to enhance value over the long run. William Allen, an influential former Chancellor of the Delaware Court of Chancery, has written that “the proper orientation of corporation law is the protection of long-term value of capital committed indefinitely to the capital lock-in is effective only in the context of the corporation. See Blair, What History Can Teach, supra note 11, at 20-22, 26 (arguing that “it is almost as difficult today as it was in the nineteenth century to lock invested capital into a general partnership” and stating that “the default rules for LLCs provide about the same potential for locking in capital as is provided in the default rules for general partnerships and LLPs—that is, not much”).

85 See supra note 79 and accompanying text.
86 But cf. Blair, What History Can Teach, supra note 11, at 13 (“[A] critical feature of the corporate form . . . was that a corporation was regarded as a separate legal entity with potentially perpetual life . . .”).
87 PRINCIPLES OF CORPORATE GOVERNANCE § 2.01 cmt. f (1994).
88 See supra Part I.A.4 (discussing various statutory mandates for the perpetual corporation).
89 See Henry Hansmann & Reinier Kraakman, The End of History for Corporate Law, 89 Geo. L.J. 439, 439 (2001) (“There is no longer any serious competitor to the view that corporate law should principally strive to increase long-term shareholder value.”).
firm." Current Delaware Vice-Chancellor Leo Strine believes that "the primary goal" of the corporation is "the generation of durable wealth" via long-term endeavors. Even Martin Lipton, a prominent corporate lawyer, and Lucian Bebchuk, a law professor at Harvard, who disagree vehemently with one another on fundamental issues of corporate law, find common ground on this point. Lipton believes that the ultimate goal of the corporation is "sustainable long-term growth," and similarly, Bebchuk has long advocated for a close and effective link between executive compensation and long-term corporate performance.

Similarly, the American Law Institute’s Principles of Corporate Governance provides that the objective of the corporation is not “to realize corporate profit and shareholder gain in the short run. Indeed, the contrary is true: long-run profitability and shareholder gain are at


91 Leo E. Strine, Jr., One Fundamental Corporate Governance Question We Face: Can Corporations Be Managed for the Long Term Unless Their Powerful Electorates Also Act and Think Long Term?, 66 Bus. Law. 1, 2–3 (2010).


95 The American Law Institute has never published a volume covering corporate law in the Restatements of the Law, so the Principles of Corporate Governance are the closest existing substitute. See AMERCO v. Shoen, 907 P.2d 536, 541 (Ariz. Ct. App. 1995) (granting “the deference we traditionally grant to the Restatements of the ALI” to the Principles of Corporate Governance).
the core of the economic objective." Thus, "[s]hort-term profits may properly be subordinated to . . . long-term corporate profit and shareholder gain." Finally, major institutional investors, such as the California Public Employees’ Retirement System, as well as leading corporate finance scholars, such as Michael Jensen, also agree that the ultimate goal of the corporation is "to maximize total long-term firm market value."

Caselaw also consistently holds that the essential objective of the corporation is to increase its long-term economic value. For example, the Delaware Court of Chancery, in an opinion written by Chancellor Allen, held that "[i]t is the obligation of directors to attempt . . . to maximize the long-run interests of the corporation’s stockholders." And the Supreme Court of Delaware recently described "enhancing the corporation’s long term share value" as a "distinctively corporate concern." The rule is the same in other jurisdictions. In the classic Michigan case of Dodge v. Ford Motor Co., the court "recognized that [corporate] plans must often be made for a long fu-

96 PRINCIPLES OF CORPORATE GOVERNANCE § 2.01 cmt. f (1994).
97 Id. ("Activity that entails a short-run cost to achieve an appropriately greater long-run profit is therefore not a departure from the economic objective.").

In the language of corporate finance, the “net present value rule” says that a corporation, like any investor, should “seize all investment opportunities that have a positive net present value.” Richard A. Brealey et al., PRINCIPLES OF CORPORATE FINANCE 18, 22 (9th ed. 2008); Stephen A. Ross et al., ESSENTIALS OF CORPORATE FINANCE 228 (5th ed. 2007). The concept of net present value is examined in detail in Part II.B.3, but for now, suffice it to say that a rational investor adhering to the net present value rule would be open to making investments that will not pay off for many years.

100 See ABA, Comm. on Corporate Laws, Other Constituencies Statutes: Potential for Confusion, 45 BUS. LAW. 2253, 2261 (1990) (stating the "prevailing corporate common law" as that of aligning directors’ interests with the long-term interests of shareholders). But see Nadelle Grossman, Turning a Short-Term Fling into a Long-Term Commitment: Board Duties in a New Era, 43 U. MICH. J.L. REFORM 905, 950 (2010) (asserting that although “a number of courts have suggested a judicial preference for directors to manage for the long-term . . . they generally do not require it”).
ture, for expected competition, for a continuing as well as an immediately profitable venture.” 104 And in the well-known Illinois case Shlensky v. Wrigley,105 the Illinois Appellate Court upheld management’s decision not to install lights and host evening baseball games at Wrigley Field on the ground that the decision was in “the long run interest of the corporation.”106

It bears emphasizing that Delaware’s important framework for judicial review of defensive responses to hostile takeover bids—led by the Unocal decision, Revlon, Inc. v. MacAndrews & Forbes Holdings, Inc.,107 and their progeny—can be seen as derived from the principle that the ultimate corporate objective is the creation of long-term value.108 This body of caselaw gives target boards substantial leeway to prevent a hostile takeover bid from succeeding when the target board has concluded that the long-term value of the corporation as an independent entity exceeds the offer price.109 Even a hostile offer made at a significant premium to market price may be opposed if the target board concludes that “the present stock market price of shares is not representative of true value.”110 The target board “is not under any per se duty to maximize shareholder value in the short term, even in the context of a takeover.”111 The Unocal doctrine is thus a specific instance of the broader principle that the objective of the corporation is to generate value in the long run.112

104 Id. at 684; see also Robert Ashford, Binary Economics, Fiduciary Duties, and Corporate Social Responsibility: Comprehending Corporate Wealth Maximization and Distribution for Stockholders, Stakeholders, and Society, 76 Tul. L. Rev. 1531, 1536 (2002) (“In reaching its decision, the Michigan Supreme Court specifically justified FMC’s decision to subordinate the short-run . . . in favor of a longer run approach to wealth maximization . . . .”).


106 Id. at 780.


109 See Paramount Commc’ns, Inc. v. Time Inc., 571 A.2d 1140, 1150 (Del. 1990). For instance, corporations have the leeway to adopt a “poison pill.” See, e.g., DALE ARTHUR OESTERLE, THE LAW OF MERGERS AND ACQUISITIONS 308–09 (1999); Memorandum from Martin Lipton, Partner, Wachtell, Lipton, Rosen & Katz, to All Attorneys (Sept. 15, 1982) (on file with author) (representing an early description of a shareholder rights plan authored by its inventor).

110 Paramount Commc’ns, 571 A.2d at 1150 n.12; see also Unitrin, Inc. v. Am. Gen. Corp., 651 A.2d 1361, 1385 (Del. 1995) (holding that the target board was justified in deploying defensive measures because target shareholders might accept an inadequate tender offer out of “ignorance or mistaken belief” regarding the long-term value of target stock).


112 This does not mean that all projects undertaken must be long term, only that the ultimate objective is long-term economic returns. Whether those returns are obtained via short- or
Revlon provides the exception to the rule of Unocal. Under Revlon, once the target board decides that the corporation’s independent existence should come to an end, the “whole question of defensive measures [becomes] moot.” At that point, the target’s directors stop being “defenders of the corporate bastion” and become “auctioneers charged with getting the best price” for the shareholders. Once the target board has decided that the corporation’s days are numbered, the fundamental principal that the corporation must be managed for the long term no longer applies, and the board “must maximize immediate value for the shareholders.” Thus, the underlying premise of Unocal and Revlon is that the ultimate corporate objective is long-term success, except in the unusual situation where the corporation has resolved to promptly break up or sell out.

But where is the source of the underlying principle that the objective of a corporation is to enhance value over the long term? Most commentators simply assert that it would be good policy for corporations and broader society if corporations sought to enhance value over the long term, rather than the short term. But best practices are not legal commands. A corporation is a legal fiction, a creature of statute, possessing “only those properties which the charter of its creation confers upon it.” Therefore, if it is to be respected, a legal basis for a long-term orientation must be identified, and one has not been identified until now.

This Article advances such a legal basis: the principle that a corporation’s ultimate objective is long-run success is a consequence of its perpetual existence. Because the corporation will exist in perpetuity, it is in a sense immortal. And an immortal entity must rationally plan not only for today and tomorrow but also for the dis-

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113 See Revlon, 506 A.2d at 182.
114 Id.
115 Id.
116 In re Delta, 2000 WL 875421, at *8 (explaining the holding of Revlon).
117 Id.; Bernard Black & Reinier Kraakman, Delaware’s Takeover Law: The Uncertain Search for Hidden Value, 96 Nw. U. L. Rev. 521, 527 (2002) (“Revlon instructs us that boards must maximize short-term shareholder value when companies are sold, so boards must also have a duty to maximize long-term shareholder value at other times.”).
118 In re Walt Disney Co. Derivative Litig., 907 A.2d 693, 697 (Del. Ch. 2005) (“Delaware law does not—indeed, the common law cannot—hold fiduciaries liable for a failure to comply with the aspirational ideal of best practices . . . .”), aff’d, 906 A.2d 27 (Del. 2006).
tant future.\textsuperscript{120} Like the River Thames, it will keep flowing, long after lives in being have gone.\textsuperscript{121} This is why the corporation must, as a matter of legal obligation, be managed for the long term.\textsuperscript{122}

Noncorporate forms of business organization, such as partnerships, do not have such a legal obligation because, in general, they lack perpetual existence.\textsuperscript{123} For instance, private equity funds usually have a ten-year lifespan, at which time they are liquidated, and returns are distributed.\textsuperscript{124} Private equity funds, therefore, must be managed in light of a ten-year time horizon. By the same token, corporations, being perpetual, must be managed with the time horizon of an immortal entity.

Thus, the perpetual existence of the corporation provides an implicit investment mandate to focus on returns over the very long term. This implicit mandate can be thought of as analogous to the explicit mandate of a sovereign wealth fund ("SWF"), which is an investment instrument funded and controlled by a government.\textsuperscript{125} Oftentimes, SWFs are established in economies that are exploiting nonrenewable resources in order to replace a natural resource—such as oil or gas—with a diverse pool of assets, such as corporate and foreign government bonds, equities, commodities, real estate, derivatives, and foreign direct investment.\textsuperscript{126} Many SWFs’ written investment mandates state that their goal is to increase the country’s wealth and stability for generations. Norway, for example, has an SWF called the "Government Pension Fund-Global."\textsuperscript{127} Its mandate provides that “the Fund should be managed with a view to achieving high return that will en-

\textsuperscript{121} BLACKSTONE, supra note 59, at 468.
\textsuperscript{122} A corporate charter could provide for a limited lifespan, as opposed to perpetual existence, but this rarely happens in practice. See supra text accompanying note 64.
\textsuperscript{123} See infra text accompanying notes 289–98.
\textsuperscript{124} See infra text accompanying notes 295–98.
\textsuperscript{126} See \textit{PRACTICING LAW INST., SOVEREIGN WEALTH FUNDS: A LEGAL, TAX AND ECONOMIC PERSPECTIVE} § 1:3 (Leonard Schneidman ed., 2010). The SWF can be used as a saving vehicle, intended to ensure that the wealth accumulated through the depletion of natural resource can be distributed across generations. \textit{Id.} The SWF can also act as a fiscal stabilization tool that helps to smooth out the consumption of the nonrenewable resource and spending of the revenues. \textit{Id}.
able coming generations to benefit from the country's petroleum wealth\textsuperscript{128} through long-term management of petroleum revenues.\textsuperscript{129} Similarly, the mission of the Abu Dhabi SWF is to invest funds "to make available the necessary financial resources to secure and maintain the future welfare of the Emirate."\textsuperscript{130} Corporations do not have mandates in the same way that SWFs do, but their perpetual existence provides an implicit mandate that is essentially the same as that of SWFs.

This Part has shown that the perpetual existence of the corporation is not a trivial aspect of the form, but rather is the statutory and theoretical underpinning for the widely accepted but undertheorized principle that corporations are to be managed for the long run. The remainder of this Article analyzes the implications of this principle.

\section*{II. IMMORTAL INVESTING}

A rational, immortal person would theoretically employ an investment strategy that differs in at least two important ways from that of a mortal. First, a person's investment time horizon\textsuperscript{131} depends in part on how long she expects to live. Thus, natural persons invest with a time horizon of months, years, or decades. By contrast, an immortal investor can employ any and every time horizon, including an ultra-long one.\textsuperscript{132} Second, a rational person's "inherent discount rate"—the amount by which she discounts delayed rewards compared to present ones—depends on her likelihood of surviving to the payoff period.\textsuperscript{133} Thus, an immortal investor can and should employ a lower inherent discount rate than any rational mortal would use.

These two differences in investment strategy offer a number of important investing advantages to an immortal investor compared to a natural person: first, an immortal investor can invest in less liquid and more volatile investments than a natural person, both of which are correlated with relatively high returns over time. Second, an immortal investor would observe more positive net present value ("NPV") op-

\begin{thebibliography}{99}
\bibitem{131} See infra Part II.A.1 (discussing "time horizon").
\bibitem{132} See infra Part II.A.1 (discussing the uniquely long time horizon for immortal investors).
\bibitem{133} See infra Part II.A.2 (discussing the very low inherent discount rate for immortal investors).
\end{thebibliography}
portunities than would a natural person. Finally, an immortal investor can be expected to cooperate especially well with others in comparison to a natural person. These characteristics make the immortal investor an attractive business partner with all the attendant benefits.

Beyond these private benefits, immortal investing is also in the public interest. Immortal investors, thanks to their low discount rates and long time horizons, can be expected to act like the ant, not the grasshopper: they work hard, cooperate well, and think of the future. Professor Eric Posner calls them, simply, “good types.” In the famous “Marshmallow Experiment,” which tests one’s ability to delay gratification by asking participants to refrain from eating the marshmallow reward, immortal investors would hold off from eating the marshmallow for a very long time. And immortal investors are the type of people that build up a healthy and productive society. In short, and as the following Sections demonstrate, immortal investors have advantages in the marketplace and are just the type of investors that we, as a society, should welcome and encourage most.

A. Basics

This Section further discusses two important characteristics unique to rational, immortal investors, who—unconstrained by a limited lifespan—should invest with (1) an ultra-long time horizon and (2) a preternaturally low inherent discount rate.

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134 A positive NPV opportunity is one that is worthwhile, in the sense that its expected value exceeds its cost. See BREALEY ET AL., supra note 99, at 18 (“Any time you find and launch a positive-NPV project (a project with present value exceeding its outlay) you have created wealth.”); infra text accompanying notes 209–11.
135 See infra Part II.B.1–B.4 (discussing private advantages of immortal investing).
136 See infra Part II.C.
1. **Long Time Horizon**

A "time horizon" is the length of time during which an investor plans to place her investment at risk.\(^{140}\) Different investors have different time horizons, and therefore, different preferred investments.\(^{141}\) For someone with a very short investment horizon, such as an elderly investor with incentives to spend her money in the near term, an investment in an overnight loan might make sense because she will only have to wait one day for the payoff.\(^{142}\) By contrast, a person with a long time horizon might prefer to invest in a parcel of land in a blighted part of town that she expects to gentrify.\(^{143}\) Although the payoff, if any, of such an investment will not come for many years, an investor with a long time horizon has, by hypothesis, years to wait.

Why might someone ever prefer a long-term investment, the outcome of which will not be revealed for years, over a short-term investment, the outcome of which will become apparent quickly? After all, the first rule of finance is that "a dollar today is worth more than a dollar tomorrow";\(^{144}\) thus, the sooner the resolution of an investment, the more valuable it is, all else being equal. The answer is that longer time horizons are associated with greater total returns, as a long time span allows one to invest in illiquid and volatile assets, which are correlated with high returns.\(^{145}\) Thus, the longer the time horizon, the greater the potential reward.

Time horizons differ from investor to investor, but will generally be limited by a human lifespan because one cannot allocate resources any further into the future than she will live.\(^{146}\) In the same vein, a rational person's time horizon should depend on how long she expects

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140 The term "investment horizon" is a synonym. See Brealey et al., supra note 99, ch. 2 (defining and discussing time horizon).

141 Id.


143 See, e.g., Kenford Co. v. Cnty. of Erie, 537 N.E.2d 176, 177 (N.Y. 1989) (deciding breach of contract case that arose from land speculation investment near the site for a planned professional football stadium that was never built).

144 Brealey et al., supra note 99, at 14 (emphasis omitted).

145 See infra Part II.B.1–2 (discussing illiquid and volatile investments).

146 See, e.g., Annie Dillard, Pilgrim at Tinker Creek 269 (1974) ("Spend the afternoon. You can't take it with you." (emphasis omitted)).
Thus, investors with long lives ahead should invest with a long time horizon, while those who are in their autumn years should invest with a short one. The logical conclusion is that a person should endeavor to make a number of speculative, long-term investments in the early years of life to achieve high returns in their old age. Unfortunately, youngsters generally lack the capital to make significant investments, and if they manage to save a large pool of money, it is typically not until they have reached middle age, when their investment horizon is no longer what it once was. “Youth,” as the saying goes, “is wasted on the young.”

Unlike our human youth, an immortal investor can invest with any time horizon and is not limited by a mortal lifespan. Therefore, one would expect an immortal investor to invest with a time horizon longer than that of any mortal. As discussed in Part II.B, this is highly advantageous. Before turning to these advantages, the Subsection below discusses the second critical characteristic of the immortal investor.

2. Low Inherent Discount Rate

As previously mentioned, the “first basic principle of finance is that a dollar today is worth more than a dollar tomorrow.” How much more? That depends on the “discount rate.” For example, at a discount rate of 5%, a $100 bill to be tendered in one year has a “present value” of $95. In other words, $100 in a year is equivalent—at the suggested 5% discount rate—to $95 right now. An investor using a 5% discount rate would gladly invest $94 in exchange for the $100 in a year from now. From her perspective, she is trading $94 for (the equivalent of) $95, which is obviously a good deal. But these calculations depend directly on the applicable discount rate. So, is 5% the correct rate?

There is no single “proper” discount rate for all people and all investments. The appropriate rate depends on a number of factors that fall into two groups: one relating to the nature of the investment, the other relating to the nature of the investor. First, the discount rate

147 Richard A. Posner, Are We One Self or Multiple Selves? Implications for Law and Public Policy, 3 Legal Theory 23, 27 (1997).
149 Brealey et al., supra note 99, at 14 (emphasis omitted); supra note 144 and accompanying text.
151 Likewise, she would gladly accept $96 today for a promise to deliver $100 in a year.
will depend on factors related to the riskiness of the investment. How certain is the investor that her promised returns will materialize? How much inflation will there be over the life of the investment? What is the opportunity cost? What is the systemic risk? What is the "beta" of the investment?152

Second, the discount rate will depend on factors related to the nature of the investor. Even when there is no risk associated with a delayed reward, human investors still discount future rewards due to our "time preference" for an immediate benefit over a deferred one.153 This Article refers to this latter aspect of the discount rate as an investor’s "inherent discount rate," an individual trait that varies from person to person.154 The inherent discount rate implies that a dollar today is worth more than a dollar tomorrow and it is independent of one’s assessments of risk—both general risks (e.g., inflation) as well as risks relating to the specific investment (e.g., nonpayment).155 Thus, given the choice between $1,000,000 delivered in one year, or some lesser amount right now, "[a] decision maker who is particularly impatient might value the future $1,000,000 at, say, only


153 Id. at 193 (explaining that the beta of investment is a measure of the sensitivity of a given security to movements in the broader market).


Of course, it should also be noted that real investors cannot ever assume a total absence of risk. E.g., BREALEY ET AL., supra note 99, at 251 (noting that risks of investments shift constantly). Compare W. Kip Viscusi, Rational Discounting for Regulatory Analysis, 74 U. CHI. L. REV. 209, 222 (2007) ("A good measure of the riskless rate of return is the government bond rate [on the] three-month Treasury bill . . . ."), with Jesse McKinley, Across Nation, Budget Talks Stir Pessimism, N.Y. TIMES, July 17, 2011, at A1 (quoting Todd Kramer, an energy derivative trader, who asked “If the U.S. can default, what is safe?”), and Damian Paletta & Matt Phillips, S&P Strips U.S. of Top Credit Rating, WALL ST. J., Aug. 6, 2011, at A1 (reporting that credit rating agency S&P “removed for the first time the triple A rating the U.S. has held for 70 years, . . . downgrading[ing] long term U.S. debt to AA+”)


156 See supra note 144 and accompanying text.
$800,000 in immediate cash, whereas one who is more patient might value it at $900,000 in immediate cash.\textsuperscript{157}

An individual's inherent discount rate plays a significant role in determining her investing behavior. For example, consider the choice between two riskless investment opportunities. First, the "slow and steady" investment, which will return $1.00 per year every year for each of the next 100 years, for a nominal total of $100. Second, the "big bang" investment, which will return $100,000, but only after 100 years pass. If these are the only two opportunities available, and assuming no risk whatsoever, which should an investor select?\textsuperscript{158} Which investment, discounted using an inherent discount rate, has a higher present value?

For a person with an inherent discount rate of 10\%, the answer is clear: slow and steady is the better choice. The present value of $1.00 every year for 100 years, discounted at 10\%, is about $10.\textsuperscript{159} On the other hand, the present value of the big bang investment—the investment with a future payoff of $100,000—is only about $7.00.\textsuperscript{160} This outcome, however, is highly dependent on the inherent discount rate of the investor. Consider a slightly lower inherent discount rate of 8\%. At that rate, the present value of slow and steady is about $12.50,\textsuperscript{161} but the present value of big bang is about $45.\textsuperscript{162} The effect is even more pronounced at lower discount rates. At a 3\% inherent discount rate, slow and steady has a present value of about $32,\textsuperscript{163} which is miniscule compared to big bang's present value of over $5,000.\textsuperscript{164}

As this example demonstrates, an investor with a low inherent discount rate will prefer long-term, high-payoff investments to short-term, low-payoff investments, and an investor with a high inherent discount rate will prefer the opposite. For the same reason, investors with a low inherent discount rate will make investments that—from

\textsuperscript{157} Hu, supra note 150, at 285.

\textsuperscript{158} This hypothetical assumes absolute certainty. See Marglin, supra note 154, at 96.

\textsuperscript{159} The present value of an annuity of $1.00 per period for \(t\) years at discount rate \(r\) is \(1/r - [1/(r \times (1 + r)^t)]\). \textsc{Brealey} \textit{et al.}, supra note 99, at 42. In this case, the present value is \(1/0.1 - [1/(0.1 \times (1 + 0.1)^{100})]\) = $10 - $0.0007 = $9.99.

\textsuperscript{160} The present value of a future payment of \(x\) dollars after \(t\) years at discount rate \(r\) is \(x/(1+r)^t\). In this case, the present value is \(100,000/(1 + 0.1)^{100} = \$7.26\). \textit{Id.} at 56.

\textsuperscript{161} Present value = \(1/0.08 - [1/(0.08 \times (1 + 0.08)^{100})]\) = $12.50 - $0.006 = $12.49. \textit{See supra} note 159.

\textsuperscript{162} Present value = $100,000/(1 + 0.08)^{100} = \$45.46. \textit{See supra} note 160.

\textsuperscript{163} Present value = \(1/0.03 - [1/(0.03 \times (1 + 0.03)^{100})]\) = $33.33 - $1.73 = $31.60. \textit{See supra} note 159.

\textsuperscript{164} Present value = $100,000/(1 + 0.03)^{100} = \$5203.28. \textit{See supra} note 160.
their perspective—are highly profitable, but—from the perspective of an investor with a high inherent discount rate—would be unattractive.165

Why does the inherent discount rate exist? Why do we prefer an immediate reward to one that is delayed, even when we are certain that the later payment will be made? The answer, ultimately, is human mortality.166 We all know that, sooner or later, our lives will come to an end, and that moment might come while we are waiting for a deferred reward. The knowledge of our own mortality causes us to prefer an immediate payoff to one that is deferred, for we fear that we may not be around to collect the latter.167 This basic financial concept has been the subject of well-known adages like “carpe diem,”168 as well as countless works of poetry and literature throughout the ages.169 This is not to say that mortal human beings are incapable of delaying gratification—just that we need to be compensated to do so. Thus, $100 in a year has a discounted present value of less than $100 because we know that we may not live long enough to collect and enjoy it.170 Hence, every rational person would prefer anything right now to that same thing delivered at a later time.171

It logically follows that the inherent discount will vary from person to person, depending on how likely one is to die before the deferred date—or at least a person’s perception of that probability.172 In

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165 See infra Part II.B.3 (discussing the advantage of long-term investing to yield more positive NPV opportunities).
166 POSNER, supra note 14, § 1.4 n.2 (“Impartiality between present and future consumption implies discounting future costs and benefits at a rate equal to the probability of still being alive when the future state in question arrives.”).
167 Id.
168 See, e.g., DEAD POETS SOCIETY (Touchstone Pictures 1989) (inspiring boarding school English teacher instructs his students, “Carpe diem. Seize the day boys, make your lives extraordinary.”); see also Ecclesiastes 8:15 (King James) (“[A] man hath no better thing vnder the Sunne, then to eate and to drinke, and to be merrie ...”); Isaiah 22:13 (King James) (“Let vs eate and drinke, for to morrow we shall die.”); DAVE MATTHEWS BAND, Tripping Billies, on CRASH (RCA Records 1996) (“Eat, drink and be merry / for tomorrow we die”).
169 E.g., ROBERT HERRICK, To the Virgins, to Make Much of Time, in THE COMPLETE POETRY OF ROBERT HERRICK 117, 117 (J. Max Patrick ed., 1963) (“Gather [sic] ye Rose-buds while ye may, / Old Time is still a flying: / And this same flower that smiles today, / To morrow will be dying.”); THE GRASS ROOTS, Let’s Live for Today, on LET’S LIVE FOR TODAY (Dunhill Records 1967) (“Sha-la-la-la-la-la, live for today / And don’t worry about tomorrow, hey, hey, hey ... we’ll take the most from living, have pleasure while we can.”).
170 See supra notes 159–64 and accompanying text.
171 See supra notes 159–64 and accompanying text; see also Green et al., supra note 155, at 33 (“[C]hoosing smaller, immediate rewards over larger, delayed rewards can be viewed as the normal outcome of an adaptive process ...”).
172 See POSNER, supra note 14, § 1.4 n.2 (discussing discount rate in relation to mortality).
other words, a rational person’s inherent discount rate should correlate with “the probability of still being alive when the future state in question arrives.” At the extreme, a very elderly person or a person with a terminal illness who has only a relatively short time to live should rationally demand significant compensation for any delay in payoff. That is, her inherent discount rate should be high compared to the average person. By contrast, one would expect healthy young adults who expect to live for decades to have relatively low inherent discount rates, as they should be more confident that they will be able to collect a future payoff. Empirical studies demonstrate that this is indeed the case. A 2004 experimental study of 123 adults aged nineteen to eighty-nine found that the elderly subjects (with a mean age of seventy-five) displayed the highest discount rate, as expected. And, consistent with the idea that one’s inherent discount rate is related to the likelihood of survival, this effect was “particularly strong for discounting over long delays.” It should come as no surprise that “the elderly will be particularly sensitive to such long delays, since there is a very real risk that they will not be around to achieve the rewards at the end of them.” The essential point is that the

173 Id. For now, this Article assumes that people can and do accurately assess their likelihood of survival, even though this may not hold in practice. Id. (asserting that “our discount rates are excessive in relation to our [actual] mortality risk” due to cognitive biases).

174 See Steve Connor, The £400 Test that Tells You How Long You’ll Live, INDEPENDENT (London), May 16, 2011, at 1 (quoting a consultant as suggesting that a person might be interested in a genetic test showing how fast she is aging because, “[i]f I know I’m going to die in 10 years I’ll spend all my money now;’ or ‘[i]f I’m going to live for 40 more years I’ll be more conservative in my lifestyle”).

For a real-life example of this phenomenon, consider the story of John Brandrick, a British civil servant who at age sixty was reportedly told by his doctor that he had only six months to live. Over the next few months, he spent his entire life savings on restaurants, wines and vacations. The diagnosis, it turned out, was wrong, leaving Brandrick alive and well, but in dire financial straits. Jon Kirk, Dead Wrong, PEOPLE.CO.UK (May 6, 2007), http://www.people.co.uk/news/uk-world-news/2007/05/06/dead-wrong-93463-19053322; James Tozer, Patient Given Wrong Diagnosis of Year to Live Now Faces Bankruptcy, DAILY MAIL (London), May 7, 2007, http://www.dailymail.co.uk/news/article-453095/Patient-given-wrong-diagnosis-year-live-faces-bankruptcy.html.

175 Daniel Read & N.L. Read, Time Discounting Over the Lifespan, 94 ORGANIZATIONAL BEHAV. & HUM. DECISION PROCESSES 22, 25, 31 (2004). This experiment was limited to adults because there is a countervailing tendency in children, whereby the inherent discount rate lessens with age. See Green et al., supra note 155, at 33 (“[T]he ability to delay gratification increases with age in children.”). There is some evidence that this effect continues until middle age. That is, one’s inherent discount rate drops from childhood until middle age and then increases again as one approaches her life expectancy. Read & Read, supra, at 31.

176 Read & Read, supra note 175, at 31.

177 Id. at 29.
more likely one is to survive to the payoff period, the lower her inherent discount rate will be.

Finally, consider all of this in the context of an immortal investor. An immortal investor is certain to survive to the payoff period—or at least more likely to survive than any mortal. Thus, an immortal investor should have an inherent discount rate of zero or, at least, an inherent discount rate that is lower than any mortal.178

B. Private Advantages of Immortal Investing

The two key aspects of immortal investing—low inherent discount rate and long time horizon—give an immortal investor at least four investing advantages over its mortal counterparts. First, an immortal investor can invest in the most illiquid assets, which are correlated with strong returns.179 Second, an immortal investor can invest in the most volatile assets, which are likewise known to offer the opportunity for superlative returns.180 Third, an immortal investor will observe more positive NPV investment opportunities than a mortal investor.181 Fourth, an immortal investor should be more cooperative than a mortal one, thus making it an attractive business partner.182 The following Subsections discuss each of these advantages in turn.

1. Illiquid Investments

Due to their long investment time horizons, an immortal investor can invest in the types of highly illiquid assets that a mortal would rationally shun. Mortal investors know that life is unpredictable, and that they may need (or want) to “cash out” of an investment to pay for current consumption.183 Therefore, they value liquidity and will pay a premium for liquid assets.184 By contrast, immortal investors

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178 This is not to say that an immortal investor would equate $100 tomorrow with $100 today. To compare future rewards with present ones, one cannot use only the inherent discount rate, but must also use the total discount rate, which takes risk into account. See supra notes 151–53 and accompanying text. Still, for an investment with a given level of risk, an immortal investor's discount rate will be lower than that of a mortal investor because the inherent component of the discount rate will be smaller for the former than for the latter. In short, an immortal investor should price investments using a lower inherent discount rate (and thus a lower total discount rate) than a mortal ever would. See supra note 166 and accompanying text.

179 See infra Part II.B.1.

180 See infra Part II.B.2.

181 See infra Part II.B.3.

182 See infra Part II.B.4.

183 POSNER, supra note 14, § 18.1 (“People want liquid wealth to meet extraordinary demands . . . .”).

184 DAVID F. SWENSEN, PIONEERING PORTFOLIO MANAGEMENT: AN UNCONVENTIONAL APPROACH TO INSTITUTIONAL INVESTMENT 83 (fully rev. & updated 2009) (“Speculators and
have much less need for liquidity,\textsuperscript{185} and the acceptance of illiquidity "pays outsized dividends" to the immortal investor.\textsuperscript{186}

Illiquid investments offer an immortal investor a special opportunity for strong returns for at least two reasons. First, just as market participants tend to pay a premium for liquidity, they will offer a discount for illiquidity.\textsuperscript{187} This provides a golden opportunity for an immortal investor. By focusing on relatively illiquid assets, an immortal investor may be able to "identify opportunities to establish positions at meaningful discounts to fair value," which can be expected to lead to outsized returns over time.\textsuperscript{188}

Second, there is commonly much less publicly available information on illiquid investments compared to liquid ones.\textsuperscript{189} There are numerous analysts and a great deal of press attention lavished on the thirty companies in the Dow Jones Industrial Average, thus making it very difficult to beat the market when investing in those assets.\textsuperscript{190} By contrast, there is much less known about highly illiquid investment opportunities that lie in "dark corners," thus "creating an opportunity to be rewarded for uncovering insights that are not reflected" in the asking price.\textsuperscript{191}

In short, highly illiquid investments offer the potential for attractive returns, but they are only appropriate for an investor with a long time horizon. Because immortal investors have the longest time horizons of all, they are able to invest in the most illiquid investments available, thereby giving them a fundamental investing advantage in the marketplace.

2. \textit{Volatile Investments}

A second advantage of immortal investing is that the long time horizon of an immortal investor allows it to invest in extremely volatile investments, which offer the opportunity for high returns over time. Volatility is correlated with returns, making highly volatile as-

\textsuperscript{185} It should be noted, however, that even immortal investors may need some liquidity; for instance, for debt service. \textit{See infra} Part III.D.3.

\textsuperscript{186} \textit{Swensen, supra} note 184, at 98.

\textsuperscript{187} \textit{Id.} at 86-89.

\textsuperscript{188} \textit{Id.} at 83.

\textsuperscript{189} \textit{Id.} at 86-87.

\textsuperscript{190} \textit{See}, e.g., \textit{Dow Jones Industrial Average}, CNN\textit{Money}, http://money.cnn.com/data/dow30 (updated daily).

\textsuperscript{191} \textit{Swensen, supra} note 184, at 82, 86.
sets highly attractive; yet their very volatility makes them unsuitable for investors with short time horizons, as the value of such assets might be temporarily depressed at the end of any relatively short investment period. While an immortal investor with a long time horizon would simply wait for the value to rebound, a mortal investor with a short time horizon cannot do the same. To put it plainly: a long time horizon is an investing advantage that can yield high investment returns, and the longer the time horizon, the greater the advantage. Thus an immortal investor, with the longest time horizon of all, has the greatest opportunity to achieve high returns from volatile assets.

The concept is familiar to anyone who has received advice on his or her retirement plan: a young worker just starting out has a long time horizon, as they have many years until retirement, whereas older workers on the cusp of retirement have a short time horizon. Thus, young workers should invest in volatile high-yielding investments (i.e., stocks), while older workers—to the extent that they worry that they will not have the time to recover from a steep drop in the stock market—must make do with steady, low-yielding investments (i.e., government bonds). In this way, the young workers with a long time horizon have a tremendous advantage. Government policy incentivizes precisely this behavior. For example, Individual Retirement Accounts and 401(k) retirement plans receive advantageous tax treatment, so long as the investment is left to grow until retirement. If, however, an impatient account holder withdraws funds before age 59.5, she forfeits those tax advantages and must pay a ten percent penalty. This carrot-and-stick approach encourages workers to invest with a long time horizon, which, as discussed, can yield higher returns.

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193 See supra Part II.A.1–2.
194 Brealey et al., supra note 99, at 206 ("The stock market is risky because there is a spread of possible outcomes.").
196 Twila Slesnick & John C. Suttle, IRAs, 401(k)s, & Other Retirement Plans 21 (8th ed. 2007).
197 Id.
198 See supra Part II.B.1.
But the nature of mortality is that even the youngest among us has a time horizon limited by a human lifespan. None of us can invest with a time horizon that extends beyond our own lives because we will not be around to receive the rewards. This is unfortunate because the longer the time horizon, the greater the investing advantage.\textsuperscript{199}

Immortality solves this problem, as an immortal investor can invest with a time horizon that stretches beyond a mortal lifetime.\textsuperscript{200} An immortal investor has all the time in the world to wait for an investment to bear fruit, which allows it to invest in ultra-volatile investments. And because expected return is positively correlated with volatility, those ultra-volatile investments should, over the long term, yield ultra-high returns—higher than a mortal investor with a finite time horizon can ever expect to achieve.\textsuperscript{201} It is well known that investing in a broad stock market index, for instance, has “the power to turn a single dollar into millions” over the course of generations.\textsuperscript{202} Even so, “few will have the patience or desire”—or the time horizon—to wait generations to collect their reward.\textsuperscript{203} An immortal investor, however, is perfectly suited to do so.

To summarize, an immortal investor has a fundamental advantage over the mortal investor in the race for returns, because the former can invest in more volatile investments than the latter ever could.

3. More Positive Net Present Value Opportunities

The essential goal of investing is to seize opportunities that have a positive NPV.\textsuperscript{204} In other words, the objective is to invest in projects whose expected future payoffs, discounted to their present value using an appropriate discount rate,\textsuperscript{205} exceed their present cost.

For example, suppose Allison and Bob were both offered the opportunity to purchase a vacant lot for $85,000, and that they both receive advice from expert real estate advisors who are certain that the lot can be sold in one year for $100,000.\textsuperscript{206} Allison and Bob are each
certain to clear $15,000 on the deal, but will have to wait a year to receive it. Should Allison or Bob buy the lot? Elementary finance theory teaches that this will depend on the present value of the expected sale price of $100,000. In other words, what is the present value of $100,000 to be received a year from now? As discussed, the present value depends on both Allison’s and Bob’s inherent discount rate.

If we assume that Allison has a 10% discount rate, the $100,000 payoff has a present value of $90,000. Thus, the net present value of the investment—the payoff minus the initial investment—is equal to $90,000 minus $85,000, or $5000. Therefore, for Allison—with her 10% discount rate—the vacant lot is a positive NPV investment opportunity, and she should embrace it.

Now let us assume that Bob has a 20% discount rate. To Bob, then, the $100,000 payoff would have only an $80,000 present value, and the NPV of the investment would be $80,000 minus $85,000, or negative $5000. At Bob’s 20% discount rate, the vacant lot is a negative NPV investment opportunity, and he should reject it.

This simple example demonstrates that an investor with a lower discount rate will observe more positive NPV investment opportunities than an investor with a higher discount rate, all else being equal. This is a key observation, as the ultimate goal of financial managers “is to seize all investment opportunities that have a positive net present value.” Because immortal investors have a lower inherent discount rate than any mortal—and thus, a lower total discount rate—they should perceive more investment opportunities as having a positive NPV than mortals.

To continue with the above example, if the asking price for the vacant lot were $91,000 (instead of $85,000), both Allison—with her simplicity’s sake, assume Allison and Bob’s real estate advisor has perfect foresight—as if she has travelled through time—so that it is truly certain that the lot can be sold in one year for $100,000 with no risk. Also assume that there are no transaction costs. See Marglin, supra note 154, at 96.

See supra Part II.A.2.

Again, note that this example ignores risk. See Marglin, supra note 154, at 96.


See supra Part II.A.2.
10% discount rate—and Bob—with his 20% discount rate—would see the investment as a negative NPV opportunity, and they would not invest in it. But an immortal investor with, say, a 5% discount rate would perceive the vacant lot as a positive NPV investment. Hence, the immortal investor would be willing to invest, even though Allison and Bob would refuse to do so.

Again, this amounts to a fundamental investing advantage for immortal investors. Indeed, there may be some investments, particularly very long-term ones, that only immortal investors would be willing to make because the discount rate of a mortal will be too high to give the venture a positive NPV. The bottom line is that because of their preternaturally low inherent discount rates, immortal investors can be expected to observe more opportunities for positive NPV investments than mortals would. In other words, some ventures that appear to mortal investors to have a negative NPV will look to immortal investors like positive NPV opportunities. And because the goal of investing is to find and invest in positive NPV ventures, this amounts to a third fundamental advantage for immortal investors.

4. Better Cooperation

Investors commonly cooperate with each other. Terms like “joint venture,” “strategic alliance,” and “club deal” are all just jargon for the general idea of cooperative investing. Why do investors cooperate? Because it turns out that, contrary to the inherently competitive nature of investing, “cooperation has clear advantages” for investors. Cooperative strategies are useful in gathering inputs, conserving resources, and improving performance generally.

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212 For Allison, the NPV would be $90,000 - $91,000 = -$1,000. For Bob, the NPV would be $80,000 - $91,000 = -$11,000.
213 NPV = $95,000 - $91,000 = $4,000.
214 See infra Part III.B.
216 Id. at 2, 7.
217 Id. at 6.
219 See infra notes 223–29 and accompanying text (discussing the challenges of cooperative investing).
220 Child et al., supra note 215, at 383.
221 Id. Even seemingly solitary economic actors must cooperate with many others. Consider a brilliant inventor who creates an amazing (and highly profitable) consumer gadget by
eration affords investors significant advantages where they lack knowledge, resources, skills, or assets, and it can offer easier access to new markets and opportunities for the mutual exchange of knowledge, benefitting not only investors, but also the economy as a whole. 222

Yet there are serious potential downsides to cooperating with other investors. An investor might be “held up” by a coventurer, particularly once she makes asset-specific investments. 223 In such a circumstance, an opportunist business partner may try to “wring some advantage from the fact that the party who performs first sinks costs, which the other party may hold hostage by demanding greater compensation in exchange for its own performance.” 224 Cooperation also leaves participants vulnerable to other types of unwelcome behavior. One’s partners might slack off, cheat, or freeride on one’s hard work. 225

Unfortunately, contracting cannot fully solve the potential problems implicated by cooperation. 226 Even a carefully drafted, long-term contract will necessarily be incomplete in some way because it is impossible to anticipate every circumstance that might come up dur-

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221 Id. at 1; see also DIANE COYLE, THE ECONOMICS OF ENOUGH: HOW TO RUN THE ECONOMY AS IF THE FUTURE MATTERS 147 (2011) (“Trust is fundamental to any successful economy, at any stage in its development.”). But see 1 ADAM SMITH, AN INQUIRY INTO THE NATURE AND CAUSES OF THE WEALTH OF NATIONS 144 (Edwin Cannan ed., Univ. of Chi. Press 1976) (1904) (“People of the same trade seldom meet together, even for merriment and diversion, but the conversation ends in a conspiracy against the public, or in some contrivance to raise prices.”).

222 Indus. Representatives, Inc. v. CP Clare Corp., 74 F.3d 128, 129–30 (7th Cir. 1996); Brian J.M. Quinn, Asset Specificity and Transaction Structures: A Case Study of @Home Corporation, 15 HARV. NEGOT. L. REV. 77, 82 (2010) (“Asset specific investments exhibit two important traits: first, costs are incurred in advance of the anticipated exchange; second, the assets are particular to a single location, use, or customer, such that their next best use is of much lower value than their anticipated use.” (footnote omitted)); see also Benjamin Klein, Why Hold-Ups Occur: The Self-Enforcing Range of Contractual Relationships, 34 ECON. INQUIRY 444, 445 (1996); Oliver E. Williamson, Credible Commitments: Using Hostages to Support Exchange, 73 AM. ECON. REV. 519, 522 (1983).

223 Child et al., supra note 215, at 50 (“Firms incur a number of risks when they enter into strategic alliances. One is the risk that their partner(s) will act opportunistically; in other words take advantage of them if and when the opportunity arises.”).

224 Child et al., supra note 215, at 79 (focusing on the risk that a business partner “may take and not give fully in return”); see also Indus. Representatives, 74 F.3d at 129–30.

225 Blair, What History Can Teach, supra note 11, at 6–7.
ing the course of the relationship. Further, even though the implied duty of good faith—read into every contract—essentially requires parties to cooperate with their contracting partners, contract law cannot always ensure that parties will actually do so. The intuitive upshot is that investors prefer to invest in, and along with, those they trust. As this Article shows, the most dependable and trustworthy cooperators are parties with long time horizons and low inherent discount rates (i.e., immortal investors).

The well-known prisoner’s dilemma thought experiment illustrates why investors prefer to transact with those they trust. The prisoner’s dilemma involves two partners, each of whom can choose to either cooperate with or defect from the other, but cannot communicate with each other before making their choice. If one party cooperates, and the other defects, the first party suffers. The highest total payout for both partners occurs when both parties cooperate, but each has good reason to fear that the other might defect. Thus, in the ordinary case, both parties defect, and both parties suffer.


228 2 E. Allan Farnsworth, Farnsworth on Contracts § 7.17 (2d ed. 1998).

229 Posner, supra note 138, at 11-12.

230 Child et al., supra note 215, at 30, 96 (noting that trust—defined as “having sufficient confidence in a partner to commit valuable know-how or other resources to transactions with it despite the fact that, in so doing, there is a risk the partner will take advantage of this commitment”—between partners is “key to the ultimate success of a joint enterprise”); Coyle, supra note 222, ch. 5: Press Release, Tim Geithner, Sec’y of the Treasury, Statement on Compensation (June 10, 2009), available at http://www.treasury.gov/press-center/press-releases/Pages/tg163.aspx (“Our financial system is built on trust and confidence.”).

231 See infra Part III.A.

232 See 5 Giovanni Sartor, Legal Reasoning: A Cognitive Approach to the Law 253–54 (rept. 2007). The “prisoner’s dilemma” is a thought experiment involving two people who are held by the police after having been found with illegal weapons near a bank. Id. The prosecutor, who believes both prisoners were trying to rob the bank, tells the prisoners that if one of the prisoners confesses to attempted robbery (and the other does not), then the confessing prisoner will be free, but his partner will then get the whole punishment. Id. If both prisoners confess to attempted robbery, however, they will both get half the punishment. Finally, if both prisoners keep quiet, both will get the lesser punishment for carrying illegal weapons. After the prosecutor presents these options, each prisoner must resolve the dilemma of whether to confess. Id.


234 Id. at 14.

235 Id.

236 Id.
Things change radically, however, when the same two people confront the prisoner's dilemma repeatedly. Although the dominant strategy in the one-round prisoner's dilemma is to defect, repeat players must think about the future implications of failing to cooperate. In any given round, a player could defect and grab a momentary gain at the expense of her counterpart, but she can reasonably expect that a defection will be met in like kind in the next round. Under such circumstances, the "optimal move is always to cooperate."" This theoretical result accords with human intuition and experience that "people are more likely to cooperate when they expect to have repeated dealings with each other than when they expect never to see each other again." This is why "fly-by-night" operations are generally viewed as less reliable than those with deep roots.

There is a catch, however. For the repeated prisoner's dilemma to resolve into a stable cooperative equilibrium, each player must take the long view and place significant value on the payoffs from future rounds. In the context of cooperative investing, she must have a long time horizon and a low inherent discount rate. A player with a short time horizon, a high inherent discount rate, or both (i.e., the grasshopper) cares only about the present round. By contrast, a player with a long time horizon, a low inherent discount rate, or both (i.e., the ant) cares not only about the present round, but also about those that will follow. Thus, in the repeated prisoner's dilemma game, theory suggests that grasshoppers "will not cooperate or at best will achieve a low level of cooperation," while ants "are most likely to yield the cooperative outcome."

This hypothesis has been tested and confirmed by a number of experimental studies using human subjects. Typically, these studies

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237 Id.
238 Id. at 15 ("Suppose that each player expects that if he cheats in one round, the other player will respond by cheating in the following round.").
239 Id. at 15–16 (noting that the natural outcome in repeated prisoner dilemma games is cooperation).
240 Id. at 16.
241 Id. at 15, 19 ("[A]s long as each player cares enough about his payoffs in future rounds—that is, he has a low discount rate—he will cooperate rather than defect in each round.").
242 See supra notes 137–39 and accompanying text.
243 See supra notes 137–39 and accompanying text.
244 Posner, supra note 138, at 17.
245 Id. at 19.
246 There are also similar experiments on animals, including pigeons, that were found to consistently defect in the prisoner's dilemma. Leonard Green et al., Prisoner's Dilemma and the Pigeon: Control by Immediate Consequences, 64 J. Experimental Analysis Behav. 1 (1995).
first determine their subjects’ inherent discount rates by asking them a series of questions such as, “would you prefer $33 today, or $41 in 19 days?”247 Then, the subjects play the prisoner’s dilemma, or some other “public goods” game, with a computer or each other; the experimenters observe and tally who cooperates and who defects.248 The results confirm the theory. A 2002 experiment using a repeated prisoner’s dilemma game found that players with a low inherent discount rate were more likely to cooperate, and players with a high inherent discount rate were more likely to defect.249 Perhaps even more impressive, a 2008 experiment that used a one-round public goods game came to the same conclusion.250 These results show that, even in the absence of future rounds, players with low inherent discount rates are generally more cooperative than those with high inherent discount rates.251

Therefore, theory, intuition, experience, and experimental data all strongly support the idea that the longer a person’s time horizon and the lower her inherent discount rate, the more cooperative she will be. From this it follows that an immortal investor, with its ultra-long time horizon and preternaturally low inherent discount rate, should be the most cooperative of all. This is an important advantage for immortal investors because it makes them attractive business partners to those seeking a cooperative relationship.252 This is an intuitive result, as an immortal investor will always be there for another

247 Oliver S. Curry et al., Patience Is a Virtue: Cooperative People Have Lower Discount Rates, 44 PERSONALITY & INDIVIDUAL DIFFERENCES 780, 782 (2008) (internal quotation marks omitted); Andrew C. Harris & Gregory J. Madden, Delay Discounting and Performance on the Prisoner’s Dilemma Game, 52 PSYCHOL. REC. 429, 432–33 (2002).

248 Curry et al., supra note 247, at 782; Harris & Madden, supra note 247, at 433–34.

249 Harris & Madden, supra note 247 at 437–38.

250 Curry et al., supra note 247, at 784.

251 See id. at 783–84 (“The present study demonstrated that . . . participants who cooperated by contributing more to the public-good exhibited lower discount rates.”).

252 Child et al., supra note 215, at 50 (“When forming an alliance, it is difficult to distinguish between a partner who will behave opportunistically and one who will not. The reputation of the prospect partner firm for reliable behavior can therefore be quite a significant factor in deciding whether to [work with it].”); Posner, supra note 138, at 13–21 (“One wants a general reputation as a ‘cooperator,’ a person with a low discount rate . . . .”); Dan M. Kahan, Signaling or Reciprocating? A Response to Eric Posner’s Law and Social Norms, 36 U. RICH. L. REV. 367, 370 (2002) (summarizing Posner’s argument as follows: “[I]ndividuals will find other individuals desirable as partners in profitable collective undertakings to the extent that they perceive them to have low rather than high discount rates. Individuals who value future payoffs as much or nearly as much as present ones are more likely than those who excessively discount the future to forego the immediate advantages of shirking or cheating. They are more likely to do this in the interest of reaping the long-term benefits associated with access to future trading opportunities.” (footnote omitted)).
round—"[t]omorrow, and tomorrow, and tomorrow." For the immortal investor, there is no final period.

C. Public Benefits of Immortal Investing

Low inherent discount rates and long time horizons are not only useful for improving investment returns, they are also socially desirable on a broader level because they imply a concern for the future. There is broad agreement that it is virtuous to behave like the ant that plans ahead for the winter, not the grasshopper that sings all summer and finds itself starving come winter.

Consider the example of logging. A logger with a high discount rate is likely to clear-cut the forest, thereby maximizing profit today with little regard for profit tomorrow. On the other hand, a logger with a low discount rate will cut trees selectively and plant new ones to replace those she cuts because she values future profits only slightly less than current profits. Thus, as a matter of public policy, we surely hope that our loggers have low discount rates.

For another example, take climate change, which is broadly viewed as a major long-term global problem. According to experts, at a discount rate of 1%—a rate that implies a deep concern for the future—it is economically justifiable to act now in order to prevent future harm from climate change. At a slightly higher discount rate

253 WILLIAM SHAKESPEARE, MACBETH act 5, sc. 5, l. 19 (Nicholas Brooke ed., 1990).
254 Reputation acts to constrain opportunistic behavior, but only when there is a "next round." POSNER, supra note 138, at 13-21. The problem of the "final period" is that there is no next round; thus, the players may no longer have an incentive to maintain a good reputation. Id.
255 See Haldane & Davies, supra note 209, at 14 ("[S]hort-termism is a public policy issue.").
256 See supra note 137 and accompanying text; see also David M. Schizer, Dean, Columbia Law Sch., Graduation Address to Columbia Law School Class of 2011: Great Societies Look to the Future (May 16, 2011), available at http://www.law.columbia.edu/graduation-2011/541527/dean-schizer-addresses-the-class-of-2011 ("Great societies look to the future. They are willing to make sacrifices today in order to make the world better tomorrow.").
257 See Jared Diamond, Easter's End, DISCOVER MAG., Aug. 1995, at 63, 68 (hypothesizing that civilization on Easter Island declined because the populace "was cutting the forest more rapidly than the forest was regenerating").
258 E.g., William Boyd, Climate Change, Fragmentation, and the Challenges of Global Environmental Law: Elements of a Post-Copenhagen Assemblage, 32 U. PA. J. INT'L L. 457, 459-60 (2010) ("Expected impacts of climate change include sea-level rise, melting ice sheets, receding glaciers, altered precipitation patterns, increased frequency and intensity of hurricanes, drought, new and amplified disease vectors, ocean acidification, species loss, and all manner of social and economic consequences . . . ." (footnotes omitted)).
of 3.5%, however, society is better off simply leaving future generations to deal with the consequences.\textsuperscript{260}

For an extreme example of how short time horizons and high discount rates can lead to environmental catastrophe, consider Professor Jared Diamond’s account of the history of Easter Island, an isolated speck of land in the Pacific Ocean that at one time was verdant forestland.\textsuperscript{261} Over the course of a few centuries, however, Easter Islanders cleared the forest more rapidly than it could regenerate.\textsuperscript{262} Eventually the food supply was destroyed, leading to devastating losses of human life and the collapse of society.\textsuperscript{263} By the time the first Europeans visited the island, they found it a barren wasteland with a tiny population.\textsuperscript{264} One may wonder, “What were they thinking when they cut down the last palm tree?”\textsuperscript{265} They were thinking: “We might as well enjoy that palm tree today because we may not get a chance to do so tomorrow,” or, as economist John Maynard Keynes would put it centuries later, “In the long run we are all dead.”\textsuperscript{266}

Finally, consider the recent financial crisis.\textsuperscript{267} Although economists and lawmakers alike disagree about the causes of the crisis,\textsuperscript{268} most seem to agree that short-term thinking as well as heavily discounting the future played a significant role.\textsuperscript{269} Financiers at Lehman Brothers, Bear Stearns, and elsewhere may have contributed by being

\textsuperscript{260} Id. at 351; see also James G. Titus, Rising Seas, Coastal Erosion, and the Takings Clause: How to Save Wetlands and Beaches Without Hurting Property Owners, 57 MD. L. REV. 1279, 1331 n.180 (1998) (“It is axiomatic among economists that if an environmental policy has benefits over many decades, a high discount rate tends to discourage policies to protect the environment.”); cf. Heinzerling & Ackerman, supra note 259, at 352 (suggesting that the “ethical” discount rate is zero because “present and future persons should be of equal worth”).

In a similar vein, finance scholars have offered data in support of discounting the far-distant future at a lower rate than the near future. See, e.g., Omar Azfar, Rationalizing Hyperbolic Discounting, 38 J. ECON. BEHAV. & ORG. 245, 251 (1999) (“Experimental results on discounting almost invariably show that agents discount the distant future at lower rates than they discount the near future.”); Martin L. Weitzman, Why the Far-Distant Future Should Be Discounted at Its Lowest Possible Rate, 36 J. ENVTL. ECON. & MGMT. 201, 202 (1998) (developing a generic argument for “why events in the far-distant future should be discounted at the lowest possible rate”).

\textsuperscript{261} See Diamond, supra note 257, at 67.

\textsuperscript{262} Id. at 64–68.

\textsuperscript{263} Id.

\textsuperscript{264} Id. at 64.

\textsuperscript{265} Id. at 65 (internal quotation marks omitted).

\textsuperscript{266} JOHN MAYNARD KEYNES, A TRACT ON MONETARY REFORM 80 (1923) (emphasis omitted).


\textsuperscript{268} Id. (“There are many competing views as to the causes of [the] crisis.”).

concerned only with the present year's bonus, without regard for the long-term health of their firms. People of modest means who bought expensive houses using adjustable-rate loans that reset after three or five years (and subsequently faced foreclosure) may have done so because of their shorter—and less than socially optimal—time horizons. If financiers and average Americans alike had invested with longer time horizons and lower discount rates, perhaps at least some of the tumult, joblessness, and wealth destruction of recent years could have been avoided.

Even Sesame Street endorses the concept that long time horizons and low discount rates are socially desirable. Consider Sesame Street's project For Me, For You, For Later, which is aimed at helping children build good financial habits. By "good financial habits," Sesame Street means habits that reflect a long time horizon and low discount rate.

But as we have seen, one's discount rate is determined in part by the chances of surviving to the relevant future time. In this way, the problem of mortality limits our ability to act in accord with a socially desirable low discount rate. Immortality solves this problem. An immortal investor will surely survive until a deferred payout can be realized, and thus, will display a lower discount rate than would ever be possible for a mortal investor.

As this Section has shown, immortal investing has socially beneficial results whereas mortal investing provides fewer beneficial results and, in some cases, harmful ones. Thanks to its lower discount rate,
an immortal investor should be more patient and mature than any human ever could be. It should be able to defer gratification and work cooperatively with others better than any natural person. An immortal investor never would have chopped down the last tree on Easter Island.\textsuperscript{276} Moreover, immortal investors will trade fairly with counterparties because they must consider future transactions.\textsuperscript{277} Finally, enhanced economic growth and improved living standards will follow the other private advantages of immortal investing.\textsuperscript{278} In sum, immortal investing is in the public interest.

\section*{D. Who Can Act as an Immortal Investor?}

Immortality provides fundamental advantages when it comes to investing for the future, and immortal investing furthers the public interest. But who can actually engage in immortal investing, given that no one lives forever?

One idea, championed in the eighteenth century by Edmund Burke, was that families could act as immortal investors via inheritances.\textsuperscript{279} Though each individual member of a family is mortal, the family as a whole may be able to invest with a time horizon that exceeds each individual’s life if it invests for the benefit of future generations. In Burke’s words: “The power of perpetuating our property in our families . . . perpetuat[es] . . . society itself. It makes our weakness subservient to our virtue, it grafts benevolence even upon avarice.”\textsuperscript{280} There is some truth to this, and common experience confirms that some people act in precisely this way. Perhaps, then, the family can act like an immortal investor, with all of its private and public virtues.\textsuperscript{281}

There are, however, several good reasons why natural persons—even families—cannot be counted on to act as immortal investors. First, only a small percentage of people leave significant assets to their

\textsuperscript{276} Diamond, supra note 257, at 67–68; supra note 257 and accompanying text.
\textsuperscript{277} See supra Part II.B.4.
\textsuperscript{278} See Haldane & Davies, supra note 209, at 1 (“An efficient capital market transfers savings today into investment tomorrow and growth the day after. In that way, it boosts welfare. Short-termism in capital markets could interrupt this transfer. If promised returns the day after tomorrow fail to induce saving today, there will be no investment tomorrow. If so, long-term growth and welfare would be the casualty.”).
\textsuperscript{279} EDMUND BURKE, REFLECTIONS ON THE REVOLUTION IN FRANCE 45 (J. G. A. Pocock ed., Hackett Publ’g Co. 1987) (1790).
\textsuperscript{280} Id.
\textsuperscript{281} See supra Part II.B–C.
Indeed, many people die intestate, thus demonstrating that they were not planning for their family's future after their deaths. Second, even when significant assets are passed along via inheritances, the U.S. government taxes them at extremely high rates, thus dampening the ardor for investing for future generations. Thus, natural persons, even in their roles as members of an intergenerational family, are not likely candidates for the role of immortal investors.

But corporations, which are perpetual in nature, are well suited—and obligated—to act as immortal investors. The next Part turns to these points.

III. The Perpetual Corporation as Immortal Investor

Thanks to the "perpetual existence" bestowed upon them by statute and charter, corporations can and should act as immortal investors. Furthermore, these same directives provide the foundation—missing until now—for the principle that the legal purpose of the corporation is to create wealth over the long term.

A. The Corporation Can Act as an Immortal Investor

The corporation has the ability to act as an immortal investor. A corporation is, as we have seen, a perpetual vehicle for investing in projects and ventures. Shareholders convey capital to the corporation, and the corporation uses that capital to invest. The corporation must evaluate investment opportunities and decide which to pursue. Unlike mortal investors, however, a corporation cannot get

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282 Congresional Budget Office, Economic and Budget Issue Brief: Federal Estate and Gift Taxes 1 (2009) ("Since 1977, less than 2 percent of adults who die each year have typically left estates large enough to be taxable.").


284 Over the past 100 years or so, federal estate taxes have ranged from a low of about twenty percent to a high of close to eighty percent, with an average of about fifty percent. Darren B. Jacobson et al., Internal Revenue Serv., The Estate Tax: Ninety Years and Counting, SOI Bull., Summer 2007, at 118, 122, available at http://www.irs.gov/pub/irs-soi/07sumbul.pdf.

285 See supra Part II.A.1-2 (contrasting time horizons and discount rates of mortal investors and rational immortal investors); see also Brealey et al., supra note 99, at 239.

286 Brealey et al., supra note 99, at 239; Blair, What Corporate Law Achieved, supra note 11, at 393 ("When a corporation is formed, initial investors not only commit a pool of capital to be used in the business, but they also yield control over the business assets and activities . . . .").

287 See Brealey et al., supra note 99, at 239 (opining that firms should evaluate each potential investment opportunity separately and compare them using NPV technique).
sick or die. In a sense, then, corporations are immortal,\textsuperscript{288} and they can make investment decisions from that unique perspective.

It bears noting that alternative forms of business organization generally lack the perpetual nature of the corporation.\textsuperscript{289} In a traditional partnership, if one of the partners dies or dissociates, the partnership is automatically dissolved.\textsuperscript{290} Partners can and do alter this rule by contract: for example, by providing that the business will continue after a partner's dissociation or death.\textsuperscript{291} But even when the duration of a partnership is set by agreement, each partner can still cause dissolution at will.\textsuperscript{292} Moreover, a partner's creditor, assignee, or heir can separately petition a court for dissolution.\textsuperscript{293} Thus, traditional partnerships lack the perpetual existence possessed by corporations.\textsuperscript{294}

The same can be said of the more cutting-edge versions of business organization, such as limited partnerships or limited liability companies ("LLCs"). These entities are not subject to dissolution like an ordinary partnership, but they "usually have a definite time limit by which managers must show their strategy has paid off or liquidate."\textsuperscript{295} For instance, private equity funds are generally organized as limited partnerships with a fixed term (commonly ten years), at which point they liquidate and distribute returns.\textsuperscript{296} Venture capital funds have a similar structure.\textsuperscript{297} There are good reasons for limiting the life of these entities. Most notably, the limited term "gives investors some assurance of distributions rather than giving managers free rein to invest earnings in new projects."\textsuperscript{298} But the limited life of such vehicles means that they lack the institutional capacity to invest from the perspective of immortality.

\textsuperscript{288} Id. at 3 n.2 ("Corporations can be immortal . . . ").

\textsuperscript{289} See LARRY E. RIBSTEIN, THE RISE OF THE UNCORPORATION 7 (2010) (dubbing alternative forms, "uncorporations"). The key difference between corporations and uncorporations is that the structure of the former is largely fixed by law, while the structure of the latter is flexible and determined by contract among the relevant constituents. \textit{Id.} at 6–7.

\textsuperscript{290} Id. at 53, 77 ("[T]he traditional partnership rule lets a single partner cause dissolution at will."); see Cox \& Hazen, \textit{supra} note 9, § 1.06.

\textsuperscript{291} Ribstein, \textit{supra} note 289, at 78.

\textsuperscript{292} Id. at 77–78.

\textsuperscript{293} Id.

\textsuperscript{294} Id. at 55 ("[P]artnership law defines a Hobbesian relationship that is not only nasty and brutish but potentially short."); see Cox \& Hazen, \textit{supra} note 9, § 1.06 ("Partnerships traditionally have had a precarious existence.").

\textsuperscript{295} Ribstein, \textit{supra} note 289, at 212.

\textsuperscript{296} Id. at 226.

\textsuperscript{297} Id.

\textsuperscript{298} Id. at 224.
It is certainly true that most corporations, despite their perpetual legal existence bestowed by statute and charter, do not exist forever. In fact, nearly every corporation ceases to exist at some point, for one of any number of reasons. A corporation may merge or consolidate with another. It may be liquidated in a bankruptcy proceeding or dissolved, voluntarily or involuntarily by judicial decree. Many corporations surely succumb to these fates, and the average corporation may ultimately have a life expectancy much shorter than the average natural person.

But the important point is that the perpetual nature of the corporation means that it has the capacity to persist forever, which no natural person can ever do. Colgate-Palmolive Co., for example, was founded in 1806 and incorporated in 1857, and two centuries later, it continues to sell toothpaste, a feat that no natural person could duplicate. And that is nothing compared to the Hudson’s Bay Co., which was incorporated in 1670 and is still going strong.

Colgate-Palmolive Co. and the Hudson’s Bay Co. are exceptional, as the vast bulk of corporations do not persist for centuries. But this does not discredit the principle that a corporation can invest as an immortal because even if one corporation ceases to exist, its underlying assets and investments can pass to another corporation. And if the second corporation winds down, those investments can again pass to another corporation (and then another, down the line). To maximize the value of any given investment at any point in time, each corporation would manage it with an eye to perpetuity. That way, the investment or asset can hold its value, even when the corporation that owns it ceases to exist.

299 Bainbridge, supra note 10, § 1.1(D).
300 Id.
301 See Susie Poppick, Will Your Blue Chips Stay Blue?, Money, June 2011, at 40, 41 (reporting that, of the thirty companies in the Dow Jones Industrial Average as of 1970, only six are still on the list; and of the 500 companies that comprised the S&P 500 ten years ago, about forty percent are no longer part of the index).
304 See, e.g., infra Part III.E.2 (describing Kraft’s dairy plant purchased by startup that produces “Chobani” brand yogurt).
305 See supra Part II.B (describing private advantages of immortal investing).
306 See supra Part II.B.4 (describing positive effect of immortal investing on cooperative investing).
In sum, the corporation is well suited to act as an immortal investor. This is so because of its fundamentally perpetual nature, and remains true even though most corporations do not in fact live forever.

B. The Corporation Should Act as an Immortal Investor Despite Potential Agency Problems

Corporations should, as a normative matter, seize the opportunity to invest as an immortal person would. By doing so, corporations can achieve all of the private benefits discussed above. Endowed with permanent capital from shareholders, corporations can invest in illiquid and volatile projects that will, in the long term, yield strong returns. They can observe positive NPV opportunities where nonperpetual entities would not, and cooperate well with others. Beyond these private advantages, the corporation will also serve the public interest by acting as an immortal investor. Corporations that expect to persist for perpetuity will be stewards of our land and other natural resources, and will invest in research and development that enhances our standard of living. In short, the perpetual existence of the corporation allows it to invest from the perspective of immortality, which provides a number of private and public advantages.

Before we celebrate this aspect of the corporate nature, it is important to address one significant normative concern—one that relates to agency costs and the separation of ownership and control. Corporate law provides that the business and affairs of the corporation are to be managed by or under the direction of a board of directors. As a result, the shareholders, who have invested capital in the corporation, have no control over its day-to-day operations or long-term policies. Rather, the board, whose collective equity share in the company is often quite small, has the ultimate authority over the corporation. This separation of ownership and control is absolutely

307 See supra Part II.B (describing private advantages of immortal investing).
308 See supra notes 79–84 and accompanying text.
309 See supra Part II.B.1–2.
310 See supra Part II.B.3–4.
311 See supra Part II.C.
312 See supra Part II.C (discussing the positive effect of low discount rate and long time horizon on environmental issues and general public welfare).
314 Bainbridge, supra note 31, at 4–6.
315 Id.; see also Adolf A. Berle, Jr. & Gardiner C. Means, The Modern Corporation and Private Property 6 (1933) ("The separation of ownership from control produces a condition where the interests of owner and of ultimate manager may, and often do, diverge. . . . ").
necessary, however, in the context of large public corporations. Being financed by the aggregation of small investments, it would be impossible for tens or hundreds of thousands of shareholders to collectively manage a corporation. Control by a small group of board members is the only realistic alternative. But it comes at a cost: the cost of agency.

There are at least three known means for addressing this problem. First, the law imposes fiduciary duties on corporate managers to work for the corporation in a diligent and loyal manner. Second, corporations can pay executives in company stock or options to align their interests with that of the corporation. Third, the “market for corporate control” encourages managers, who face the threat of corporate takeover and regime change, to work hard for the corporation.

Admittedly, a corporation’s role as an immortal investor could reduce the efficacy of the first and third methods of addressing the agency problem inherent in the separation of ownership from control. As for the first method—fiduciary duty to shareholders—observe that under current standards, fiduciary duties have limited application to managers unaffected by any conflict of interest. That is, liability for unconflicted managers is limited by the business judgment rule, which directs courts to assume that business decisions were

316 Bainbridge, supra note 31, at 40–41.
317 Id. at 6.
318 E.g., Cox & Hazen, supra note 9, ch. 10.
320 See Jay B. Kesten, Managerial Entrenchment and Shareholder Wealth Revisited: Theory and Evidence from a Recessionary Financial Market, 2010 BYU L. REV. 1609, 1612–13 (“A any observable divergence from the optimal use of corporate resources is reflected in a public firm’s share price. Market participants have strong incentives to identify such underperforming firms, acquire control, remedy the firm’s managerial or operational deficiencies, and realize the resultant capital gain. Managers—operating in the shadow of a possible takeover—are thereby sensitized to market (i.e., shareholder) sentiment and incentivized to reduce agency costs and maximize shareholder value.” (footnotes omitted)); see also Hansmann, supra note 51, at 58; Manne, supra note 51, at 112–13.
321 The second method of ameliorating the agency problem stemming from the separation of ownership from control—compensating managers with company stock or stock options (and requiring them to hold it for some time)—appears to be unaffected by a corporation’s role as an immortal investor.
322 The legal treatment of a conflicted manager, on the other hand, would not appear to change if corporations were expected to act as immortal investors. See, e.g., Weinerberger v. UOP, Inc., 457 A.2d 701, 710 (Del. 1983) (holding that the duty of loyalty “is unflinching in its demand that where one stands on both sides of a transaction, he has the burden of establishing its entire fairness, sufficient to pass the test of careful scrutiny by the courts”).

the product of a process that was either deliberately considered in good faith or was otherwise rational." 323 If courts were to accept this Article's core argument, the business judgment rule would provide even more protection for managers than it currently does. Given a long enough time horizon, managers will almost always be able to assert that their business plan is in the interest of the corporation. Even after many years of losses, a manager could justify an investment based on her belief that it will yield profits in the far-distant future. Thus, if corporations were expected to act as immortal investors, it may eviscerate what little disciplining power is currently exercised by the fiduciary duty of care.

The second method of addressing agency problems—the market for corporate control—which is seen by many scholars as the most important, is already not given free rein under current Delaware law. Under the Unocal doctrine, 324 and the subsequent body of caselaw that developed around it, 325 a management team that claims to be acting with a long-term plan for the corporation and keeps open the option of the corporation remaining independent can defend itself fairly effectively from a hostile takeover attempt. 326 Similar to the context of the business judgment rule, if courts were to embrace the central idea of this Article, it might completely insulate corporate managers from the discipline of the market for corporate control. Managers of public companies would be able to ignore stock market valuation as misapprehending the true value of the corporation for years on end. 327 The market for corporate control could lose a great deal of disciplining power under such a legal regime.

Admittedly, these are real costs of the position advocated in this Article, but they must be poised against the attendant public and private benefits. 328 This Article contends that the balance weighs in favor of corporate immortal investing.

323 E.g., In re Caremark Int'l Inc. Derivative Litig., 698 A.2d 959, 967 (Del. Ch. 1996) (emphasis omitted).
326 Paramount Commc'ns, 571 A.2d at 1150; Revlon, 506 A.2d at 181; Unocal, 493 A.2d at 954–55; see also supra notes 108–12 and accompanying text (reviewing Unocal body of caselaw and its effect on hostile takeover bids).
327 See supra notes 108–12 and accompanying text (discussing corporate boards' substantial leeway to prevent hostile takeover bids when they conclude that the long-term value of the corporation exceeds offer price).
328 See supra Part II.B–C.
But even assuming the converse—that the reduced accountability of management is too high a price to pay for the benefits of immortal investing by corporations—one should still support the idea that corporations are better off acting as immortal investors. This is because shareholders have other investment vehicles, apart from corporations, in which they can invest. Among the options are limited partnerships, general partnerships, LLCs, and other forms of business organization. These alternative forms offer flexible structures that can be adjusted by contract. If investors would prefer to invest in an entity with a finite existence, one in which their capital is not locked up in perpetuity, they are free to invest in, or even create, such an entity.

In fact, many have done exactly that. Private equity, hedge funds, and venture capital funds are all usually organized as limited partnerships whose basic structure varies in fundamental ways from that of a corporation. Take private equity funds, for example. Far from perpetual existence, private equity funds are established for a fixed term, usually ten years, at which point they liquidate and distribute returns. These features are designed specifically to address the agency costs that are inherent in the corporate form:

The combination of finite life and mechanisms designed to mitigate the agency costs of finite life distinguish the private equity structure from that of a standard corporation. Permanent financing enables corporate managers to invest for the long term and to react to changing circumstances by reallocating funds between projects. By contrast, uncorporate devices force managers periodically to face the judgment of the capital markets.

Thus, investors have the choice of investing in perpetual corporations or alternative business entities with limited lives. Each has relative strengths and weaknesses. Business entities with limited lifespans cannot invest in an immortal fashion, but may have reduced agency costs. Perpetual corporations offer the benefits of immortal invest-

329 Ribstein, supra note 289, at 1.
330 Id. at 7–8.
331 Id. at 222–31 ("As with private equity and [venture capital] funds, hedge funds are commonly organized as limited partnerships and include provisions limiting managers' control over cash by providing for distributions and terminations.").
332 Id. at 223, 226.
333 Id. at 223.
334 See supra Part II.B; see also Ribstein, supra note 289, at 223–24 ("Where long-term management has fewer benefits, as with the sort of mature firms that have attracted private equity investment, investors may be better off holding the managers' feet to the fire.").
ing, but with higher agency costs. Some investors will prefer one, other investors will prefer the other, and the free market leaves room for both.

In conclusion, the agency costs of corporations may be exacerbated if they act as immortal investors. This Article acknowledges this problem but contends that the benefits of immortal investing are worthwhile. Moreover, even if the problem of unconstrained management is not outweighed by the advantages of immortal investing for some investors, alternative forms are always available for those who prefer them. Hence, the bottom line is that perpetual corporations should, as a normative matter, act as immortal investors.

C. The Corporation Must Act as an Immortal Investor

The corporation not only can and should act as an immortal investor, but it is legally obliged to do so. Under modern statutes, a corporation is endowed with perpetual existence unless it elects in its charter to exist for a certain term. In practice, corporate charters generally remain silent on this point, the effect of which is an election of perpetual existence. And, as explained above, the only rational way for a perpetual entity to invest is in an immortal manner. Finally, because corporations are obliged to seek economic gain, their perpetual nature creates an implicit mandate to invest for the distant future. In other words, the corporation is legally required to invest as an immortal would.

D. Hindrances and Responses

Because they have perpetual existence, corporations ought to make investment decisions that are appropriate for an immortal entity. That is, they should invest with a long time horizon and a low
discount rate. In practice, however, corporations often seem to act in precisely the opposite manner. This is not surprising, though, as there are at least three important circumstances that hinder the ability of corporations to act as an immortal investor. This Section enumerates these hindrances and responds with suggestions as to how they can be overcome or ameliorated.

1. Managers Are Mortal

Corporations are managed by or under the direction of a board of directors and those directors must be natural persons. Thus, although a corporation can, in theory, make investments with an infinite time horizon and an ultra-low discount rate, the only way for it do so in practice is for a group of natural persons—i.e., the board or their delegates (collectively, "management")—to make it so, and in reality, a corporation’s management may be unable or unwilling to adopt an immortal perspective. They may focus on annual or even quarterly performance (especially if their bonuses depend on such performance) rather than cause the corporation to invest in the most profitable long-term ventures. Paying managers in stock or options cannot solve this problem fully, in part due to the difficulty of fixing an appropriate holding period.

A conscious focus on immortality, however, could help the mortal managers appreciate their proper role in guiding the corporation. Managers who affirmatively recognize the immortal nature of their corporation may enhance their ability to conceive of what is in its long-term interest. Hence, this Article suggests that corporations em-

341 See supra Part II.A.1-2.
344 See id. § 141(b) ("The board of directors of a corporation shall consist of 1 or more members, each of whom shall be a natural person.").
345 See, e.g., Bebchuk & Fried, supra note 94, at 121–24 ("Rewarding managers for good developments that are beyond their control imposes risk-bearing costs without providing any useful incentives [within their time horizon]."); Richard C. Ausness, Tort Liability for Asbestos Removal Costs, 73 Or. L. Rev. 505, 542 (1994) ("[C]orporate managers discount long-term risks excessively and focus on short-term profits because they expect to be gone from the company before decisions affecting future tort liability have any effect.").
ploy methods of "debiasing," akin to those developed in the "implicit bias" literature, to achieve this conscious awareness.347

Implicit biases are unconscious attitudes and beliefs regarding race and gender that are observed in experimental settings, such as the Implicit Association Test ("IAT").348 According to the literature, most people have some implicit biases, even if they are unaware of them.349 Fortunately, there are methods for ameliorating implicit biases.350 One might simply recognize one’s implicit biases by, for example, taking the IAT. Another recognized debiasing technique is to focus on exemplars that run counter to one’s implicit bias. For example, it has been shown that a person with an implicit anti-African American bias can eliminate biases significantly by viewing photographs of Martin Luther King, Jr.351

Traditional debiasing techniques can be modified to help mortals manage the corporation from the perspective of perpetuity. If managers engage in something as simple as consciously recognizing the immortal nature of the corporation, it could help de-bias them from their own mortality. To that end, the Norwegian Finance Minister, in a recent discussion of the time horizon of Norway’s SWF, explicitly acknowledged that the SWF is "investing for infinity."352 Corporate managers should acknowledge that, as a result of their mortality, they have a relatively high inherent discount rate relative to the corporation. Perhaps they should take a simple test that reveals their discount rate.353 In fact, when actually tested in an experimental setting, managers’ discount rates were high, even assuming mortality.354 This mere knowledge should help debias them.

349 Kang & Lane, supra note 347, at 473 ("Implicit biases—by which we mean implicit attitudes and stereotypes—are both pervasive (most individuals show evidence of some biases), and large in magnitude, statistically speaking.").
350 Id. at 499–503.
351 Id. at 501.
353 Simple tests of the type used in Curry et al., supra note 247, at 781, and Harris & Madden, supra note 247, at 432–33, would suffice.
354 Haldane & Davies, supra note 209, at 4–5 (reporting that a survey of CEOs at Fortune 1000 firms showed that their "discount rates applied to future cash-flows were around 12%, much higher than either equity holders' average rate of return or the return on debt," and that another survey of executives of the top corporations on the London stock exchange found that the majority displayed discount rates of over 20%).
In addition, managers should consciously focus on the perpetual nature of their corporation. Physical illustrations of the corporation's long history (if any)—a yellowed photograph of the corporation's first factory or a portrait of the founder wearing obviously antiquated garb—could help. Knowing that the corporation has existed a long time in the past makes it easier to imagine it continuing to exist for a long time into the future. Corporate seals, trademarks, songs, and other branding endeavors can also assist managers in conceiving of the corporation as a perpetual entity. Myths and stories about the corporation can also be an effective means of accomplishing this goal. Stories, which can be used in a number of ways in the workplace, help create an “organizational memory” and a cohesive, collective understanding of the corporation and its goals. The mythological origin of Hewlett Packard, with Bill Hewlett and Dave Packard toiling in their Palo Alto garage, is an example of this phenomenon.

For another example, consider the actions of former corporate executive Peter Guber who, after being named CEO of Columbia Pictures, described that the studio looked and felt as if it were going under. Guber explained that he had to “find some . . . creative way to persuade both Sony and the disparate, disgruntled but talented band of executives [he had] inherited to unite and play for the future.” Guber stumbled upon the old movie, Lawrence of Arabia, one of Columbia Pictures’s most cherished films. A particular scene in that movie depicted Lawrence trying to figure out how to unite a disparate group to fight and work together for their future when none

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355 Reading this Article would go a long way in this regard.


357 See, e.g., Daniel A. Farber & Suzanna Sherry, Telling Stories out of School: An Essay on Legal Narratives, 45 Stan. L. Rev. 807, 821–22 (1993) (noting the importance of “the stories tech-reps tell each other—around the coffee pot, in the lunchroom, or while working together on a particularly difficult problem” to development of expertise (internal quotation marks omitted)).


359 Guber, supra note 356, at 10.

360 Id. at 11.

361 Id.
of them believed they should or could.\textsuperscript{362} The character devised a plan to help the divided tribes conquer a city occupied by the Turks, and the plan worked.\textsuperscript{363}

Guber decided to use the story of \textit{Lawrence of Arabia} to motivate his employees.\textsuperscript{364} "This is who we are," [he] told them. "We're a disparate group of businesses but we're one tribe. We need to believe we can make the impossible possible."\textsuperscript{365} He gave the executives framed copies of the seminal picture of Lawrence from the film.\textsuperscript{366} The story became Columbia Pictures's new mantra and spread throughout the studio to all the employees, helping to reverse the organization's mindset.\textsuperscript{367} The company started putting up more signs and insignia depicting their unity with Sony; it replaced old trademarks with new Sony ones.\textsuperscript{368} Soon enough, the studio had turned around and was once again releasing hit films in the theaters.\textsuperscript{369}

Similarly, the management of many university corporations, such as Yale and Harvard, are particularly skilled at using the power of narrative to forge their entities' identities and objectives. Universities such as these are reified as something that exists separate and apart from the faculty, students, and staff that happen to be on campus at any given time.\textsuperscript{370} The icons, songs, seals, and traditions of university corporations play a vital role in reification, which in turn aids managers in appreciating that their objective is long-term success for the perpetual institution.\textsuperscript{371}

Likewise, Japanese companies are famous for having organizational personalities that take precedence over their individual employees.\textsuperscript{372} In Japan, the corporation has a "cosmic significance" and is viewed as a part of the process of human development, happiness, and prosperity for humanity.\textsuperscript{373} Most Japanese corporations are affiliated

\textsuperscript{362} \textit{Id.}
\textsuperscript{363} \textit{Id.} at 11–12.
\textsuperscript{364} \textit{Id.}
\textsuperscript{365} \textit{Id.} at 12.
\textsuperscript{366} \textit{Id.}
\textsuperscript{367} \textit{Id.}
\textsuperscript{368} \textit{Id.} at 13.
\textsuperscript{369} \textit{Id.}
\textsuperscript{370} See \textsc{William A. Klein} et al., \textsc{Business Organization and Finance: Legal and Economic Principles} 117–22 (11th ed. 2010) (discussing "reification" of the corporation).
\textsuperscript{371} \textit{Id.}
\textsuperscript{372} \textit{E.g.,} Chiaki Nakano, \textit{A Survey Study on Japanese Managers' Views of Business Ethics,} 16 \textsc{J. Bus. Ethics} 1737, 1741 (1997).
\textsuperscript{373} Stuart D.B. Pinken, \textit{Values and Value Related Strategies in Japanese Corporate Culture,} 6 \textsc{J. Bus. Ethics} 137, 139 (1987) (internal quotation marks omitted).
with a Shinto shrine or a kami (guardian) to whom the employees show respect.\textsuperscript{374} Moreover, a written corporate philosophy often plays a major role in disseminating values throughout the company.\textsuperscript{375} For example, the corporate philosophy of the Japanese corporation Toyota encourages respect for the law, other people and cultures, the environment, customers, and employees, as well as an underlying organizational commitment to innovation and collaboration.\textsuperscript{376} Other Japanese corporations are illustrative, as well: Toshiba's corporate philosophy is "commitment to people and to the future,"\textsuperscript{377} and Fuji Film's is "[t]o be able to create lasting images of visual experiences for others to see."\textsuperscript{378} The corporation's religious affiliations reinforce their values, which are further supported by religious organizations.\textsuperscript{379} Collectively, these techniques help Japanese managers appreciate that their task is to achieve their corporations' perpetual existence.

Universities' and Japanese corporations' methods of encouraging the perspective of immortality are not particular to them; rather, they are employed by ordinary American corporations as well.\textsuperscript{380} Some corporations nickname their employees to help them identify with the larger company. IBM, for example, calls its employees "IBMers,"\textsuperscript{381} and Google calls its workforce "Googlers."\textsuperscript{382}Google provides an example of a contemporary corporation that appears to do a good job of recognizing the importance of long-term success and focusing managers' attention on long-run profitability. In connection with its initial public offering, the founders of Google published an owners' manual, which lays out Google's corporate philosophy clearly and gained wide recognition:

\textsuperscript{374} Id.
\textsuperscript{375} Id. at 138.
\textsuperscript{377} Wang, supra note 376, at 2 (internal quotation marks omitted).
\textsuperscript{378} Pinken, supra note 373, at 138 (internal quotation marks omitted).
\textsuperscript{379} Id. at 139.
\textsuperscript{380} See, e.g., RAYMOND VERNON, SOVEREIGNTY AT BAY: THE MULTINATIONAL SPREAD OF U.S. ENTERPRISES 118 (1971) ("[L]arge U.S. enterprises generally try to create some sense of identity and style.").
\textsuperscript{382} Google Inc., Registration Statement (Form S-1) amend. no. 9, at 31 (Aug. 18, 2004) (emphasis omitted).
As a private company, we have concentrated on the long term, and this has served us well. As a public company, we will do the same.

If opportunities arise that might cause us to sacrifice short term results but are in the best long term interest of our shareholders, we will take those opportunities. We will have the fortitude to do this.

... [W]e are trying to look forward as far as we can.

... We will make business decisions with the long term welfare of our company and shareholders in mind.

... We will not shy away from high-risk, high-reward projects because of short term earnings pressure. For example, we would fund projects that have a 10% chance of earning a billion dollars over the long term.

... [W]e seek to maximize value in the long term.

Google's managers appear to have upheld the company's long-term philosophy, as demonstrated by the billions of dollars it spends annually on researching and developing new and improved products and services.

In conclusion, although managers are mortal, it is possible for them—through known techniques—to manage their corporations as immortal entities.

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383 Id. at 27–29 (emphases omitted). In a similar vein, IBM recently published a letter in connection with its hundredth anniversary that emphasized its long-term focus. IBM Advertisement, supra note 381 ("A century of corporate life has taught us this truth: To make an enduring impact over the long term, you have to manage for the long term."); see also Patagonia Advertisement, Don't Buy This Jacket, N.Y. TIMES, Nov. 25, 2011, at A21 ("Because Patagonia wants to be in business for a good long time—and leave a world inhabitable for our kids—we want to do the opposite of every other business [on Black Friday—the day after Thanksgiving]. We ask you to buy less and to reflect before you spend a dime on this jacket or anything else.").

384 See Amir Efrati, High Costs Slow Google's Profit, WALL ST. J., Apr. 15, 2011, at B1 ("Research and development costs [at Google] soared to $1.23 billion for the quarter, up from $818 million a year earlier. Chief Financial Officer Patrick Pichette defended the higher costs, saying Google was 'building multibillion-dollar businesses' and this is the time to invest."); James B. Stewart, Why Google Still Looks Like a Long-Term Winner, WALL ST. J., Apr. 23–24, 2011, at B7 ("Google is determined to blow through sclerotic bureaucracy and pour money into big, potentially high-yielding investments, no matter what the immediate consequences for quarterly earnings.").
2. Shareholders Are Mortal—Cost of Capital

A second possible objection to corporate immortal investing is that the corporation needs to attract shareholders to exist, and those shareholders will demand a certain return from their investment as the price for taking the risk. The "cost" of an investor's capital is equal to the return a corporation "must promise in order to get capital from the market, either debt or equity." A corporation "does not set its own cost of capital; it must go to the market to discover it." For example, a corporation's decision to adopt the type of low discount rate investment strategy that this Article proposes may nevertheless be thwarted by shareholders who have a different (and higher) discount rate. Ultimately the corporation's investment strategy is determined by the shareholders' cost of capital, not the corporation's internal discount rate. And as discussed previously, it is a shareholder's inherent discount rate that determines her cost of capital for any particular investment.

The cost of capital for a corporation aggregates all of the inherent discount rates of the universe of potential investors and, thus, the total cost of capital for investment in any corporation becomes a weighted average. Therefore (the argument goes), because a corporation's shareholders are mortal, the corporation will be forced to invest as if it were mortal too. All of the aforementioned benefits of immortal investing will not be achieved because investors, who are mortal, will set the corporation's cost of capital.

This is a potentially powerful critique, but its effect can be blunted by the fact that perpetual corporations themselves can be shareholders in other corporations. Historically, corporations were

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385 See supra notes 79, 308 and accompanying text (discussing necessity of shareholder investment); see also SHANNON P. PRATT & ROGER J. GRABOWSKI, COST OF CAPITAL: APPLICATIONS AND EXAMPLES 3 (3d ed. 2008) (explaining investment choices shareholders make based on opportunity cost).

386 PRATT & GRABOWSKI, supra note 385, at 3 (internal quotation marks omitted).

387 Id. (internal quotation marks omitted).

388 Id. at 5 ("The cost of capital is a function of the investment, not the investor. The cost of capital comes from the marketplace. The marketplace is the universe of investors 'pricing' the risk of a particular asset." (footnote and internal quotation marks omitted)).

389 See supra Part II.A.2 (discussing mortals' inherently high discount rates relative to the immortal investor).

390 PRATT & GRABOWSKI, supra note 385, at 6, 10 ("Cost of capital equals the discount rate."). For present purposes, it should be noted that this basic formula ignores differences between debt and equity.

391 See Strine, supra note 91, at 1–2 ("[W]hy should we expect corporations to chart a sound long-term course of economic growth, if the [shareholders] who determine the fate of the managers do not themselves act or think with the long term in mind?").
not permitted to hold stock in other corporations.\footnote{Lawrence M. Friedman, A History of American Law 396 (3d ed. 2005).} Beginning in the nineteenth century, corporate lobbyists asked for this privilege, and some states began granting special charters to a limited number of corporations to own stock in related corporations.\footnote{Id.} The floodgates opened in the 1890s, when New Jersey gave all corporations the ability to own stock in other corporations.\footnote{See Joel Seligman, A Brief History of Delaware's General Corporation Law of 1899, 1 Del. J. Corp. L. 249, 265 (1976) (discussing the history of New Jersey corporate law).} Through its corporate code, New Jersey became the first state to allow corporations to buy and sell the stock and assets of its competitors.\footnote{Id.} Soon, other states followed New Jersey's lead; now corporations are generally permitted to hold each other's stock.\footnote{Id. at 269 (reporting that, as of 1912, all states save two allowed corporations to hold stock in one another).} Corporations have enthusiastically seized this opportunity, and investing in shares of other corporations has become a major component of modern corporate management. For instance, consider eBay Inc., which not only runs an online auction house, but also holds stock in other corporations, such as a twenty-eight percent stake in craigslist, Inc.\footnote{eBay Domestic Holdings, Inc. v. Newmark, 16 A.3d 1, 11 (Del. Ch. 2010).} According to its 2011 annual report, eBay has invested more than $700 million in various equity stakes,\footnote{eBay Inc., Annual Report (Form 10-K), at 62 (Jan. 28, 2011).} and the Court of Chancery of Delaware has observed that eBay is "in the business of investing in securities."\footnote{In re eBay, Inc. S'holders Litig., No. C.A. 19988-NC, 2004 WL 253521, at *4 (Del. Ch. Feb. 11, 2004).} This phenomenon is not limited to high-flying technology companies, such as eBay. Even General Motors—an old-fashioned company if there ever was one—has begun "investing tens of millions in start-ups."\footnote{See Mike Ramsey & Sharon Terlep, GM Ventures into Start-Ups, Wall St. J., June 14, 2011, at B4 (noting that GM's new investment strategy constituted "a break with its past").}

In addition to corporations that merely invest on the side, like eBay or GM, there are also "institutional investors," including mutual funds and pension funds, which are generally organized as corporations. These institutional investors presently hold more than two-thirds of all publicly traded equities.\footnote{Strine, supra note 91, at 10–11 & n.28.} The upshot is that many corporations are owned in significant part by other corporations. Take Coca-Cola Co. for instance. SunTrust Bank, Inc. owns about 1.4% of Coca-Cola shares, and Berkshire
Hathaway, Inc. owns about 8%. In turn, other corporations own SunTrust Bank, Inc. and Berkshire Hathaway, Inc., and so on and so on. "It's turtles all the way down."  

In truth, it is not turtles all the way down. But to the extent that corporations make up some significant portion of the investors in other corporations, the marketplace's discount rate will be lower than it would be if all shareholders were natural persons. Therefore even if one finds natural persons at some point in the chain of stock ownership, or even if there are natural persons with significant direct holdings of a corporation, the corporation's discount rate should still be lower than that of a natural person. This is because the cost of capital for a corporation is not determined by any single shareholder—mortal or immortal—but by the weighted average of all of the actual and potential shareholders.

Moreover, this effect provides a novel rationale for multiple layers of corporate holding companies. All else being equal, chains of parent and subsidiary corporations would appear to be an inefficient


403 The phrase "turtles all the way down" traces its origins to a nineteenth-century William James essay. See Rodger C. Cramton, Demystifying Legal Scholarship, 75 Geo. L. J. 1, 2 n.4 (1986) (citing William James, The Will to Believe (1897), reprinted in The Will to Believe and Other Essays in Popular Philosophy 1 (Frederick H. Burkhardt et al. eds., 1979)). For its meaning, see Steven W. Hawking, A Brief History of Time (1988), which describes the phrase using an anecdote:

A well-known scientist (some say it was Bertrand Russell) once gave a public lecture on astronomy. He described how the earth orbits around the sun and how the sun, in turn, orbits around the center of a vast collection of stars called our galaxy. At the end of the lecture, a little old lady at the back of the room got up and said: "What you have told us is rubbish. The world is really a flat plate supported on the back of a giant tortoise." The scientist gave a superior smile before replying, "What is the tortoise standing on?" "You're very clever, young man, very clever," said the old lady. "But it's turtles all the way down!"

Id. at 1.

404 See supra Part II.A.2 (concluding that immortal investors, who are more likely than natural persons to live to the end of the payoff period, will have low discount rates because they are willing to wait).

405 Supra text accompanying notes 390–91.

406 Existing literature already appreciates that the use of holding companies can prevent creditors of one corporation from recovering from other affiliated corporations, as well as the converse—i.e., that a holding company structure can prevent creditors of a parent corporation from recovering from its subsidiaries. See, e.g., Walkovszky v. Carlton, 223 N.E.2d 6, 9–10 (N.Y. 1966) (insulating related taxi cab corporations from the liability of one of them); see also Hansmann & Kraakman, supra note 20, at 394–95 (describing "affirmative asset partitioning").
business structure compared to a unified firm due to increased transaction costs. Yet, we observe in the real world many wholly owned subsidiaries. Although some of these corporate structures may reflect regulatory requirements, many corporations act through subsidiaries rather than their parent corporations in the absence of any apparent regulatory explanation. For example, Berkshire Hathaway is a holding company that owns subsidiaries involved in many diverse business activities. The most prominent of these activities is insurance, as Berkshire Hathaway holds about seventy domestic- and foreign-based insurance entities, including GEICO and General Re. Other notable Berkshire Hathaway subsidiaries include Fruit of the Loom, Benjamin Moore & Co., and International Dairy Queen Inc. And if they are anything like their parent company, many of these subsidiaries likely have subsidiaries as well.

One possible explanation for this observed behavior is that, from the perspective of immortal investing, the more layers of corporations between the natural persons and operating businesses, the better. Layers of corporate ownership dilute the high inherent discount rate of natural persons to something approaching the low inherent discount rate of an immortal investor. Consider the extreme case of a corporation with a single natural-person shareholder. That corporation is likely to feel tremendous pressure to adopt the relatively high discount rate and relatively short time horizon of the mortal shareholder, rather than invest as an immortal would. If the corporation refused to do so, instead acting as an immortal investor, the single shareholder could and likely would replace the management with others who agree to adhere to the shareholder’s desires. Alternatively, consider if, instead of a single natural person as a shareholder,
the corporation was a subsidiary, which was owned by another subsidiary, which was owned by a holding company, which was owned by a mutual fund, which was ultimately owned by natural persons. In that case, the corporate chain of ownership would attenuate the influence of the ultimate natural persons due to the frictions in the system. There are real transaction costs associated with transmitting the natural persons' desires all the way down to the corporation, and these transaction costs should have the effect of freeing the corporation to act as an immortal investor and not simply as a puppet of natural persons. In this way, the increased transaction costs of subsidiary corporations (and of institutional investing) can actually benefit the corporation.

Finally, the objection that mortal investors will refuse to invest in corporations engaged in immortal investing (i.e., investments whose benefits will be realized only after the mortal investors have passed away) is dubious even if all the potential shareholders are natural persons. This is because, as long as parties have access to well-functioning capital markets, natural persons who hold shares directly can sell their shares and cash out during their lifetime. So long as the corporation has a bright future, existing shareholders can sell their shares to new shareholders in an endless daisy chain of ownership.

3. Contractual Liabilities, Including Debt Service

In contrast to shareholders, whose capital is locked into a corporation and need not be repaid, a corporation's contractual liabilities, such as salaries, rent, and debt service, must be paid on a regular and recurring basis. Admittedly, the continuous need to meet these contractual obligations may constrain the corporation's ability to act like an immortal investor and invest with a very long time horizon.

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413 See Stephen M. Bainbridge, Corporation Law and Economics § 1.2(D) (2002) (explaining that separation of ownership from control is necessary to prevent "chaos that would result from shareholder involvement in day-to-day decisionmaking").

414 This does, of course, raise the problem of agency costs. But see supra Part III.B (arguing that the benefits of immortal investing outweigh agency costs).

415 See, e.g., Brealey et al., supra note 99, at 21 (discussing natural persons' access to competitive markets).

416 See id. at 19–22. Further, the same objection can be made to many government investments that are made with a time horizon that exceeds an ordinary lifespan (e.g., the Hoover Dam), but natural persons have proved willing to contribute taxes toward those investments.

417 See supra text accompanying notes 79–84.

418 Brealey et al., supra note 99, at 830 (explaining the need for corporations to hold cash and pay short-term bills).

419 Contractual obligations require corporations to consider the short term. See, e.g., Eliz-
That is, can a corporation realistically make long-term, illiquid investments if it must make payroll, pay the rent, and service debt every month as well?

The answer, of course, is that a corporation, like anyone else, must manage its budget to live within its means. Although it must invest for the far-distant future if it finds attractive opportunities to do so, a corporation must also retain some cash on hand to meet its regular liabilities. And although those liabilities may limit, to some extent, the ability of a corporation to make the types of investments that an immortal investor would favor, it need not inhibit immortal investing entirely.

Private American universities, which are themselves corporations, demonstrate that immortal investing can coexist with regular, recurring—even significant—liabilities. Our largest and most successful private universities, such as Harvard, MIT, and Stanford, have engaged in immortal investing for generations. These corporate entities have built campuses, laboratories, and other facilities that have been used continuously—in some cases for hundreds of years—and the universities have invested in brands that have grown to immense value over time. There is no doubt that the managers of these institutions have successfully taken advantage of the investing opportunities that perpetual corporate existence provides. How do they manage to do so while still meeting short-term contractual liabilities?

One possible response is that university corporations have no shareholders. Thus, there is no pressure from investors for dividends or stock appreciation, as there is in the case of business corporations. Moreover, these universities have multi-billion-dollar endowments

ABETH WARREN, CHAPTER 11: REORGANIZING AMERICAN BUSINESSES 23–26 (2008) (discussing corporate bankruptcy, which a corporation can face after repeated failure to satisfy creditors and can end the corporation's existence swiftly).

420 See supra Part II.B.1–2 (suggesting that corporations should behave like immortal investors by making very long-term investments in illiquid assets).

421 Cf. Barack Obama, President of the U.S., Remarks by the President on Fiscal Policy at George Washington University (Apr. 13, 2011) ("[M]y vision for America [is that] we live within our means while still investing in our future[ . . . ]").

422 See supra Part III.C (asserting that the corporation must act as an immortal investor).

423 BREALEY ET AL., supra note 99, at 830.

424 See Algo D. Henderson, The Role of the Governing Board, Ass'n Governing Boards Rep., Oct. 1967 at 1, 28 ("Colleges and universities are corporations governed by boards of trustees.").


426 See id.
that might insulate managers from the distractions of meeting pressing contractual liabilities, such as rent or payroll.\textsuperscript{427}

However, these answers overestimate the superficially appealing distinction between universities and business corporations. In reality, universities and business corporations are quite similar. Take Harvard, for example. Harvard is in debt to the tune of $6.6 billion\textsuperscript{428} and has a $3.5 billion annual operating budget.\textsuperscript{429} About one-third of the annual budget is covered by endowment income, which means that Harvard must pay out about $2 billion in cash each year to cover current liabilities. Despite Harvard's need to satisfy massive immediate liabilities, it is clear that the University—founded as a perpetual corporation in 1636 and still going strong—has been able to plan and invest as an immortal investor would. Moreover, one can generalize the point to the context of the business corporation: the need to meet current contractual liabilities may hinder corporations from being able to invest as an immortal would, but experience in the university context has shown that immortal investing is still possible despite that pressure. And by the same token, other hindrances, such as the fact that managers and shareholders are mortal, are also surmountable.\textsuperscript{430}

E. Examples

As shown above, corporations can, should, and must act as immortal investors—at least in theory. But do they so act in practice? This Section offers a few contemporary examples of corporations that appear to act as immortal investors and reap the corresponding benefits.

1. One-Hundred-Year Bonds

As immortal entities, corporations may borrow for terms that would exceed a mortal lifespan; in fact, dozens of major corporations have taken advantage of this opportunity in recent years by issuing bonds with a 100-year term (sometimes called "century bonds").\textsuperscript{431} In August 2010, for example, Norfolk Southern Corp. borrowed $250

\textsuperscript{427} See id. at 3 ("Harvard and Yale, for example, had endowments in 1998 of $4.2 billion and $2.1 billion, respectively.").

\textsuperscript{428} Back to the Bond Market., HARV. MAG., Jan.–Feb. 2011, at 53.


\textsuperscript{430} See supra Part II.D.1–2.

\textsuperscript{431} Katy Burne, Rethinking the 'Long Bond': Bankers Pitch 100-Year Debt, but Given the Risks Would Investors Bite?, WALL ST. J., Aug. 23, 2010, at C1 ("Hundred-year bonds were in
million in 100-year bonds at an annual rate of 5.95%.

A natural person could never borrow money for a 100-year term, for she could not realistically fulfill her promise. But a perpetual corporation can fulfill such a promise, and many have done so.

2. Husbanding Assets

There are also numerous examples showing that perpetual corporations husband assets better than mortals. Recall the example of a hypothetical immortal logger who carefully replants her forest for future harvests. Weyerhaeuser Corp. provides an example of a corporation acting in this way. Weyerhaeuser, a logging company, was incorporated in 1900 to manage nearly one million acres of timberland in Washington State. Now, Weyerhaeuser manages more than twenty million acres. From the outset, Weyerhaeuser used mottos and other methods of instilling into managers the concept that the corporation is immortal and should be managed as such. On the day of the company's founding, Frederick Weyerhaeuser is reported to have said: "This is not for us, nor for our children, but for our grandchildren." Weyerhaeuser has continued to express the importance of immortal investing explicitly. Its contemporary corporate literature focuses on the idea that trees are a "sustainable," "renewable resource" that can "meet a myriad of human needs without exhausting the resource or harming the environment." Moreover, it...
harvests trees "at sustainable rates over the long term," and the continued vitality of Weyerhaeuser's forests after more than a century is a sign that the company actually plans for the long term.  

For a very different example of husbandry, consider the South Edmeston dairy plant in upstate New York. Kraft Foods Inc. built the plant in 1920 and used it through 2005, when Kraft decided to exit the yogurt business and shut down the facility. However, within a year or two, a new corporation, Agro Farma, was formed for the sole purpose of buying the plant. Agro Farma began producing greek yogurt under the brand name "Chobani," and in less than four years, Chobani went from nonexistence to shipping 1.2 million cases per week. With $500 million in annual sales, Chobani has become the country's number one yogurt by revenue. Importantly, Chobani's achievement was made possible because Kraft operated and maintained its plant as if it were going to continue producing yogurt forever. Had Kraft allowed the plant to go into disrepair—as one might have expected given that it ultimately left the business—the South Edmeston dairy plant may not have been equipped for Agro Farma to begin immediate and high-speed production of Chobani yogurt.

This is not to say that every corporation is a steward. Surely, many are not. General Electric's decades-long pollution of the Hud-
son River is just one example of many. But this Subsection is merely meant to show that there are indeed corporations that can and do husband assets for the long term.

3. Hedge Funds in Corporate Form

A hedge fund is an investment vehicle, usually organized as a limited partnership, that pools cash from a number of sophisticated investors and then invests that money in securities and other instruments. Generally, hedge funds accept investments and permit investors to withdraw their money from the fund only at specified intervals with advanced written notice. This practice ensures that the fund manager has adequate liquidity. Even so, fund managers often must sell some portfolio holdings in order to raise the cash necessary for withdrawal demands, unless that cash is already on hand. The need to maintain liquidity to satisfy redemption requests from investors may inhibit hedge fund managers from investing in attractive illiquid or volatile opportunities. Indeed, sometimes hedge fund managers are forced to sell holdings at unattractive prices in order to satisfy investor withdrawals if they do not have enough cash at the moment.

But if a hedge fund were organized as a corporation, these limitations would not exist, as it would enable the fund to “lock in” inves-

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446 Hudson River PCBs, EPA, http://www.epa.gov/hudson (last visited Feb. 17, 2012) ("From approximately 1947 to 1977, the General Electric Company (GE) discharged as much as 1.3 million pounds of polychlorinated biphenyls (PCBs) from its capacitor manufacturing plants at the Hudson Falls and Fort Edward facilities into the Hudson River."); see also BAKAN, supra note 342, at 75–79 (recounting some of GE’s “major legal breaches between 1990 and 2001,” including almost two dozen instances of pollution and contamination).


448 Id. § 1:1. The SEC staff has defined a hedge fund as “an entity that holds a pool of securities and perhaps other assets, whose interests are not sold in a registered public offering and which is not registered as an investment company under the Investment Company Act.” STAFF OF THE U.S. SEC. & EXCH. COMM’N, IMPLICATIONS OF THE GROWTH OF HEDGE FUNDS 3 (2003).


450 Id.

451 Id.

452 Id. § 5:20; see SCOTT FRUSH, HEDGE FUNDS DEMYSTIFIED: A SELF-TEACHING GUIDE 15–16 (2008) (noting that hedge funds can invest in illiquid assets for a certain amount of time, but not for too long, because hedge fund managers must comply with investors’ notices of intent to withdraw within a couple of weeks or months).

453 FRUSH, supra note 452, at 15–16.
tors' capital. Indeed, this may in fact be happening in practice. William Ackman, manager of the well-known hedge fund Pershing Square Capital Management, L.P., raised these very issues in a recent investment letter. Although Pershing Square manages about $10 billion, the fund refrains from investing 10–15% of that money, holding it in reserve to satisfy possible investor redemption requests. In his letter, Ackman complained that the "need to manage for investor liquidity" constrains his ability to maximize returns. This problem was magnified during the recent financial crisis when, spooked by a series of swift market drops and major firm bankruptcies, many investors withdrew huge sums in short order. The need to keep extra cash on hand to meet these redemption requests reduced the returns Pershing Square would have achieved had it been able to be more fully invested. Just at the moment when they saw many investment opportunities, financial institutions like Pershing Square were hit with a record number of redemption requests. Organizing an investment fund as a corporation would provide Pershing Square with "permanent capital," such that it could be "more opportunistic during times of market and investor distress" and "take larger stakes in a greater number of holdings." Though there may be regulatory hurdles to organizing a hedge fund as a public corporation, the important point is that a major hedge fund manager has recognized, and is trying to achieve, the advantages of immortal investing that the corporate form permits.

454 See supra text accompanying notes 79–84 (discussing the idea that stockholders commit their financial contributions irretrievably to the corporation).
456 Id.
457 Id. (internal quotation marks omitted).
458 Id.
459 Id.
460 As a matter of theory, this is to be expected. See Andrei Shleifer & Robert W. Vishny, The Limits of Arbitrage, 52 J. FIN. 35, 37 (1997) (noting that when arbitrageurs manage other people's money, they "can become most constrained when they have the best opportunities").
461 Waite, supra note 455.
462 For example, the Investment Company Act of 1940, 15 U.S.C. § 80b-5(a)(1) (2006), prohibits investment funds whose managers are compensated on the basis of performance from selling shares to the public. See id. (banning "compensation to the investment adviser on the basis of a share of capital gains upon or capital appreciation"); John Jannarone, Ackman Puts Some English on His IPO, WALL ST. J., June 17, 2011, at C10. Thus, the press has speculated that Ackman plans to organize a corporate fund in the United Kingdom open only to non-American investors. Jannarone, supra.
CONCLUSION

Perpetual existence has long been the overlooked middle child of the defining attributes of the corporation; it has hardly received a mention while its siblings (limited liability and centralized management) have received all of the attention. By focusing on perpetual existence, however, this Article identified the source of the widely held yet undertheorized idea that the ultimate objective of the corporation is long-term profitability, and showed that corporations can, should, and must act as immortal investors—all novel contributions to the theory of the corporation. Focusing further attention on the perpetual existence of the corporation may prove to be a sound investment—in the long run, of course.