

The Law and Economics of Hedge Funds: Financial Innovation and Investor Protection

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ABSTRACT

A persistent theme underlying contemporary debates about financial regulation is how to protect investors from the growing complexity of financial markets, new risks, and other changes brought about by financial innovation. Increasingly relevant to this debate are the leading innovators of complex investment strategies known as hedge funds. A hedge fund is a private investment pool not subject to the full range of restrictions on investment activities and disclosure obligations imposed by the federal securities laws, that compensates management in part with an annual performance fee, and typically engages in the active trading of financial instruments.

Hedge funds engage in financial innovation by pursuing novel investment strategies that lower market risk (beta) and may increase returns attributable to manager skill (alpha). Despite the funds' unique costs and risk properties, the historical performance of hedge funds suggests that the ultimate result of hedge fund innovation is to help investors reduce economic losses during market downturns. Most recently, during approximately the first year of the subprime mortgage-initiated credit crisis (from June 1, 2007 through May 30, 2008), the U.S. stock market lost 8.27 percent of its value whereas, by a conservative estimate, hedge funds produced gains averaging 1.83 percent. By increasing investors' ability to maximize risk-adjusted returns, hedge funds advance the same goal that federal investor protection regulation seeks to advance.

This Article shows that the economic outcomes attained by hedge funds are in part attributable to the legal regime under which they operate. The hedge fund legal regime includes not only federal securities law but also the entity and contract law provisions governing the fund, its manager, and investors. Federal law applicable to hedge funds enables the funds to pursue innovative investment strategies employing the trifecta of leverage, short sales, and derivatives. The entity and contract law governance of hedge funds provides high-powered incentives for fund managers to engage in and capture the gains from financial innovation.

A general lesson from the law and economics of hedge funds is that when a legal regime permits financial intermediaries to be flexible in their investment strategies and aligns the incentives of investors and innovators through performance fees and co-investment by managers, financial innovation is likely to complement investor protection.

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THE LAW AND ECONOMICS OF HEDGE FUNDS: FINANCIAL INNOVATION AND INVESTOR PROTECTION

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INTRODUCTION

A persistent theme underlying contemporary debates about financial regulation is how to protect investors from the growing complexity of financial markets, new risks, and other changes brought about by financial innovation.¹ Increasingly relevant to this debate are the leading innovators of complex investment strategies known as hedge funds. A hedge fund is a private investment pool not subject to the full range of restrictions on investment activities and disclosure obligations imposed by the federal securities laws, that compensates management in part with an annual performance fee, and typically engages in the active trading of financial instruments.² As a type of financial intermediary that offers investors a means to safeguard and grow their capital, hedge funds represent a third stage in the development of investment intermediaries after commercial banks and mutual funds. While banks allow depositors to earn safe returns on their capital, returns from bank deposits are typically lower than those from stocks and other investment opportunities.³ In addition, while mutual funds allow investors to benefit from the relatively high returns of investing in stocks, mutual funds expose investors to substantial losses from overall market downturns.⁴ Hedge funds, by contrast, employ innovative investment strategies to attain relatively high returns while simultaneously reducing exposures to market risk. As suggested by their historical performance, hedge funds are uniquely able to reduce losses during market downturns. Most recently, during the first year of the subprime mortgage-initiated credit crisis (from June 1, 2007 through May 30, 2008), the U.S. stock market lost 8.27 percent of its value whereas, by a conservative estimate, hedge funds globally produced gains averaging 1.83 percent.⁵

¹ See, e.g., Robert K. Steel, Under Secretary for Domestic Finance, Remarks Before the American Enterprise Institute, Nov. 13, 2007 (noting the challenge of constructing “a regulatory system ensuring . . . investor protection” yet still “adaptive to the accelerating rate of innovation and complexity in the financial services industry”); Accredited Investors in Certain Private Investment Vehicles, 72 Fed. Reg. 400, 413 (proposed Jan. 4, 2007) (to be codified at 17 C.F.R. pts. 230 & 275) (justifying increasing the net worth required to invest in hedge funds because “the increase in . . . private pool complexity since 1982 . . . underscores the need to strengthen investor protections”).

² See generally Houman B. Shadab, *Fending for Themselves: Creating a U.S. Hedge Fund Market for Retail Investors*, 11 N.Y.U. J. LEGIS. PUB. & POL’Y 251 (2008). See also SEC, IMPLICATIONS OF THE GROWTH OF HEDGE FUNDS, STAFF REPORT TO THE UNITED STATES SECURITIES AND EXCHANGE COMMISSION 3 (Sept. 29, 2003) (noting there is no legal or universally accepted definition of “hedge fund”) [hereinafter SEC STAFF REPORT].

³ See *infra* note 114 and accompanying text.

⁴ See *infra* notes 154-159 and accompanying text.

⁵ See *infra* Section III.C.2.

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This Article shows that the economic outcomes achieved by hedge funds are in large part attributable to their governing legal regime. Over the past decade, the hedge fund industry has been in a major growth and development phase. Today, there are approximately 13,000 hedge funds with an estimated \$1.74 trillion in assets that may grow to \$6 trillion by 2015.⁶ The funds are major participants in the financial markets and estimated to account for the majority of trades on the New York Stock Exchange.⁷ While regulators have recognized the benefits of hedge funds to investors and the economy,⁸ neither policymakers nor researchers have systematically connected the outcomes produced by hedge funds with the federal securities regime and governance structures under which they operate.⁹ Missing this connection may have important policy implications, as financial innovation by hedge funds typically has the result of protecting investor wealth during general market downturns.

Section I examines the law applicable to hedge funds. Although the hedge fund industry is made up of a very diverse array of investment funds (not all of which technically “hedge” their investments), two aspects of their governing regime make the funds distinct. The first aspect is the absence of legal restraints on their investment strategies. While the law limits banks to the business of loan-making, and regulation restricts the ability of mutual funds to engage in anything but traditional buy-and-hold investing, hedge funds face no legal barriers in utilizing the trifecta of leverage, short sales, and derivatives to achieve their objectives for investors.¹⁰ Second are hedge funds’ unincorporate governance structures, which are characterized by managerial co-investment into the fund, performance-based fees, and virtually complete discretion by the manager in investing the fund’s assets and choosing under what circumstances investors may withdraw their capital.

Section II explains how the legal regime applicable to hedge funds facilitates financial innovation. Hedge funds innovate by implementing novel investment strategies to stay competitive and prevent investors from withdrawing

⁶ Ken Schachter, *Hedge Funds Grow Like Kudzu*, RED HERRING, Feb. 26, 2007, available at <http://www.redherring.com/Home/21446>; Alistair MacDonald & Margot Patrick, *Hedge Funds: Leveraging The Numbers*, WALL ST. J., Nov. 24, 2007, Page B1; GEORGE P. VAN, VAN HEDGE FUND ADVISORS INT’L, HEDGE FUND DEMAND AND CAPACITY 2005–2015, at 6 (2005).

⁷ Tomoeh Murakami Tse, *Public Pension Systems Betting on Hedge Funds*, WASH. POST, July 24, 2007.

⁸ See SEC STAFF REPORT, *supra* note 2, at 4-5.

⁹ Bhaswar Gupta & Edward Szado, *Hedge Fund Legal Structure and its Impact on Performance* 8, Center for International Securities and Derivatives Markets, University of Massachusetts at Amherst - Eugene M. Isenberg School of Management Working Paper, May 20, 2008 (noting that “very little research has focused on the interactions between hedge fund legal structures and their risk, performance or strategy focus”).

¹⁰ An investment is leveraged to the extent borrowed funds are used to make the investment or the investment otherwise has exposure which magnifies gains or losses. A short sale is a way to profit from a price decline. It requires the short seller to borrow securities, sell them, repurchase them at a lower price, and return the securities to the lender. A derivative is a security, such as stock options and futures, whose price is derived from the value of some underlying asset. See FRANÇOIS-SERGE LHABITANT, HANDBOOK ON HEDGE FUNDS 151-52, 126-29, 142-50 (2006).

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capital. These novel investments strategies often include utilizing innovations in financial instruments such as complex securities and derivatives. Consistent with the research on innovation and governance more generally, hedge fund governance devices facilitate innovation by providing managers with the flexibility to adapt to changing economic conditions and high-powered incentives to capture the gains from innovation. Although hedge funds impose unique costs and risks on investors, innovation by hedge funds helps investors to diversify a portfolio of stocks and bonds and thereby reduce exposures to overall market risk. The ultimate result of hedge fund innovation is analyzed in Section III, which shows that, by helping investors to maximize risk-adjusted returns, hedge funds advance the same goal that federal investor protection regulation seeks to advance.

I. THE HEDGE FUND LEGAL REGIME

Hedge funds are governed by the entity law of the jurisdiction in which they choose to organize along with the law of contract governing their operating agreements. As investment advisers to the funds they manage, hedge fund managers are also governed by federal and state investment adviser law. As issuers of securities and as purchasers and sellers of the securities of other companies, hedge funds are likewise governed by federal and state securities regulation. However, the funds operate so as to be totally exempt from federal law applicable to investment companies. Nonetheless, the funds are fully subject to federal prohibitions on fraud and insider trading.

A. Uncorporate Governance

A hedge fund consists of three basic entities: investors, the fund itself, and the investment adviser/management company. U.S.-based hedge funds typically adopt some type of uncorporate form and are structured as limited partnerships or limited liability companies (LLCs).¹¹ A hedge fund limited partnership is made up of two types of partners, limited partners and a general partner. The limited partners provide capital as the fund's investors.¹² As limited partners, these investors are not liable for the fund's debts, although they are subject to losing all of their investment capital and any profits not yet distributed.¹³ Hedge funds typically only accept capital contributions at the beginning of each month, and may close themselves off to new contributions if the manager determines that

¹¹ See generally Larry E. Ribstein, *The Rise of the Uncorporation* (University of Illinois Law & Economics Research Paper No. LE07-026 2007) (analyzing the reasons for and implications of the growing usage of non-corporate business forms); DOUGLAS L. HAMMER ET AL., SHARTSIS FRIESE LLP, U.S. REGULATION OF HEDGE FUND INVESTORS 88 (2005) [hereinafter SHARTSIS]; SCOTT J. LEDERMAN, HEDGE FUND REGULATION § 2:3, 2-4 (2007). Because the difference between hedge funds structured as limited partnerships or LLCs is generally not important for the purposes this Article, the analysis here is limited to limited partnerships except whereas noted.

¹² See, e.g., *Allen v. Amber Manor Apartments Partnership*, 96 Ill. App. 3d 541 (1981) (holding that limited partnership status is obtained by making a capital contribution).

¹³ See, e.g., Del. Rev. Unif. Ltd. Partnership Act § 17-303.

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additional capital will decrease overall returns.¹⁴ When a capital contribution is made to a hedge fund limited partnership, a capital account is established for the investor representing the investor's pro rata interest in the fund.¹⁵

Although state partnership statutes permit a partnership agreement to grant voting rights to limited partners,¹⁶ in practice hedge fund limited partnerships do not typically grant any voting rights to their limited partners.¹⁷ To avoid losing their limited liability, limited partners do not participate in management decisions.¹⁸ Limited partners of a hedge fund are passive investors whose decisionmaking is limited to deciding when and how much capital to contribute or withdraw, subject to capital redemption restrictions under the fund's operating agreement.¹⁹

The general partner of a hedge fund limited partnership is the fund's portfolio manager and investment adviser and is responsible for managing all aspects of the hedge fund business, including managing the fund's investment portfolio.²⁰ Limited partnership law gives the general partner complete control over the activities of the partnership and the terms of the partnership agreement, subject only to the fiduciary duties owed to limited partners and whatever duties the general partner chooses to be bound by in the agreement.²¹ The fiduciary duties of general partners are to a large extent waivable in the limited partnership agreement. For example, the Delaware limited partnership statute, which seeks "to give maximum effect to the principle of freedom of contract," allows the partnership agreement to limit the fiduciary duties of general partners.²²

Courts in Delaware and other states interpret fiduciary duties as contractual in nature such that anything short of an intentional breach of the

¹⁴ LEDERMAN, *supra* note 11, at § 2:2.4, 2-4.

¹⁵ SHARTSIS, *supra* note 11, at 89.

¹⁶ *See, e.g.*, Del. Rev. Unif. Ltd. Partnership Act § 17-302(b) (stating that "the partnership agreement may grant to all or certain identified limited partners or a specified class or group of limited the partners the right to vote separately or with all or any call or group of the limited partners or the general partners, on any matter").

¹⁷ LEDERMAN, *supra* note 11, at § 2:2.1, 2-3. Partnership statutes expressly allow for a partnership agreement to completely eliminate any voting powers of limited partners. *See, e.g.*, Del. RULPA Section 17-302(f) ("A partnership agreement may provide that any limited partner or class or group of limited partners shall have no voting rights.").

¹⁸ *See, e.g.*, Del. Rev. Unif. Ltd. Partnership Act § 17-303(a).

¹⁹ *See infra* Section I.B.2.

²⁰ SHARTSIS, *supra* note 11, at 89, 94; LEDERMAN, *supra* note 11, at §2:2.1, 2-3. For the purposes of this Article, hedge fund "manager" and "investment adviser" are used interchangeably to refer to the same business entity, unless otherwise noted.

²¹ SHARTSIS, *supra* note 11, at 90.

²² Del. Code. tit. 6, § 17-1101(c), (d). The equivalent provisions allowing statutory waiver for the member of an LLC are located in Del. Code. tit. 6, § 18-1101(b)-(e).

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partnership agreement typically will not constitute a breach of fiduciary duty.²³ In particular, a hedge fund manager may negotiate different fees to be charged to different investors, and through “side letters” give different investors unique rights as to disclosure and other issues, so long as differential treatment does not violate investors’ contractual rights or the manager’s fiduciary duty to not give preferential treatment to some investors to the detriment of others.²⁴ Accordingly, organizing as a limited partnership affords to the hedge fund manager overwhelming flexibility in managing its internal affairs and carrying out its investment strategy.

The general partner of a limited partnership bears unlimited liability for the debts the partnership itself cannot satisfy.²⁵ To shield hedge fund managers from this personal liability, the general partner of a hedge fund is typically a company organized as an LLC, but may be some other limited liability entity such as a limited partnership or Subchapter S corporation.²⁶ Despite having limited liability for the fund’s debts as a matter of law, the general partner entity or the individual general partners (managers) typically co-invest a significant portion of their liquid net worth directly in the underlying fund as limited partners.²⁷ Using a comprehensive database of hedge funds from 1994 to 2002, Agarwal et al. estimated the average investment by managers to be 7.1 percent of fund assets, with the median manager owning 2.4 percent of the fund.²⁸ Hedge fund investors often seek co-investment by managers.²⁹

In addition to enabling managers with broad discretion and limiting the liability of investors and managers, organizing the fund as a limited partnership or LLC, and the general partner as an LLC, is crucial to the fund, its investors, and the general partner in minimizing tax burdens. As a limited partnership and LLC, respectively, neither the fund nor the general partner is taxed at the entity level. All income, gains, losses, and deductions “pass through” to the general and limited partners and LLC members who report such items on their own personal

²³ LARRY E. RIBSTEIN, *UNINCORPORATED BUSINESS ENTITIES* 331-32 (2d ed. 2000) (reviewing case law including those finding that general partners’ competition with the partnership not a breach of fiduciary duty so long as authorized in partnership agreement).

²⁴ SHARTSIS, *supra* note 11, at 90; LEDERMAN, *supra* note 11, at § 2:3.3[F], 2-19-20; Susan Ferris Wyderko, *Testimony Concerning Hedge Funds Before the Subcommittee on Securities and Investment of the United States Committee on Banking, Housing, and Urban Affairs* (May 16, 2006).

²⁵ See Del. Code Ann. tit. 6, § 17-403; SHARTSIS, *supra* note 11, at 92.

²⁶ SHARTSIS, *supra* note 11, at 88 n.4, at 91-92; LEDERMAN, *supra* note 11, at §2:3.1, 2-5. As control persons of the general partner entity, its owners may be personally liable for actions of the general partner as manager of the fund. SHARTSIS, *supra* note 11, at 92.

²⁷ SHARTSIS, *supra* note 11, at 92; LEDERMAN, *supra* note 11, at § 2:2.2, 2-3.

²⁸ Vikas Agarwal, et al., *Role of Managerial Incentives and Discretion in Hedge Fund Performance*, 13, 35 (Centre for Financial Research Working Paper No. 04-04, April 28, 2006), available at <http://ssrn.com/abstract=889008>.

²⁹ Government Accountability Office, *Hedge Funds: Regulators and Market Participants Are Taking Steps to Strengthen Market Discipline, But Continued Attention Is Needed* GAO-08-200, 11 (2008).

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income tax returns.³⁰ Pass-through taxation preserves the tax treatment of the fund's income as it is allocated to investors. This generally benefits investors because the favorable tax treatment given to long-term capital gains relative to ordinary income is passed along to investors.³¹ Because personal income tax is assessed on an annual basis, hedge fund investors incur tax liability each year in which the hedge fund realizes net income.³²

B. Hedge Fund Operating Agreement

The wide-ranging flexibility of the law of limited partnerships, LLCs, and other forms of unincorporate governance serves as a virtually blank slate upon which particular business entities may write with their operating agreements. Even more so than state-based corporate law, limited partnership and LLC law is "enabling," as opposed to mandatory, meaning that companies may choose the details of their own governance structures from a default set of "off-the-rack" rules provided by state entity organization statutes.³³ Hedge funds utilize lengthy and detailed operating agreements defining the precise rights and duties between managers and investors.

1. Hedge Fund Manager Compensation

Under the terms of the applicable operating agreement, the hedge fund management and advisory company is compensated by a management fee, typically ranging from one to two percent of the underlying fund's net asset value, which may be calculated monthly or quarterly.³⁴ The management fee covers expenses for operating and administering the fund such as for overhead, personnel salary, office leases and physical capital costs.³⁵ Charging a management fee to investors is common throughout the asset management industry and is a practice utilized by publicly registered mutual funds.³⁶

A distinguishing and defining feature of hedge funds, however, is that their operating agreements have provisions compensating managers based upon the performance of the funds they advise, where performance is typically calculated on an annual basis. Hedge fund performance-based fees typically range from 15 to 20 percent of profits in excess of prior losses and net of management fees.³⁷ Performance-based compensation is contractually structured as an income

³⁰ SHARTSIS, *supra* note 11, at 88-89, 92.

³¹ LEDERMAN, *supra* note 11, at § 2:3.3, 2-7; SHARTSIS, *supra* note 11, at 89.

³² SHARTSIS, *supra* note 11, at 89.

³³ See FRANK H. EASTERBROOK & DANIEL R. FISCHEL, *THE ECONOMIC STRUCTURE OF CORPORATE LAW* 2-3 (1991).

³⁴ SHARTSIS, *supra* note 11, at 327; LEDERMAN, *supra* note 11, at § 2:3.3[A], 2-8.

³⁵ LEDERMAN, *supra* note 11, at § 2:3.3[A], 2-8.

³⁶ Securities and Exchange Commission, *Invest Wisely: An Introduction to Mutual Funds* (August 8, 2007).

³⁷ JAMES R. BARTH ET AL., *HEDGE FUNDS: RISKS AND RETURNS IN GLOBAL CAPITAL MARKETS*, MILKEN INSTITUTE 32-33 (December 2006); LEDERMAN, *supra* note 11, at § 2:3.3[C], 2-10.

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allocation to the management company contingent upon the fund's performance, and not as a fixed fee for services.³⁸ This compensation structure decreases the tax burden to the manager by preserving the tax character of capital gains realized by the fund. As a result, the fund is not required to convert income from capital gains to ordinary income which is taxed at a higher rate.³⁹

Hedge funds' performance fees are limited by two types of contractual provisions, each requiring a threshold level of investment returns before any performance-based compensation is allocated to the manager. The more common provision is called a "high water mark." A high water mark limits the performance fee allocation only to positive gains above the amount of the investor's capital contribution.⁴⁰ A high water mark requires any losses from previous years to first be recouped, meaning that an investor must actually receive a net positive return on their investment before a manager is paid a performance fee.⁴¹ A "hurdle rate" is another compensation provision utilized by hedge funds, typically in conjunction with a high water mark. A performance fee subject to a hurdle rate will not be allocated to the manager unless a minimum rate of return is achieved.⁴² Particular hurdles may be calculated annually or on a cumulative basis, and may be fixed at an absolute rate or depend on some other rate or performance benchmark.⁴³

2. Restrictions on Share Liquidity

Investors' financial rights in a limited partnership are overwhelmingly determined by contract.⁴⁴ Limited partnership law generally leaves it up to the partnership agreement to determine when and under what circumstances a limited partner is entitled to a distribution of capital, and permits partners to freely transfer their economic interests in the firm (e.g., rights to profits, losses, and distributions) but not limited partners' voting or management rights or powers.⁴⁵ In practice, hedge funds place significant restrictions on the ability of investors to redeem their shares with the fund and to resell or otherwise transfer their shares.⁴⁶ The funds restrict investors' ability to withdraw capital to a periodic basis, ranging from monthly to quarterly to annually.⁴⁷ In addition, investors must

³⁸ LEDERMAN, *supra* note 11, at § 2:3.3[C], 2-10.

³⁹ *Id.* (noting that capital gains are characterized as a "guaranteed payment" when allocated to the manager).

⁴⁰ SHARTSIS, *supra* note 11, at 329-330; LEDERMAN, *supra* note 11, at § 2:3.3[C][1], 2-11.

⁴¹ SHARTSIS, *supra* note 11, at 329; LEDERMAN, *supra* note 11, at § 2:3.3[C][1], 2-11.

⁴² SHARTSIS, *supra* note 11, at 330-31; LEDERMAN, *supra* note 11, at § 2:3.3[C][2], 2-12.

⁴³ SHARTSIS, *supra* note 11, at 330-31; LEDERMAN, *supra* note 11, at § 2:3.3[C][2], 2-12.

⁴⁴ RIBSTEIN, *supra* note 23, at 294.

⁴⁵ Del. Code Ann. tit.6 §17-702(a).

⁴⁶ Share resale restrictions are generally required for a hedge fund make a private offering under federal law. *See infra* Section I.D.1.

⁴⁷ LEDERMAN, *supra* note 11, at § 2:2.4, 2-4; SHARTSIS, *supra* note 11, at 3. By comparison, publicly registered mutual funds are required to redeem shares to investors *daily*. Company Act

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typically give 30 to 90 days notice before being able to withdraw capital.⁴⁸ Hedge funds also implement a “lockup” period that prohibits a capital contribution from being withdrawn after it is first invested in the fund.⁴⁹ Lockup periods are typically less than one quarter, but may be as long as two years.⁵⁰ Finally, hedge funds may also use a “gate” to limit how much capital can be withdrawn on a given date, which is usually based upon a fraction of the net asset value of the fund.⁵¹

Hedge funds limit the liquidity of their shares for several reasons. First, limitations on liquidity may benefit the fund in the long run because capital redemptions at a given point in time may be disruptive to the fund’s operations and inconsistent with the fund’s investment objectives or trading strategy.⁵² Second, restrictions on the resale of hedge fund shares are required for a hedge fund to qualify for certain exemptions under federal law relating to raising capital.⁵³ Third, hedge funds place restrictions on the trading of their shares so as to not be deemed a publicly traded partnership that must pay higher corporate taxes.⁵⁴

C. Investment Company and Investment Adviser Law

Because a hedge fund consists of an investment fund and an investment adviser, its activities fall within the scope of federal regulation under the Investment Company Act of 1940 (the “Company Act”) and the Investment Advisers Act of 1940 (the “Advisers Act”).

1. Investment Company Law

The Company Act was passed in wake of the stock market crash of 1929 and government findings in the late 1930s alleging pervasive self-dealing and investor abuse in the investment fund industry.⁵⁵ The Company Act requires registration by all investment companies, defined as any issuer that, among other things, “is or holds itself out as being engaged primarily . . . in the business of investing, reinvesting, or trading securities.”⁵⁶ A registered investment company

Rule 22c-1(b), 17 C.F.R. § 270.22c-1(b) (2007) (requiring registered investment companies to calculate net asset value at least daily).

⁴⁸ LEDERMAN, *supra* note 11, at § 2:3.3[D][3], 2-16.

⁴⁹ *Id.*

⁵⁰ *Id.* at § 2:3.3, 2-16-17. BARTH ET AL., *supra* note 37, at 38-41 (showing that a majority of hedge funds have a lockup period of less than one quarter).

⁵¹ LEDERMAN, *supra* note 11, at § 2:3.3[D][3][b], 2-16.

⁵² *See infra* Section II.D.3.

⁵³ *See infra* Section I.C.

⁵⁴ LEDERMAN, *supra* note 11, at § 2:3.3[D][2] at 2-15.

⁵⁵ WILLIAM J. BAUMOL, THE ECONOMICS OF MUTUAL FUND MARKETS: COMPETITION VERSUS REGULATION 48-54 (1990); Celebration of the 60th Anniversary of the Investment Company Act Opening Remarks by Paul Roye Director, Division of Investment Management U.S. Securities & Exchange Commission (Oct. 4, 2000), available at <http://sec.gov/news/speech/spch405.htm>.

⁵⁶ Company Act § 3(a)(1), 15 U.S.C. § 80a-3(a)(1) (2006).

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is subject to wide-ranging and detailed regulation intended to ensure that unsophisticated investors are able to make informed investment choices and to prevent fund sponsors from acting opportunistically at the expense of investors.⁵⁷

Hedge funds would fall within the definition of “investment company” under the Company Act except that they typically operate so as to qualify for at least one of two exclusions from the definition of an investment company. Under section 3(c)(1) of the Company Act, hedge funds are excluded from the definition of investment company so long as they have no more than 100 investors and sell their securities only through a private sale.⁵⁸ Under section 3(c)(7) of the Company Act, hedge funds are excluded from the definition of investment company so long as they only sell securities to “qualified purchasers” through a private sale.⁵⁹ A natural person satisfies the definition of “qualified purchaser” under the Company Act if they own not less than \$5 million in investments.⁶⁰ Section 3(c)(7) hedge funds may sell to an unlimited number of qualified purchasers without falling under the definition of an investment company, but limit sales to 499 investors to avoid registration under the Securities and Exchange Act. Importantly, because hedge funds are not registered as investment companies, the funds are not subject to Company Act’s restrictions on employing leverage, short selling, and derivatives trading.⁶¹

2. Investment Adviser Law

Hedge fund managers meet the definition of “investment adviser” under the Advisers Act, which is defined as any person in the business of advising others about whether to purchase or sell certain securities.⁶² An adviser must register under the Advisers Act if it holds its services out to the public as an

⁵⁷ See Company Act § 1(b)(1), 15 U.S.C. § 80a-1(b)(1); Form N-1A Items 14-15, 10, 5, 3 (requiring disclosure of information including contact information of the fund’s investment advisers and portfolio managers, the history of the fund, its risk/return profile and investment objectives, and the fund’s organization and how the fees it charges to investors are calculated). Registered investment companies must also quarterly disclose portfolio holdings to the SEC and semiannually to investors. Company Act §§ 30(a), 30(b); Company Act Rule 30b1-1, 17 C.F.R. §270.30b1-1; Company Act Rule 30b1-5, 17 C.F.R. §270.30b1-5; Company Act § 30(e); Company Act Rule 30e-1, 17 C.F.R. §270.30e-1. Open-end registered investment companies must also daily calculate net asset value and allow investors to redeem shares within 7 days at that value. Company Act § 22(e); Company Act Rule 22c-1(a), 17 C.F.R. § 270.22c-1(a) (1993) (requiring registered investment companies to sell, redeem, or repurchase shares at net asset value); Company Act Rule 22c-1(b), 17 C.F.R. § 270.22c-1(b) (1993) (requiring registered investment companies to calculate net asset value at least daily). A registered investment company must also have a board of directors, 40 percent of whom are independent. Company Act § 10(a), 15 U.S.C. § 80a-10(a) (2006).

⁵⁸ 15 U.S.C. § 80a-3(c)(1).

⁵⁹ 15 U.S.C. § 80a-3(c)(7). Nonpublic offerings for the purposes of being exempted from the Company Act are generally interpreted to be the same as those as under section 4(2) of the Securities Act. SEC STAFF REPORT, *supra* note 2 at 12 n.36.

⁶⁰ 15 U.S.C. § 80a-2(a)(51)(A)(i); 17 C.F.R. § 270.2a51-1(g)(2) (1997).

⁶¹ See *infra* notes 154-159 and accompanying text.

⁶² Advisers Act § 202(a)(11), 15 U.S.C. § 80b-2(a)(11) (2006).

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investment adviser, advises an investment company registered under the Company Act, or advises 15 or more clients.⁶³ However, a hedge fund manager may gain exemption from the Advisers Act by qualifying as a private adviser, which means that the manager has not advised more than 15 clients in the previous twelve months (which in practice may include up to 15 separate funds with several hundred investors each), does not hold itself out to the public, and does not advise a registered investment company.⁶⁴

Both registered and unregistered advisers are subject to the provisions of the Advisers Act prohibiting material misstatements, misleading omissions, and other fraudulent practices to investors or prospective investors.⁶⁵ The Advisers Act prohibits any fund manager from making false or misleading statements regarding investment strategies, experience and credentials, risks associated with the fund, and valuation of the fund's assets.⁶⁶ Under the Advisers Act, fraudulent or misleading statements or omissions need not be willful to be unlawful; mere negligence will suffice for liability.⁶⁷ In addition, registered managers must disclose basic information about the manager on Form ADV, either to investors or the SEC.⁶⁸ This includes information about its investment strategies⁶⁹ along with material facts about the financial condition of the management company.⁷⁰ Unregistered managers are not subject to any limitations on charging performance fees.⁷¹ By contrast, a fund manager registered as an investment adviser is generally prohibited from charging a performance fee to an investment company that it advises.⁷² However, even registered advisers may charge a performance fee if advising a Company Act section 3(c)(7) fund or if all investors in the fund meet

⁶³ Advisers Act §§ 203(b)(3). Each individual fund is a "client" for Advisers Act purposes, not each investor in the advised fund. Advisers Act § 203(b)(3).

⁶⁴ 17 C.F.R. § 275.203A-1(a); Advisers Act § 203(b)(3), 15 U.S.C. § 80b-3(b)(3). A "client" includes a legal organization, thereby allowing hedge fund managers to count each separate fund as a client, and not each separate investor in each fund. 17 C.F.R. § 275.203(b)(3)-1(a) (2004).

⁶⁵ Advisers Act § 206(4)-(8), 15 U.S.C. § 275.206(4)-(8).

⁶⁶ Prohibition of Fraud by Advisers to Certain Pooled Investment Vehicles, 72 Fed. Reg. 44756, 44759 (Aug. 9, 2007) (to be codified at 17 C.F.R. pt. 275).

⁶⁷ *Id.* at 44,759-60 (noting that negligent misstatements are prohibited under the Advisers Act).

⁶⁸ Form ADV is required under Advisers Act Rule 204-3(a), 17 C.F.R. § 275.204-3(a) (1994).

⁶⁹ Form ADV, Part II, <http://www.sec.gov/about/forms/formadv.pdf>.

⁷⁰ 17 C.F.R. § 275.206(4)-4(a)(1)-(2).

⁷¹ SHARTSIS, *supra* note 11, at 333.

⁷² Advisers Act § 205(a)(1), 15 U.S.C. § 80b-5(a)(1) (2006). Instead of a performance-based fee, a registered investment adviser may charge a "fulcrum fee" based upon assets under management which is increased or decreased according to a relevant benchmark of performance. However, these fee arrangements are only utilized by a small minority of mutual funds. *See* 15 U.S.C. § 80b-5(b)(2); Sophia Grene, *A Cautious Embrace of Performance Fees*, FIN. TIMES, Jan. 7, 2008, at 9 ("According to Lipper research, just over 2 per cent of US mutual funds have such a [fulcrum] fee structure . . .").

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the definition of “qualified client,” which includes natural persons having at least \$1.5 million in net worth or at least \$750,000 managed by the adviser.⁷³

D. Securities Regulation

Hedge funds fall within the orbit of federal securities regulation for two primary reasons. First, hedge funds raise investment capital by issuing limited partnership or LLC-member interests, which are considered “securities” under the Securities Act.⁷⁴ Second, as purchasers and sellers of the securities of U.S.-based companies, hedge funds must comply with various obligations arising in connection with securities trading.

1. Raising Investment Capital

In raising capital from limited partner-investors, hedge funds act both as issuers and sellers of securities that utilize interstate commerce, and are therefore subject to the antifraud provisions of the Securities Act and the Exchange Act.⁷⁵ These statutes prohibit specific material misstatements, fraudulent conduct more generally, and material omissions. Under section 17(a) of the Securities Act, it is unlawful for an issuer to make any untrue statement of material fact or to omit any fact so that a statement that was made is misleading.⁷⁶ Under section 10(b) and Rule 10b-5 of the Exchange Act, material omissions in connection with the sale of any security are likewise prohibited.⁷⁷ Furthermore, under the Securities Act negligence is sufficient for liability.⁷⁸

Despite being subject to fraud liability, hedge funds raise capital so as not to be subject to the registration and disclosure obligations typically required of companies making a public offering of securities. The Securities Act requires all companies publicly raising capital to register with the Securities and Exchange Commission (“SEC”) and disclose information to investors.⁷⁹ Section 5 of the Securities Act requires all interstate issuers of securities to file a registration statement.⁸⁰ Registration statements generally consist of a prospectus to be delivered to investors before or accompanying a sale, other information to be filed

⁷³ Advisers Act § 205(b)(4); 15 U.S.C. § 80b-5(b)(4); Advisers Act Rule 205-3(d)(1), 17 C.F.R. § 275.205-3(d)(1).

⁷⁴ Securities Act § 2(a)(1).

⁷⁵ Notwithstanding that hedge funds privately raise capital in reliance upon Securities Act Regulation D, such an offering is fully subject to the antifraud provisions of the Securities Act. Regulation D Preliminary Note 1, 17 C.F.R. § 230.501 (2007); *Landreth Timber Co. v. Landreth et al.*, 471 U.S. 681, 692 (1985).

⁷⁶ 15 U.S.C. § 77q(a) (applying its provisions to any “offer or sale of any security”).

⁷⁷ Exchange Act § 10(b), 15 U.S.C. § 78j; Rule 10b-5, 17 C.F.R. § 240.10b-5 (2007).

⁷⁸ *Aaron v. SEC*, 446 U.S. 680, 701-02 (1980) (holding that because a violation of either section 17(a)(2) or 17(a)(3) of the Securities Act does not require scienter, only a showing of negligence is required). Scienter is a “mental state embracing intent to deceive, manipulate or defraud.” *Ernst & Ernst v. Hochfelder*, 425 U.S. 185, 193 (1976).

⁷⁹ Securities Act § 5(a), 15 U.S.C. § 77a (2006).

⁸⁰ Securities Act § 5, 15 U.S.C. § 77e (2006).

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with the SEC, and a third category of information to be made available to investors upon request.⁸¹ A prospectus typically contains information such as a description of the issuer's business, the particular securities being offered, important risk factors affecting the issuer, financial statements, and numerous items relating to the issuer's financial condition.⁸²

Hedge funds make offerings of securities under the constraints of two exemptions from the registration and disclosure requirements of the Securities Act, which are widely referred to as "private placements" or "private offerings."⁸³ First, section 4(2) of the Securities Act specifically exempts nonpublic offerings of securities by an issuer from the requirements of section 5.⁸⁴ As developed by case law following the U.S. Supreme Court case of *SEC v. Ralston Purina Co.*, an offering will be deemed private if potential investors have access to the same kind of information available in a registration statement, are financially sophisticated, have the ability to bear economic risk, and perhaps other factors.⁸⁵ To qualify for a statutory private offering pursuant to section 4(2) of the Securities Act, a fund must provide potential investors with access to the same type of information as would be provided in a registration filed pursuant to section 5 of the Securities Act.⁸⁶

Second, hedge funds also issue securities under Rule 506 of Regulation D of the Securities Act ("Rule 506"). Rule 506 requires funds to limit their investor base almost exclusively to accredited investors⁸⁷ (although it does not limit the number of investors a hedge fund may have⁸⁸). Investors qualifying as accredited investors include certain companies with at least \$5,000,000 in assets and natural persons whose net worth (or whose joint net worth with a spouse) exceeds \$1,000,000 or that have an annual income for the last two years of at least

⁸¹ SHARTSIS, *supra* note 11, at 145, 157 (describing the components of disclosure for registration statement on Form N-1A and Form S-1).

⁸² See, e.g., Form S-1, Part 1. Form S-1 is the general form to be used by issuers of standard U.S. securities.

⁸³ SEC STAFF REPORT, *supra* note 2, at 14.

⁸⁴ Securities Act § 4(2), 15 U.S.C. § 77d(2) (2006) (exempting from Section 5 of the Securities Act any "transaction not involving a public offering").

⁸⁵ *SEC v. Ralston Purina Co.*, 346 U.S. 119, 125-26 (1953); SHARTSIS, *supra* note 11, at 116-20. Other factors include if the offering is personally made to potential investors, raises a low amount of capital, and involves a small group of offerees and limited number of shares. *Id.*

⁸⁶ 346 U.S. at 125-26.

⁸⁷ 17 C.F.R. § 230.506. Rule 506 does, however, allow sale to up to 35 nonaccredited investors that are financially sophisticated, defined as an investor that, either alone or with the assistance of a purchaser representative, possesses "such knowledge and experience in financial and business matters that he is capable of evaluating the merits and risks of the prospective investment." Regulation D Rule 506(b)(2)(ii), 17 C.F.R. § 230.501(b)(2)(ii). It should be noted that although Rule 506(b)(2)(i) limits the number of "purchasers" allowed to 35, that limitation has no effect because accredited investors are not included in the definition of "purchaser" under Regulation D. 17 C.F.R. § 230.501(e)(1)(iv).

⁸⁸ As far as legal considerations are concerned, hedge funds limit the number of their investors to comply with the section 3(c)(1) "investment company" exclusion under the Investment Company Act and/or to avoid mandatory registration and reporting under the Securities and Exchange Act.

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\$200,000 (or \$300,000 in joint spousal income if married).⁸⁹ To qualify for an exemption pursuant to Rule 506, a hedge fund is also prohibited from offering or selling its securities using “general solicitation or general advertising.”⁹⁰ Rule 502(c) of Regulation D lists any advertising in print or broadcast media, and any invitation to a seminar or meeting by such methods, as constituting general solicitation or advertising.⁹¹ Hedge funds seeking the safe harbor provision of Rule 506 must also exercise reasonable care to prevent the resale of their securities.⁹² Securities purchased pursuant to a Rule 506 private placement cannot be resold by the purchaser without registration or qualification for another exemption from registration.⁹³

When an offering is made pursuant to Rule 506, the offer is deemed in accordance with section 4(2) and hence exempt from the registration requirements of section 5 of the Securities Act.⁹⁴ Nonetheless, to avoid the liability involved with making a private placement, hedge funds usually make offerings that would satisfy the requirements of Rule 506 *and* the judicially-defined statutory section 4(2) exemption.⁹⁵

2. Trading Registered Securities

Hedge funds must comply with various requirements under the Exchange Act arising out of their investments in public companies.⁹⁶ First, all hedge funds and their managers are required to disclose large shareholdings of public

⁸⁹ 17 C.F.R. § 230.501(a). The SEC attempted to introduce a higher accredited investor requirement applicable to hedge fund investors and revised other aspects of Regulation D. *See* 72 Fed. Reg. *supra* note 1, at 403-05 (requiring that investors a fund exempt under section 3(c)(1) of the Company Act to be an “accredited natural person” owning at least \$2.5 million in investable assets); Revisions of Limited Offering Exceptions in Regulation D, 72 Fed. Reg. 45116 (August 10, 2007).

⁹⁰ 17 C.F.R. § 230.506(b)(1).

⁹¹ 17 C.F.R. § 230.502(c). In *In re CGI Capital Inc.*, the SEC found that a broker-dealer made a general solicitation when it sent out a mass email about privately raising capital for an internet startup without first verifying whether the potential investors were accredited or otherwise sophisticated. *In re CGI Capital Inc.*, Securities Act Rel. No. 7,904 (Sept. 29, 2000).

⁹² *Id.* Exercising reasonable care to prevent resale is meant to “assure that the purchasers of the securities are not underwriters within the meaning of section 2(a)(11) of the [Securities] Act.” *Id.*

⁹³ 17 C.F.R. § 230.502(d) (1997).

⁹⁴ 17 C.F.R. § 230.506(a) (2008) (“Offers and sales of securities by an issuer that satisfy the conditions in paragraph (b) of this Rule 506 shall be deemed to be a transaction not involving any public offering within the meaning of Section 4(2) of the [Securities] Act.”).

⁹⁵ HAMMER ET AL., *supra* note, at 120 (“Hedge funds typically rely on the safe harbor of Regulation D Rule 506 . . . in addition to relying on the statutory section 4(2) exemption, in offering and selling their interests.”); LEDERMAN, *supra* note, § 4:2.1 (noting that hedge funds typically raise capital “pursuant to a private placement exempted from registration under section 4(2) of the Securities Act and Rule 506 of Regulation D”). *See also* SODERQUIST & GABALDON, *supra* note, at 73 (noting the importance of the section 4(2) private placement exemption even in light of Rule 506 because, among other reasons, it minimizes liability for making an unregistered public offering).

⁹⁶ Hedge funds also typically do not need to register as broker-dealers under the Exchange Act. SEC STAFF REPORT, *supra* note 2 at 18.

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companies. To regulate the market for control of public companies, sections 13(d) and 13(g) require that hedge funds or their advisers must disclose beneficial ownership of greater than five percent in a class of voting shares of securities registered under the Exchange Act, and disclose whether the purpose of such ownership is to acquire or influence the issuer.⁹⁷ In connection with preventing insider trading, section 16(a) requires that hedge funds, upon acquiring a 10 percent ownership stake in any issuer's class of voting equity securities registered pursuant to the Exchange Act, to disclose such ownership, any other equity ownership in the company, and any subsequent changes in such ownership.⁹⁸ In addition, to increase publicly available knowledge about institutional shareholdings, under section 13(f) hedge funds owning more than \$100,000,000 in stock traded on a national exchange are required to quarterly disclose to the SEC all of their equity holdings on Form 13F.⁹⁹

Furthermore, hedge fund advisers investing in commodity interests such as futures may be required to register under the Commodities and Exchange Act (the "CEA")¹⁰⁰ as either a commodity pool operator ("CPO") or a commodity trading advisor ("CTA") and thereby fall within the jurisdiction of the Commodities Futures Trading Commission (the "CFTC").¹⁰¹ The CEA and CFTC rules require registered CPOs and CTAs to disclose and report upon a wide variety of information.¹⁰² For instance, a CPO must disclose to investors audited financial statements and to the CFTC concentrated derivatives positions exceeding certain thresholds.¹⁰³ Nonetheless, substantial exemptions to CEA registration exist for funds trading in commodities interests.¹⁰⁴

II. FINANCIAL INNOVATION, MARKET RISK, AND HEDGE FUND GOVERNANCE

Financial innovation furthers the overall purposes of the financial system by decreasing investment risk and reducing transaction costs associated with

⁹⁷ Exchange Act § 13(d), 15 U.S.C. § 78m(d); Exchange Act § 13(g), 15 U.S.C. § 78m(g); 17 C.F.R. § 240.13d-1(a) (2007).

⁹⁸ Exchange Act § 16(a)(3)(B); 17 C.F.R. § 240.16a-1; 17 C.F.R. § 240.16a-2 (2007).

⁹⁹ Exchange Act Rule 13f-1(b); 17 C.F.R. § 240.13f-1(b) (2007).

¹⁰⁰ 7 U.S.C. §§ 1, et seq.

¹⁰¹ CEA §§ 6m and 6n, 7 U.S.C. §§ 6m and 6n. CEA § 2, 7 U.S.C. § 2 (creating CFTC?). The CFTC has jurisdiction over, among other things, the trading of commodity futures and commodity options. CEA §§ 2(a)(1)(A), 2(a)(1)(C)(ii) and 2(c), 7 U.S.C. §§ 2(a)(1)(A), 2(a)(1)(C)(ii) and 2(c). SHARTSIS, *supra* note 11, at 39 (explaining what CFTC has jurisdiction over).

¹⁰² CEA Rules 4.21-.26, 17 C.F.R. §§ 4.21-26 (CPO disclosure and related rules); CEA Rules 4.31-.36, 17 C.F.R. §§ 4.21-26 (CTA disclosure and related rules).

¹⁰³ CEA Rule 4.22(a), 17 C.F.R. § 4.22(a) (audited financial statements); CEA Rule 4.22(c), 17 C.F.R. § 4.22(c) (must provide investors with annual reports which include performance data and financial statements); CEA Rules 15.03, 18.00, 17 C.F.R. §§ 15.03, §18.00 (requiring certain positions to be reported to the CFTC).

¹⁰⁴ *E.g.*, CFTC Rule 4.13 (a)(3), 17 C.F.R. § 4.13 (exempting from registration as a CPO funds making private placements to accredited investors under Regulation D of the Securities Act) (August 8, 2003); CFTC Rule 4.13(a)(4) (exempting from registration as a CPO funds making a private placement to "qualified purchasers" under section 2(a)(51) of the Company Act).

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investing. Hedge funds in particular innovate by implementing novel investment strategies that decrease market risk. The legal regime applicable to hedge funds facilitates their innovation activities in two ways. The lack of federal restrictions on hedge fund investment activities enables the funds to innovate as demanded by industry conditions, and the unincorporate internal governance of the funds goes a step further to provide high-powered incentives to innovate.

A. Financial Innovation

A fundamental goal of the financial system is to facilitate investment activities by matching up investors that seek positive returns on their capital with firms seeking to raise financial capital by selling securities.¹⁰⁵ This goal is furthered when financial innovation decreases investment risk by, for example, increasing the range of available investment opportunities and the quality of information about the potential risks and rewards of an investment. Investment activity is also facilitated when innovation reduces transaction costs such as the inability to quickly exit an investment and the fees paid to third-party asset managers.¹⁰⁶ Ultimately, financial innovation enables investors to get the most out of their investment dollar.

Innovation is a process that entails the commercialization of a new idea and results in something new and valuable to consumers or producers.¹⁰⁷ Categories of innovations include new products for consumers (i.e., goods and services), new methods of production, and new forms of business organization.¹⁰⁸ Turning to the financial sector, financial product innovations such as exchange

¹⁰⁵ See Robert C. Merton, *Financial Innovation and Economic Performance*, 4 J. APPL. CORP. FIN. 12, 12 (1992) (“The primary function of the financial system is to facilitate the allocation and deployment of economic resources, both spatially and across time, in an uncertain environment.”).

¹⁰⁶ These activities reflect the broader goals of the financial system. See *id.*; STEPHEN G. CECCHETTI, MONEY, BANKING AND FINANCIAL MARKETS 4-7, 263-68 (2006). “Liquidity” means either the ease with which an investor has access to credit or can sell an asset without incurring a substantial loss. Stephen G. Cecchetti, *Federal Reserve Policy Actions in August 2007: Frequently Asked Questions*, VoxEU.org, August 13, 2007, <http://www.voxeu.org/index.php?q=node/460>.

¹⁰⁷ Jan Fagerberg, *Innovation: A Guide to the Literature*, in THE OXFORD HANDBOOK ON INNOVATION 4 (JAN FAGERBERG, DAVID C. MOWERY & RICHARD R. NELSON EDS. 2005) (“Invention is the first occurrence of an idea for a new product or process, while innovation is the first attempt to carry it out in practice.”) [hereinafter HANDBOOK ON INNOVATION]; Elspeth McFadzean, Andrew O’Loughlin & Elizabeth Shaw, *Corporate Entrepreneurship and Innovation Part 2: A Role- and Process-Based Approach*, 8 EUR. J. INNOVATION MGMT. 393, 395 (2005) (innovation involves an idea discovery phase and a commercialization phase); CORPORATE GOVERNANCE, MARKET STRUCTURE AND INNOVATION 3 (Mario Calderini, Paola Garrone & Maurizio Sobrero eds. 2003) (innovation begins “with the generation of new knowledge targeted to the discovery of new products and processes, and ending with their commercial exploitation”); MARY O’SULLIVAN, CONTESTS FOR CORPORATE CONTROL: CORPORATE GOVERNANCE AND ECONOMIC PERFORMANCE IN THE UNITED STATES AND GERMANY 12 (innovation generates “higher quality and/or lower-cost products”).

¹⁰⁸ See JOSEPH A. SCHUMPETER, THE THEORY OF ECONOMIC DEVELOPMENT: AN INQUIRY INTO PROFITS, CAPITAL, CREDIT, INTEREST, AND THE BUSINESS CYCLE 66 (Transaction ed. 1983) (1934) (innovation consists of new goods, new methods of production, exploitation of new markets and sources of supply, and new forms of organization).

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traded funds have lowered the cost of investing in funds with returns correlated to unique market sectors such as financial companies or the Chinese economy,¹⁰⁹ and financial services innovations such as discount online brokerages like E*Trade Financial have lowered the transaction costs of securities trading for retail investors. In addition, innovations in financial production methods (or financial engineering) such as electronic record keeping of securities, new financial instruments, and application of the Black-Scholes option pricing model and other quantitative techniques help to better manage risk and increase liquidity.¹¹⁰ Financial organizational innovations such as the NASDAQ private trading platform established by several major investment banks have increased the liquidity of private securities traded among certain qualified institutional buyers.¹¹¹

B. How Hedge Funds Innovate

Hedge funds innovate by creating new and often complex investment strategies that may build upon innovations in trading instruments and financial engineering. Although hedge fund innovation may come at the expense of increasing investment transaction costs and investors' exposures to hedge fund-specific risks, the net impact of such innovation is generally to reduce exposures to market risk and specific systematic market risk factors, thereby helping to diversify an investment portfolio.

1. Investing and Diversification

Investors benefit from receiving the highest returns on the capital they invest. One source of higher investment returns is investor or manager skill in implementing investment strategies. Manager skill is typically measured and represented by the quantity alpha (α). Another source of higher returns is higher risk. Risk is the chance that the securities purchased to make an investment will decrease in price and thereby impart a loss to the investor.¹¹² Higher risk is a source of higher returns because investors must be compensated for taking greater risks.¹¹³ For example, stocks typically have higher returns than bonds because

¹⁰⁹ For example, iShares exchange traded fund securities, which are distributed by a subsidiary of Barclays Global Investors, track the value of the U.S. financial sector and Chinese stocks. See Dow Jones U.S. Financial Sector Index Fund, http://www.ishares.com/product_info/fund/overview/IYF.htm; FTSE/Xinhua China 25 Index Fund, http://www.ishares.com/product_info/fund/overview/FXI.htm.

¹¹⁰ W. Scott Frame & Lawrence J. White, *Empirical Studies of Financial Innovation: Lots of Talk, Little Action?*, 42 J. ECON. LIT. 116, 120 (2004). For an overview of innovations in financial instruments and their role in reducing risk and increasing liquidity see generally John D. Finnerty & Douglas R. Emery, *Corporate Securities Innovation: An Update*, J. APP. FIN. (2002).

¹¹¹ See Frame & White, *supra* note 110, at 118; Lynn Cowan, *Banks to Share Platform for 144A Trades*, WALL ST. J., Nov. 12, 2007, at C3.

¹¹² Burton G. Malkiel, *A Random Walk Down Wall Street*, in FOUNDATIONS OF CORPORATE LAW 29, 29 (Roberta Romano ed. 1999).

¹¹³ See *id.* at 35; RICHARD A. BREALY ET AL., PRINCIPLES OF CORPORATE FINANCE 193-94 (8th ed. 2006) (reviewing empirical evidence of the risk-return relationship).

taking an equity position in a company to share in its profits is generally riskier than making that company a loan.¹¹⁴

Modern portfolio theory focuses on those returns attributable to risk and teaches that investors should seek to maximize risk-adjusted returns.¹¹⁵ Risk-adjusted return is a measure of how much risk an investor must take on to earn a certain level of return. Higher risk-adjusted returns gives investors greater assurance that they will receive the return expected from an investment and not suffer a loss.¹¹⁶ Financial risk is typically measured by calculating the standard deviation of an investment's return, which shows how likely it is that the investment will produce a return either greater or less than its average historical return.¹¹⁷ Other measures of risk focus solely on the likelihood that an investment may impart a loss to the investor or fail to achieve a specific investment goal. For example, the value-at-risk measure shows how much an investor can expect to lose over a given time period, and the shortfall risk measure shows the likelihood of an investor not achieving, or falling short of, a desired rate of return.¹¹⁸ Risk-adjusted returns are maximized when, taking into account the different measures of risk, an investor is receiving the highest possible return for the total amount of risk they are taking on.¹¹⁹ In deciding among different investments, investors should choose a combination of risk and return consistent with their investment goals and tolerance for risk.

Overall investment risk has two components, idiosyncratic risk and market (or systematic) risk. Idiosyncratic risks are losses that arise from the particular circumstances of a company or related issuers, such as management quality and employee retention.¹²⁰ Market risk, by contrast, is the risk that the price of a security, and hence the value of an investment, will move up or down along with fluctuations in the overall market.¹²¹ Market risk arises because economywide

¹¹⁴ BREALY ET AL., *supra* note 113, at 147-49.

¹¹⁵ Modern portfolio theory was first developed by Nobel prize-winning economist Harry Markowitz in the 1950s. *See* Harry M. Markowitz, *Portfolio Selection*, 7 J. FIN. 77 (1952); HARRY M. MARKOWITZ, *PORTFOLIO SELECTION: EFFICIENT DIVERSIFICATION OF INVESTMENTS* (1959).

¹¹⁶ LHABITANT, *supra* note 10, at 455.

¹¹⁷ Malkiel, *supra* note 112, at 29-30.

¹¹⁸ LHABITANT, *supra* note 10, at 443-44.

¹¹⁹ The Sharpe ratio is the most common way of measuring risk-adjusted returns. A Sharpe ratio is calculated by dividing an investment's return in excess of the return to a hypothetical "risk-free" investment (typically proxied by the return on the ninety-day U.S. Treasury bill) by the standard deviation of the returns. *See* LEDERMAN, *supra* note 11, at § 1:3, 1-18; LHABITANT, *supra* note 10, at 455. The Sortino ratio is another measure of risk-adjusted returns which incorporates the downside risk measures by comparing an investment's return to its risk of incurring a level of losses below some minimum acceptable amount. *See id.* at 472-73; HEDGE.CO.NET, *SHARPE VS SORTINO RATIO* (2003), <http://www.hedgeco.net/sharpe-ratio-sortino-ratio.htm>.

¹²⁰ BREALY ET AL., *supra* note 113, at 162. Unique risk is also referred to in the finance literature as "unsystematic" risk or "idiosyncratic" risk. *See* Malkiel, *supra* note 112, at 34.

¹²¹ Unless otherwise noted, this Article adopts the standard convention of measuring "the market" by the value of the Standard and Poor's 500 Index, which tracks the stock prices of 500 of the largest public companies operating in the U.S. *See, e.g.,* Richard Roll & Stephen A. Ross, *The*

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changes often impact a significant if not overwhelming portion of individual companies and other issuers, and thereby cause the prices of securities of different companies to move up or down together.¹²²

Although a security with higher returns will tend to have higher risk, diversification can reduce overall investment risk without reducing returns. To diversify means to broaden the different sources of investment risk to which an investor is exposed. Diversification entails investing in a portfolio of numerous securities from a wide range of issuers and types of assets (e.g., stocks, bonds, commodities, real estate).¹²³ As explained by Nobel Prize-winning economist James Tobin, diversification cautions investors against putting all their “eggs in one basket.”¹²⁴ Diversification reduces risk to the extent the returns of different securities are independent of one another, i.e., have a low correlation.¹²⁵ Low correlation means that when some securities perform poorly, others may perform well, and the net effect is to insulate a portfolio from overall losses. Diversification reduces idiosyncratic risk because losses stemming from the unique circumstances of any single issuer are not correlated with losses from others.¹²⁶ Empirical research shows that idiosyncratic risk can be minimized by purchasing the securities of approximately 20 different companies.¹²⁷

Once a portfolio is diversified with respect to idiosyncratic risk, the remaining risk to an investment portfolio comes from market risk.¹²⁸ Properly understood, risk is therefore not about the risk of individual securities, but rather a portfolio-level issue regarding the impact that *adding* securities has on the likelihood of the portfolio experiencing losses.¹²⁹ Market risk is the sensitivity of a portfolio’s or an individual security’s price to movements in the general market, and it is measured by the quantity known as beta (β).¹³⁰ A portfolio with a beta equal to 1 will perfectly mirror returns of the market; a portfolio with a beta of 0 is “market neutral” and will not change in response to changes in the market; a beta of -1 means a portfolio will return the exact opposite of the market (e.g., a 10 percent market gain will result in a 10 percent loss); and a beta of two will have returns with double the magnitude of the market (in either direction).¹³¹

Arbitrage Pricing Theory Approach to Strategic Portfolio Planning, FIN. ANAL. J. 122, 128 (1995).

¹²² BREALY ET AL., *supra* note 113, at 162; Malkiel, *supra* note 112, at 34.

¹²³ Malkiel, *supra* note 112, at 32.

¹²⁴ James Tobin, Recipient of the 1981 Alfred Nobel Memorial Prize in Economic Sciences, Lecture at Trinity University (April 30, 1985).

¹²⁵ See Malkiel, *supra* note 112, at 32–33.

¹²⁶ BREALY ET AL., *supra* note 113, at 161–62.

¹²⁷ *Id.* at 162.

¹²⁸ See BREALY ET AL., *supra* note 113, at 167; Malkiel, *supra* note 112, at 35–36.

¹²⁹ LHABITANT, *supra* note 10, at 540.

¹³⁰ BREALY ET AL., *supra* note 113, at 167.

¹³¹ *Id.* Stocks of relatively risky companies such as Amazon.com have higher betas than those of staples of the economy such as Coca-Cola. From January 1999 to December 2003, the beta of Amazon.com was 2.22 whereas it was 0.28 for Coca-Cola. *Id.* at 168.

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Diversification can decrease market risk by purchasing securities from different asset classes because securities from different classes are exposed to different sources of risk.¹³² For example, stocks are generally exposed to fluctuations in the overall economy, while bonds are exposed to changes in interest rates.¹³³

The capital asset pricing model shows that investors are generally awarded higher returns only for investing in securities with more market risk (higher beta).¹³⁴ To maximize risk-adjusted returns, investors should therefore invest in an efficient portfolio yielding the highest return for the level of market risk they are willing to bear.¹³⁵ Because returns are dependent upon manager skill (α) and market risk (β), this relationship can be expressed mathematically as

$$R_p = \alpha + \beta R_m$$

where R_p is the return to a portfolio and R_m the return of the general market.¹³⁶

Arbitrage Pricing Theory (APT) goes one step further by unpacking market risk and return into various components.¹³⁷ Under APT, the return to a portfolio of securities is not simply dependent on economywide changes and a portfolio's sensitivity to those changes in the aggregate, but upon changes in several market risk factors such as interest rates, foreign exchange rates, and changes in inflation forecasts.¹³⁸ Accordingly, there are not one but several different betas, each reflecting the sensitivity of a portfolio to a specific market risk factor. If, for example, the return to a portfolio (R_p) is dependent upon manager skill and interest rates, exchange rates, and inflation, this relationship can be expressed as

$$R_p = \alpha + \beta_1 R_{INT} + \beta_2 R_{FOREX} + \beta_3 R_{INF}$$

where β_1 represents the sensitivity of the portfolio to interest rates and R_{INT} is the change in the interest rate, β_2 is the sensitivity of the portfolio to foreign exchange fluctuations and R_{FOREX} is the change in foreign exchange rates, and β_3 is the sensitivity of the portfolio to inflation and R_{INF} is the change in the inflation rate. As with market risk, diversification across asset classes can decrease losses from systematic risk factors because the returns to such securities are relatively uncorrelated.¹³⁹ In sum, diversification among securities and across classes of

¹³² LHABITANT, *supra* note 10, at 539-541.

¹³³ *Id.* at 548.

¹³⁴ BREALY ET AL., *supra* note 113, at 188-89; Malkiel, *supra* note 112, at 35.

¹³⁵ BREALY ET AL., *supra* note 113, at 182-85.

¹³⁶ M. Barton Waring & Laurence B. Siegel, *The Myth of the Absolute-Return Investor*, 6 *Fin. Anal. J.* 12, 15 (2006); FILIPPO STEFANINI, INVESTMENT STRATEGIES OF HEDGE FUNDS 69-70 (2007).

¹³⁷ *See, e.g.*, Rall & Ross, *supra* note 121, at 122-26 (reviewing APT).

¹³⁸ BREALY ET AL., *supra* note 113, at 199.

¹³⁹ *See* Rall & Ross, *supra* note 121, at 122 (noting that “[d]ifferent portfolios have different sensitivities to these [systematic risk] factors” such that a “portfolio that is so hedged as to be insensitive to these factors . . . is essentially riskless”); *id.* at 127 (“Altering the mix of stocks and

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securities reduces a portfolio's overall investment risk and thereby facilitates the maximization of risk-adjusted returns.

2. Transaction Costs and Idiosyncratic Risk

Constructing an efficient portfolio requires an investor to minimize transaction costs. Diversification requires a substantial level of financial acumen, time, capital, and other resources to search for and monitor investment opportunities. Furthermore, investors with relatively small amounts of capital face high transaction costs in attempting to diversify by directly investing in multiple separate issuers of securities.¹⁴⁰ Investment intermediaries such as banks, mutual funds, and hedge funds reduce transaction costs by utilizing their specialized skills and resources to inform or make informed investment decisions for others, and by operating on a large enough scale to take advantage of scale economies.¹⁴¹ Investment intermediaries do, however, introduce transaction costs that investors would not bear if investing on their own, and differ among themselves in the fees and commissions they charge investors.

The two most economically significant investment intermediaries are depository institutions and registered investment companies.¹⁴² A depository institution is a financial intermediary whose primary source of funds are deposits and for which a substantial source of profit derives from earning interest in making loans.¹⁴³ Depository institutions include commercial banks, savings and loans institutions, and credit unions.¹⁴⁴ Depository institutions have introduced several innovations relevant to investors. They have decreased transaction costs by offering investors a place for safekeeping of their assets, easy access to cash, and a way to pool a small amount of capital with other small investors to benefit from returns (in the form of interest payments) on large loans to borrowers.¹⁴⁵ Furthermore, depository institutions allow investors to diversify and lower idiosyncratic risk by using depositors' funds to lend to numerous borrowers and using their superior knowledge and expertise in making and monitoring loans.¹⁴⁶ However, loan-making is inherently limited in its ability to maximize depositors' risk-adjusted returns. Banks are prohibited by law from owning stock in public companies, and can therefore only earn the relatively safer but relatively lower

bonds in the portfolio will certainly affect the amount and type of risk exposure" to systematic risk factors).

¹⁴⁰ KEVIN DOWD, *COMPETITION AND FINANCE: A REINTERPRETATION OF FINANCIAL AND MONETARY ECONOMICS* 25 (1996).

¹⁴¹ *Id.* at 114-120; CECCHETTI *supra* note 106, at 259. Of course, borrowers often raise funds directly by issuing securities such as stocks and bonds. *Id.*

¹⁴² CECCHETTI *supra* note 106, at 330-31.

¹⁴³ *Id.* at 286.

¹⁴⁴ *Id.*

¹⁴⁵ *Id.* at 264-67.

¹⁴⁶ *Id.* at 267-8; ALAN D. MORRISON & WILLIAM J. WILLHELM, JR., *INVESTMENT BANKING: INSTITUTIONS, POLITICS, AND LAW* 3 (2007) (noting that bank depositors "play no part in interpreting or gathering" the information that banks acquire from borrowers).

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returns on debt investing.¹⁴⁷ Banks are also restricted in their use of derivatives to hedging their loan-related risks,¹⁴⁸ which limits their ability to expose investors to a broader range of risk and return.

A registered investment company is a publicly available pooled investment fund that may take one of three legal forms in the U.S., open-end, closed-end, or as a unit investment trust. The most widely-utilized type of registered investment companies are mutual funds, which are a type of open-end investment company that sells daily-redeemable shares to individual and institutional investors that do not trade on secondary markets.¹⁴⁹ Closed-end registered investment companies offer fixed numbers of shares that trade on secondary markets.¹⁵⁰ Investment companies decrease transaction costs and idiosyncratic risk by typically investing in a diverse portfolio of securities. The mutual fund market is extremely differentiated with funds specializing in securities based upon types of assets (e.g., stocks, bonds, or money-market instruments), firm size (i.e., so-called large-cap, mid-cap or small-cap funds), sector (e.g., energy companies, technology companies), and/or geographic location (e.g., emerging markets).¹⁵¹

Mutual funds typically adopt a traditional, “long-only” investment strategy consisting of purchasing stocks and/or bonds, earning dividend or interest income, and ultimately selling the securities at a higher price.¹⁵² A mutual fund’s performance is evaluated by comparing a fund’s returns to the overall performance of the market or other relevant benchmark.¹⁵³ Mutual funds are an improvement over banks in the sense that they offer investors a relatively low-

¹⁴⁷ Gramm-Leach-Bliley Act §16, 12 U.S.C. § 24 (Seventh); 12 U.S.C. § 335; 12 C.F.R. pt. 1 (describing the different types of debt instruments in which banks may invest).

¹⁴⁸ Office of the Comptroller of the Currency Bulletin 96-43, Credit Derivative, Guidelines for National Banks, Aug. 12, 1996; LISSA L. BROOME & JERRY W. MARKAM, REGULATION OF BANKS FINANCIAL SERVICES ACTIVITIES: CASES AND MATERIALS 922 (2d ed. 2004) (noting that “a bank trading in derivatives for its own account must use that trading to offset some other risk. Speculation is not allowed.”).

¹⁴⁹ SEC, INVEST WISELY: AN INTRODUCTION TO MUTUAL FUNDS, <http://www.sec.gov/investor/pubs/inwsmf.htm> (“Legally known as an ‘open-end company,’ a mutual fund is one of three basic types of investment companies.”); Company Act § 4(3), 15 U.S.C. § 80a-4(3) (defining “management company”); Company Act § 5(a)(1), 15 U.S.C. § 80a-5(a)(1) (defining a management company as “open-end” if it “is offering for sale or has outstanding any redeemable security of which it is the issuer”). As registered investment companies that publicly raise capital from investors, mutual funds must comply with the Securities Act, Company Act, and Advisers Act, among other laws.

¹⁵⁰ SEC, *supra* note 149.

¹⁵¹ See Dustin Woodard, *Different Types of Mutual Funds*, About.com, http://mutualfunds.about.com/cs/buildingblocks/a/fund_types.htm.

¹⁵² LEDERMAN, *supra* note 11, at § 1:3, 1-16-17 (noting that traditional investment strategies consist of stock, bond, and other fixed-income investments).

¹⁵³ Bing Liang, *On the Performance of Hedge Funds*, 55 FIN. ANALYSTS J. 72, 72 (1999) (contrasting hedge funds with “mutual funds and other traditional investment vehicles” that evaluate returns relative to an external benchmark).

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cost method to invest in a diverse portfolio of stocks and bonds that typically earn higher returns than bank deposits.

However, the increased returns from mutual funds come with increased risk. By pursuing traditional long-only investment strategies, mutual fund returns reflect the standard trade-off between attaining higher returns at the expense of increasing risk. In particular, mutual funds investing in equities reward investors with higher returns at the expense of increasing exposures to market risk. Furthermore, investment company regulation hampers the ability of mutual funds and closed-end registered investment companies to decrease or diversify away market risk through the employment of non-traditional investment strategies or asset classes. First, the Company Act significantly increases the cost of registered investment companies' use of leverage, derivatives, and short sales.¹⁵⁴ To use leverage in the form of borrowing bank funds, a registered investment company must cover the debt by retaining assets equivalent to at least 300 percent of the borrowings.¹⁵⁵ Registered investment companies must also offset any short position and certain derivatives positions by a corresponding offsetting position or by holding liquid securities of an equivalent value in a segregated account.¹⁵⁶

Second, mutual funds in particular are prohibited from investing greater than 15 percent of the net value of their assets in illiquid securities, which includes the privately placed securities issued by hedge funds.¹⁵⁷ Mutual funds may also not utilize lock-ups because open-end investment companies must offer daily redemption of investors' shares.¹⁵⁸ Furthermore, mutual funds typically have relatively narrowly defined investment strategies and lack the flexibility to quickly adapt strategies to changing market conditions because deviating from an investment policy deemed "fundamental" requires shareholder approval.¹⁵⁹ Due to these constraints, mutual funds are limited in their ability to reduce their exposures to market risk, and are unable to do so without a concomitant reduction in returns. Accordingly, during economic downturns mutual funds typically remain invested in securities even as they continue to decrease in value.

¹⁵⁴ See generally Audrey Talley & James L. Love, *Restrictions on Investments*, in *MUTUAL FUND REGULATION*, Chapter 8 (2d ed. Clifford E. Kirsch 2007).

¹⁵⁵ Company Act § 18(c) (closed-end investment companies), § 18(f) (open-end investment companies).

¹⁵⁶ Emerald Management Co., SEC No-Action Letter (Jan. 21, 1978); LEDERMAN, *supra* note 11, at § 5:2.7, 5-28-29; Talley & Love, *supra* note 155, at §§ 3:3.1[B][3], 3-7—3-11. Although the SEC has authority under Section 12(a) of the Company Act to prohibit registered investment companies from undertaking short sales or purchasing securities on the "margin" (which is a form of borrowing), it has not exercised that authority.

¹⁵⁷ Investment Company Act Rel. No. 18,612. The SEC defines "illiquid" securities as those that cannot be sold at near their net asset value within 7 days. Acquisition and Valuation of Certain Portfolio Instruments by Registered Investment Companies, Investment Company Act Rel. No. 14,983, 51 Fed. Reg. 9,773 (Mar. 12, 1986); Investment Company Act Rel. No. 5,947, 35 Fed. Reg. 19,989 (Oct. 21, 1969).

¹⁵⁸ Company Act § 22(e).

¹⁵⁹ 15 U.S.C. § 8-a-13(a)(1)-(4); Talley & Love, *supra* note 155, at § 8.2.1[B]; LEDERMAN, *supra* note 11, at § 5:2.7, 5-27.

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3. Hedge Fund Investment Strategies and Market Risk

While depository institutions and mutual funds are a benefit to investors seeking to reduce investment transaction costs and idiosyncratic risk, hedge funds are uniquely able to reduce losses from market risk. In general, the hedge fund legal regime gives the funds the flexibility to efficiently employ leverage, short sales, and derivatives. Investment flexibility is an advantage of hedge funds because it allows underperforming funds to change their investment strategy and improve their performance.¹⁶⁰ The lack of legal restrictions on derivatives use is also an advantage of hedge funds, as the approximately 73 percent of hedge funds that employ derivatives (compared to 21 percent of mutual funds) have a lower risk of loss than those hedge funds that do not.¹⁶¹ Similarly, hedge funds generally use leverage to increase performance without engaging in excessive risk-taking. For instance, a 2005 study estimated that only 1.2 percent of hedge fund assets are insufficiently capitalized.¹⁶²

In contrast to mutual funds strategies that seek returns relative to an external market benchmark, hedge funds pursue absolute return strategies. An absolute return strategy seeks to achieve gains regardless of the direction of the overall market.¹⁶³ In 1949, Alfred Winslow Jones started the first absolute return strategy hedge fund by combining traditional long positions in stocks he believed would increase in price with short positions in the stocks of companies he believed would decrease.¹⁶⁴ Since that time, so-called “long-short equity” funds have become a major strategy employed by hedge funds, accounting for approximately 20 percent of the industry.¹⁶⁵

In addition to long-short equity, there are three other general types of hedge fund investment strategies that together encompass the overwhelming portion of funds in the industry. These strategies are relative value, corporate event driven, and directional funds. Relative value funds are those that employ the trading technique known as arbitrage, which seeks to profit from a price discrepancy between two securities that is expected to change.¹⁶⁶ Convertible bond arbitrage funds, for example, seek gains based upon a temporary mismatch between the price of a corporate bond and the stock of the company that the convertible bondholder has a right to convert the bond into.¹⁶⁷ Convertible bond

¹⁶⁰ See Ramin Baghai-Wadji & Stefan Klocker, *Performance and Style Shifts in the Hedge Fund Industry* 33-34, 36-37 (Vienna University of Economics and Business Administration Working Paper, 2006), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=920444.

¹⁶¹ Yong Chen, *Derivatives Use and Risk Taking: Evidence from the Hedge Fund Industry* 1 (Boston College Working Paper, Sept. 12, 2006).

¹⁶² Anurag Gupta & Bing Liang, *Do Hedge Funds Have Enough Capital? A Value-At-Risk Approach*, 77 J. FIN. ECON. 219, 248 (2005).

¹⁶³ LEDERMAN, *supra* note 11, at § 1:3, 1-17; LHABITANT, *supra* note 10, at 32.

¹⁶⁴ LHABITANT, *supra* note 10, at 8-10.

¹⁶⁵ BARTH ET AL., *supra* note 37, at 19.

¹⁶⁶ STEFANINI *supra* note 136, at 14.

¹⁶⁷ *Id.* at 99-100; LHABITANT, *supra* note 10, at 279-84.

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arbitrage strategies were first utilized by the proprietary trading desks of large investment banks.¹⁶⁸ Another type of relative value strategy are fixed income strategies specializing in mortgage-backed securities (MBS) arbitrage. An MBS is a security that pays investors periodic interest payments stemming from a pool of underlying mortgage payments.¹⁶⁹ The first MBS was introduced in 1978 and hedge funds pioneered the arbitrage of MBS by using innovative models to value the cash flows of an MBS. The interest rate risk that MBS securities are exposed to are typically hedged by short positions in Treasury bonds (or derivatives).¹⁷⁰ Other relative value trading strategies include fixed income arbitrage and equity market neutral funds.¹⁷¹

Corporate event driven strategies seek to profit from trades based upon extraordinary events in a company such as mergers or bankruptcies.¹⁷² Merger arbitrage hedge funds, for example, typically purchase the stock of a company that has just announced that it will be acquired and sell short the stock of the acquiring company with the expectation that the acquiring company's stock will fall after the acquisition and the acquired company's stock will increase.¹⁷³ Other event driven funds include those that invest in distressed securities and engage in corporate activism.¹⁷⁴

Directional investment strategies seek gains from major trends in the market. Global macro funds, for example, invest in a broad array of financial instruments based upon an analysis of macroeconomic conditions in various countries and taking into account such factors as gross domestic product, demographics, and currency exchange rates.¹⁷⁵ In the early 1990s, the global macro hedge funds of George Soros, Julian Robertson, and others pioneered taking large and leveraged positions in foreign currencies.¹⁷⁶ Although global macro funds accounted for approximately 32 percent of hedge fund assets in 1994, by 2004 10 percent of fund assets were involved with the strategy.¹⁷⁷

Hedge funds have also furthered innovation by becoming leading buyers and sellers of innovative financial instruments such as collateralized debt obligations (CDO) and credit default swaps (CDS). A CDO is a debt-like security composed of a pool of different types of bonds. Investors purchase a specific "tranche" of CDOs, and the risk of each tranche is based upon the priority with

¹⁶⁸ LHABITANT, *supra* note 10, at 287-88.

¹⁶⁹ STEFANINI *supra* note 136, at 167.

¹⁷⁰ *Id.* at 173-174.

¹⁷¹ For general descriptions of these sub-strategies *see* LHABITANT, *supra* note 10, at 197-214, 297-310.

¹⁷² STEFANINI *supra* note 136, at 14.

¹⁷³ *Id.* at 75-76, 82-83.

¹⁷⁴ *Id.* at 14.

¹⁷⁵ *Id.* at 239-40.

¹⁷⁶ *Id.* at 240-41; LHABITANT, *supra* note 10, at 12-15, 327-50.

¹⁷⁷ BARTH ET AL., *supra* note 37, at 19.

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which the investor is paid if borrowers in the underlying bonds fail to make timely payments.¹⁷⁸ A CDS is a derivatives contract in which a CDS seller agrees to provide protection to a CDS buyer in the event that a loan obligation to the buyer from a third party is not fully completed. In exchange for periodic payments, a CDS seller may agree to pay the value of the loan to the CDS buyer in the event of default. Hedge funds that invest in CDOs often do so in conjunction with CDSs.¹⁷⁹ Hedge funds have also utilized CDSs to profit from inefficiencies in the relative prices of a company's equity and debt securities,¹⁸⁰ and have become leading sellers of CDSs which help banks reduce their exposure to the risk of loan defaults.¹⁸¹

The foregoing innovative hedge fund investment strategies have the general effect of reducing market risk and exposures to systematic risk factors. This is demonstrated by the funds exhibiting betas lower than equity mutual funds, both in the aggregate and across the vast majority of specific fund strategies.¹⁸² As shown in Figure 1, the main hedge fund strategies have a lower average beta than equity mutual funds when equity mutual funds are separated into low, medium, and high beta mutual funds.¹⁸³ Indeed, even equity mutual funds with relatively low betas are still higher than the hedge fund strategy with the highest average beta (global macro).¹⁸⁴

¹⁷⁸ STEFANINI *supra* note 136, at 159-60.

¹⁷⁹ *Id.* at 163-65.

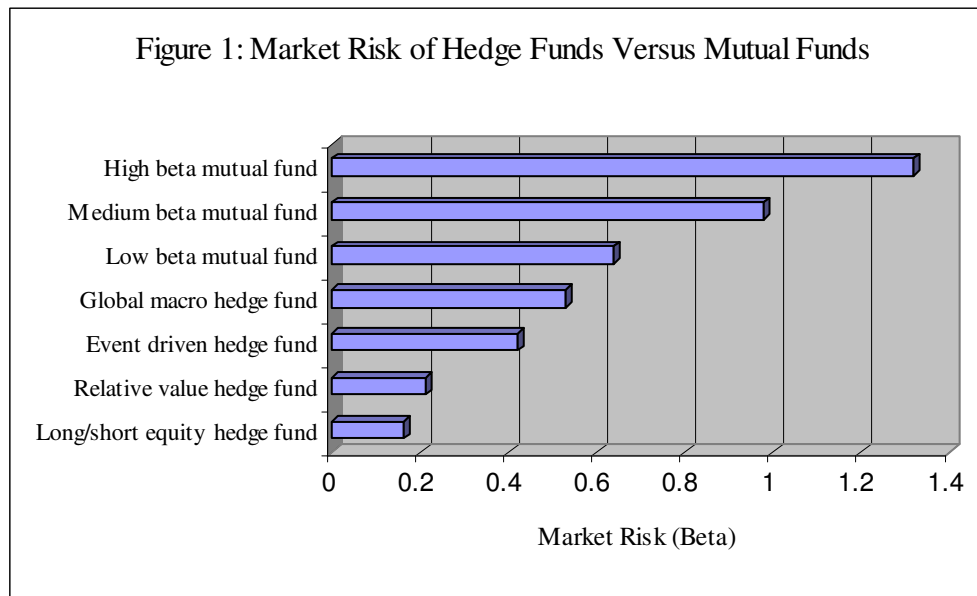
¹⁸⁰ Dragon Y. Tang & Hong Yan, *Liquidity, Liquidity Spillover, and Credit Default Swap Spreads* 4 (Working Paper July 31, 2006).

¹⁸¹ Amanda Cantrell, *Derivatives: Popular, Risky, Scrutinized*, CNN/Money, Sept. 24, 2005.

¹⁸² See Bing Liang, *On the Performance of Hedge Funds*, 55 FIN. ANALYSTS J. 72, 79, 78 (1999) (noting that "hedge funds are absolute performers with no relative benchmark" and finding empirically that "the low beta value for hedge fund groups indicate that hedge funds have low systematic risk"); Daniel Capocci & Georges Hübner, *Analysis of Hedge Fund Performance*, 11 J. EMPIRICAL FIN. 55, 73 tabl. 5 panel C (2004) (estimating the betas and alphas of hedge funds by strategy from 1994 to 2000).

¹⁸³ Capocci & Hübner, *supra* note 182, at 73 tabl. 5 panel C; John M.R. Chalmers et al., *On the Perils of Financial Intermediaries Setting Security Prices: The Mutual Fund Wild Card Option*, 57 J. FIN. 2209, 2217 tabl. III (2001) (estimating equity mutual fund betas from February 1, 1998 to March 30, 2000).

¹⁸⁴ While Figure 1 is an accurate reflection of average market correlations by broad classifications of hedge funds and equity mutual funds, significant numbers of individual hedge funds have higher betas than mutual funds and significant numbers of individual mutual funds have lower betas than hedge funds.



Furthermore, hedge funds have relatively low correlation to market risk when market risk is unpacked into systemic risk factors. In a comparison of hedge fund returns with those of mutual funds based upon how sensitive each is to standard systemic risk factors (such as changes in stock prices, bond prices, and the value of the dollar), Fung and Hsieh found that hedge funds have a relatively low correlation to standard systematic factors compared to mutual funds.¹⁸⁵ Fung and Hsieh also applied APT to determine what specific systematic risk factors are common to hedge funds.¹⁸⁶ They found that hedge funds are exposed to a set of non-standard systematic risk factors such as the difference between returns to small and large cap stocks.¹⁸⁷ Accordingly, hedge fund innovation helps to diversify a portfolio by lowering standard market risks and broadening the sources of risk to which investors are exposed.

4. Unique Costs and Risks of Hedge Fund Innovation

Although hedge fund innovation reduces exposures to market risk and standard systematic risk factors, it would be premature to conclude on such a basis that the funds thereby reduce overall investment risk. This is because investors may be worse off if the net effect of hedge funds decreasing standard market risks while increasing non-standard risks results in a higher overall risk of loss. The benefits of hedge fund innovation must be weighed against the costs and risks unique to investing in hedge funds. First, hedge funds have unique

¹⁸⁵ See William K.H. Fung & David A. Hsieh, *Hedge Funds: An Industry in Its Adolescence*, 91 *ECON. REV.* 1, 8 (2006).

¹⁸⁶ William Fung & David A. Hsieh, *Empirical Characteristics of Dynamic Trading Strategies: The Case of Hedge Funds*, 10 *REV. FIN. STUD.* 275 (1997); William Fung & David A. Hsieh, *Hedge Fund Benchmarks: A Risk-Based Approach*, 60 *FIN. ANAL. J.* 65 (2004) (noting that, like the APT, their “hedge fund risk-factor model similarly helps investors identify the common sources of risk”).

¹⁸⁷ Fung & Hsieh, *supra* note 188, at 71.

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transaction costs because, unlike making bank deposits or purchasing mutual fund shares, hedge funds charge performance fees and place constraints on investors' ability to immediately withdraw capital.¹⁸⁸

In addition, notwithstanding their typically low correlation to market movements, hedge fund returns may become more correlated to general market trends during downturns.¹⁸⁹ And unlike traditional stocks and bonds whose returns are normally distributed like a bell curve, hedge fund returns are asymmetric. The funds' returns exhibit the "higher moment" return properties of negative skew and high kurtosis.¹⁹⁰ This means that when hedge fund returns are negative, their losses may be very large. Indeed, this large loss risk may increase as more hedge funds are added to a portfolio.¹⁹¹ The source of hedge funds' higher moment return properties has its origins in the legal regime under which they operate. Skewness and kurtosis result from federal securities law enabling the funds to short sell, use leverage and derivatives, and make illiquid investments.¹⁹² Furthermore, the option-like payoff structure resulting from hedge funds' contractual performance allocation also leads to higher moment risk properties.¹⁹³ To deal with higher moment returns and other unique risk properties, hedge funds have implemented innovative risk management techniques that are often built into their trading strategies.¹⁹⁴

¹⁸⁸ See *infra* Section II.D.3 regarding the economic impact of hedge fund redemption restrictions.

¹⁸⁹ Monica Billio, Mila Getmansky & Loriana Pelizzon, *Phase-Locking and Switching Volatility in Hedge Funds* 38 (Department of Economics, Ca' Foscari University of Venice Working Paper, November 2006) (finding "that exposures [to market factors] can be strongly different in the down-market regimes compared to normal times suggesting that risk exposures of hedge funds in the down-market regimes are quite different than those faced during normal regimes"); Javier Mencía, *Testing Dependence Between Financial Returns, An Application to the Hedge Fund Industry* 3 (Bank of Spain Working Paper, January 2006) (finding that "when strong shocks to the market occur, [hedge funds'] diversification benefits seem to deteriorate due to non-linear dependence"), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=870000. But see Nicole M. Boyson, Christof W. Stahel & Rene M. Stulz, *Is There Hedge Fund Contagion?* 30 (National Bureau of Economic Research Working Paper, February 4, 2006) (finding no evidence that extreme losses in currency and equity markets are correlated to extreme losses in the hedge fund sector).

¹⁹⁰ See, e.g., Chris Brooks, & Harry M. Kat, *The Statistical Properties of Hedge Fund Index Returns and Their Implications for Investors*, 5 J. ALT. INVESTMENTS 26 (2002); Burton G. Malkiel & Atanu Saha, *Hedge Funds: Risk and Return*, 61 FIN. ANALYSTS J. 80, 80 (2005).

¹⁹¹ E.g., Harry M. Kat, *Integrating Hedge Funds into the Traditional Portfolio*, in HEDGE FUNDS: INSIGHTS IN PERFORMANCE MEASUREMENT, RISK ANALYSIS AND PORTFOLIO ALLOCATION 3, 3-15 (Greg N. Gregoriou et al. eds., 2005) [hereinafter HEDGE FUND INSIGHTS]; François-Serge Lhabitant & Michelle Learned, *Hedge Fund Diversification: How Much is Enough?* 3-4 (FAME Research Working Paper No. 52, July 2002).

¹⁹² Angelo Ranaldo & Laurent Favre, *How to Price Hedge Funds: From Two-to-Four-Moment CAPM* 6-8 (EDHEC Risk Management and Research Center Working Paper, October 2003).

¹⁹³ *Id.*

¹⁹⁴ ARMELLE GUIZOT, THE HEDGE FUND COMPLIANCE AND RISK MANAGEMENT GUIDE 108-133 (2007) (noting the approaches to risk management that hedge funds have and should adopt); LHABITANT, *supra* note 10, at 468 (noting that "[m]ore recently, several researchers have provided

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Yet despite hedge funds' unique risk properties, the funds nonetheless exhibit lower overall risk than the market. To adequately measure the net impact of hedge funds on overall investment risk, downside risk measures must be utilized.¹⁹⁵ One such measure is the maximum drawdown, which calculates the most an investor could lose over a time period. Comparing the maximum drawdown of hedge funds to that of other asset classes from January 1994 to December 2005, Lhabitant found that hedge funds had less risk than all asset classes except government bonds.¹⁹⁶ For example, whereas maximum drawdowns for the NASDAQ and S&P 500 stock indices were 75.03 percent and 46.28 percent respectively, the worst loss an investor in a diversified portfolio of hedge funds could have experienced was 13.81 percent. Innovation by hedge funds therefore has the net impact of lowering overall investment risk.¹⁹⁷ How and to what extent adding hedge funds to a traditional portfolio of stocks and bonds decreases risk depends on several factors, such as what assets the portfolio is already composed of and what particular funds are added.¹⁹⁸

new perspectives on measuring portfolio performance [and risk] . . . these measures are gaining ground in the hedge fund industry”).

¹⁹⁵ See, e.g., Hilary Till, *Risk Considerations Unique to Hedge Funds*, QUANTITATIVE FIN. 409-11 (2002); Natalya Lyzanets & Maksym Senchyna, *Comparing Different Value-at-Risk Models for Hedge Funds*, University of Lausanne Working Paper, October 2005; Daniel Giamouridis & Ntoula Ioanna, *A Comparison of Alternative Approaches for Determining the Downside Risk of Hedge Fund Strategies* (Cass Business School Research Paper, October 2006); Martin Eling, *Performance Measurement of Hedge Funds Using Data Envelopment Analysis*, 20 FIN. MARKETS PORTFOLIO MGMT. 4 (2006).

¹⁹⁶ LHABITANT, *supra* note 10, at 520, fig. 23.3.

¹⁹⁷ See Jean-François Bacmann & Gregor Gawron, *Fat-Tail Risk in Portfolio of Hedge Funds and Traditional Investment*, in HEDGE FUND INSIGHTS, *supra* note 191, at 491-513 (demonstrating that “the risk of a traditional portfolio is reduced when hedge funds are added.”); R. McFall Lamm Jr., *Asymmetric Returns and Optimal Hedge Fund Portfolios*, J. ALT. INVESTMENTS 6, 9-21 (2003) (“[O]ptimal hedge fund portfolios should have up to a 30% smaller allocation to distressed debt than symmetric return models indicate . . . offset by larger allocations to equity market neutral, rotational, and systematic macro strategies, which produce more positively skewed portfolios.”); Jan-Hein Cremers, Mark Kritzman & Sebastien Page, *Optimal Hedge Fund Allocations: Do Higher Moments Matter?*, 32 J. PORTFOLIO MGMT. 70, 70 (2005) (finding that “higher moments of hedge funds do not meaningfully compromise the efficacy of mean-variance optimization” where investors are generally risk averse); Niclas Hagelin, Bengt Pramborg & Fredrik Stenberg, *Hedge Fund Allocation under Higher Moments and Illiquidity*, in HEDGE FUND INSIGHTS, *supra* note 191, at 105-128 (finding that “gains from allocating into hedge funds occur even when possible effects of deviations from normality”); Jean Brunel, *Revisiting the Role of Hedge Funds in Diversified Portfolios*, in HEDGE FUND INSIGHTS, *supra* note 191, at 129-49 (concluding that despite hedge funds' unique risks, “there is indeed a role for nontraditional, hedge fund-type strategies in diversified portfolios”); Ivilina Popova, et al., *Optimal Hedge Fund Allocation with Asymmetric Preferences and Distributions* (Seattle University Economics & Finance Working Paper, May 1 2006) (showing “that conditional on the investor's objective, a substantial allocation to hedge funds is justified even with consideration for the highly unusual skewness and kurtosis”), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=900012.

¹⁹⁸ See Bacmann & Gawron *supra* note 197, at 512 (“[T]he benefits of the inclusion of hedge funds in a traditional portfolio depend on the initial composition of the portfolio and on the type of hedge fund added to the portfolio.”); Lhabitant & Learned, *supra* note 191, at 3-4.

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Because hedge funds can decrease net risk while nonetheless delivering gains estimated to average between nine to 12 percent annually,¹⁹⁹ the equations in Section II.B.1 imply that the funds must do so by reducing betas and increasing alpha, or demonstrating managerial skill. Indeed, numerous studies document that hedge funds generally achieve risk-adjusted returns superior to those of traditional long-only investments in the aggregate and across the vast majority of specific fund strategies.²⁰⁰ Alpha is therefore a measure of gains to investors from financial innovation.

C. Why Hedge Funds Must Innovate

The nature of the hedge fund business typically requires the funds to innovate on a regular basis. The basic business model of a hedge fund is based upon a manager “believ[ing] he has a set of *skills that could earn above average risk adjusted returns.*”²⁰¹ The type of skill required for a successful hedge fund is skill in generating new and unique knowledge about the future prices of securities or derivatives, or skill in generating trading strategies to better exploit existing information about the prices of financial instruments. This business model can only be successful if the fund innovates by continually developing and implementing valuable, unique, and not-easily-copied investment strategies.²⁰² Because financial markets tend to quickly reflect public information about the prices of securities, the potential gains from a single arbitrage or other investment strategy is inherently limited. Due to this “capacity effect” or diminishing returns to scale, hedge funds may have an optimal size and often close themselves to new capital to avoid decreasing total profits and hence performance-based allocations.²⁰³ To be able to increase assets under management without reducing overall returns, hedge funds must therefore implement new investment strategies.

¹⁹⁹ See, e.g., Peng Chen & Roger Ibbotson, *The A,B,Cs of Hedge Funds: Alphas, Betas, and Costs* 176 (Yale International Center for Finance, Working Paper No. 06-10, September 2006) (finding the compounded annual return for hedge funds from 1995 to April 2006 to be 9%); Henry M. Kat & Joëlle Miffre, *The Impact of Non-Normality Risks and Tactical Trading on Hedge Fund Alphas* 7-8 (Cass Business School, City University London Faculty of Finance Working Paper Series WP-FF-21-2005, May 24, 2006) (finding an annualized average return from hedge funds of 12% from January 1985 to August 2004).

²⁰⁰ See Robert Kosowski, Narayan Y. Naik & Melvin Teo, *Do Hedge Funds Deliver Alpha? A Bayesian and Bootstrap Analysis*, 84 J. FIN. ECON. 229, 262-63 (2007); Bill Ding & Hany A. Shawky, *The Performance of Hedge Fund Strategies and the Asymmetry of Return Distributions*, 13 EUR. FIN. MGMT. 309, 329 (2007) (finding that from 1990 to 2003, all hedge fund categories achieved above average performance when measured against an aggregate equity market index); Robert; Chen & Ibbotson, *supra* note 199, at 14 (finding that “when combined with stock, bond, and cash portfolios, hedge funds add positive alpha and excellent diversification”); Kat & Miffre, *supra* note 199, at 16-17 (finding the representative hedge fund manager to have superior trading skills but noting that previous studies and their own may overstate alpha); Capocci & Hübner, *supra* note 182, at 77 (finding that hedge funds as a whole “[d]eliver significant excess returns”).

²⁰¹ Fung & Hsieh, *supra* note 185, at 2 (emphasis in original).

²⁰² See generally Jay Barney, *Firm Resources and Sustained Competitive Advantage*, 17 J. MGMT. 99 (1991).

²⁰³ Manuel Ammann & Patrick Moerth, *Impact of Fund Size on Hedge Fund Performance*, 16 (Working Paper Series in Finance No. 11, Sept. 2005) (finding “a negative relationship between

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Competitive pressures in the hedge fund industry also drive innovation. Barriers to entry in the hedge fund industry are low.²⁰⁴ As additional managers enter the industry and capital continues to flow into the funds, superior returns may decrease as new participants compete away the profits of managers that demonstrate above-average skill.²⁰⁵ Furthermore, because trading strategies are not afforded intellectual property rights, hedge fund managers often go to great lengths to protect their proprietary strategies and investment positions.²⁰⁶ Nonetheless, the superior returns offered by hedge funds may be short-lived as rival managers and other traders in the markets discover and imitate the trading strategies of skilled managers.²⁰⁷ There are also an increasing array of low-cost close substitutes for hedge funds such as mutual funds employing hedge fund-like strategies and synthetic hedge fund “clones” potentially able to replicate the returns of average-performing hedge funds.²⁰⁸ Because hedge fund investors are relatively quick to withdraw capital from underperforming funds,²⁰⁹ increasing competition places a greater importance on innovating to provide a unique service to investors. Indeed, the relatively high attrition rates in the industry, which are in

fund sizes and returns”); Cecile Le Moigne & Patrick Savaria, *Relative Importance of Hedge Fund Characteristics*, 20 FIN. MARKETS PORTFOLIO MGMT. 419, 420 (2006) (reviewing some literature on performance and fund size and finding mixed results); Naryan Y. Naik et al., *Capacity Constraints and Hedge Fund Strategy Returns*, 13 EUR. FIN. MGMT. 239 (2007) (finding increases in capital to funds decreases their performance); Agarwal et al., *supra* note 28, at 20-21; LHABITANT, *supra* note 10, at 520.

²⁰⁴ LEDERMAN, *supra* note 11, at § 1:4.2, 1-21-1-23.

²⁰⁵ William Fung et al., *Hedge Funds: Performance, Risk and Capital Formation* 19 (AFA 2007 Chicago Meetings Paper July 19, 2006) (finding “that following significant inflow of capital in the industry, the level of alpha has come down substantially in recent years”), *available at* <http://ssrn.com/abstract=778124>.

²⁰⁶ *See, e.g.*, Gregory Zuckerman, *Trader Made Billions on Subprime*, WALL ST. J. Page A1, Jan. 15, 2008; RICHARD BOOKSTABER, *DEMONS OF OUR OWN DESIGN: MARKETS, HEDGE FUNDS, AND THE PERILS OF FINANCIAL INNOVATION* 184 (describing how sellers can mask trades by employing securities dealers).

²⁰⁷ BOOKSTABER, *supra* note 206, at 195 (noting the risk of a fund’s positions being traded against once known by others).

²⁰⁸ Vikas Agarwal et al., *Hedge Funds for Retail Investors? An Examination of Hedged Mutual Funds* 1 (June 4, 2007) (unpublished paper, *available at* http://www.fma.org/Orlando/Papers/HMF_January11_fma.pdf); William Fung & David A. Hsieh, *Hedge Fund Replication Strategies: Implications for Investors and Regulators*, 10 FIN. STABILITY REV., Banque de France 55, April 2007; Marc Hogan, *Hedge Funds: Attack of the Clones*, BUSINESSWEEK.COM, Dec. 4, 2006.

²⁰⁹ Vikas Agarwal et al., *Flows, Performance, and Managerial Incentives in Hedge Funds* 30 (EFA 2003 Annual Conference Paper No. 501, July 22, 2004) (finding that “money-flows chase good recent performance”); Bill Ding et al., *Market Volatility, Investor Flows, and the Structure of Hedge Fund Markets* 3 (unpublished paper, November 6, 2006) (finding evidence that hedge fund investors are “smart” such that they have skill in allocating capital to funds that perform above-average); Guillermo Baquero & Marno Verbeek, *A Portrait of Hedge Fund Investors: Flows, Performance and Smart Money* 6-7 (EFA 2006 Zurich Meetings Paper, November 14, 2007) (finding that hedge funds investors rapidly withdraw capital from underperforming funds), *available at* <http://ssrn.com/abstract=773384>.

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large part attributable to funds voluntarily closing for failure to meet investment objectives, reflect the importance of outperforming rivals.²¹⁰

Finally, hedge funds must innovate as part of their overall strategy to keep up with a constantly changing economic world.²¹¹ Financial innovation is often a response to broad macroeconomic changes in general price levels, interest rates, and currency exchange ratios.²¹² Accordingly, greater macroeconomic instability will tend to spur more financial innovation, often in an attempt to reduce the risks from such change.²¹³ Hedge funds' short-term trading strategies are exposed to and dependent upon continual and rapid changes in their economic environment. There are nonstop changes in the value of the investment positions taken by the funds and the risk factors to which they are exposed. These changes must be continually monitored and often require managers to make incremental innovations to their investment strategies to attain their objectives.²¹⁴

D. Hedge Fund Governance and Innovation

Hedge funds' uncorporate governance is a successful adaptation to the needs of an investment fund required to innovate. Their specific governance devices (e.g., performance fees, lockups) provide managers with the flexibility to adapt to changing economic conditions and foster the types of incentives and financial commitment conducive to innovation activities. These devices result in performance advantages because they allow managers to capture the gains from financial innovation. By generally aligning the interests of investors and managers, hedge fund governance devices reduce the transaction costs associated with delegating investment decisionmaking to a portfolio manager.

1. Hedge Funds Versus Corporate Governance

According to the transaction cost theory of the firm, firms adopt governance structures aligned with transaction-specific characteristics to reduce

²¹⁰ Chan et al., *Systemic Risk and Hedge Funds*, in THE RISKS OF FINANCIAL INSTITUTIONS 249-50 (Mark S. Carey & René M. Stulz eds. 2006) *Stuart Feffer & Christopher Kundro*, Understanding and Mitigating Operational Risk in Hedge Fund Investments Capco, The Capital Markets Company Ltd. (2003).

²¹¹ See RICHARD R. NELSON & SIDNEY G. WINTER, AN EVOLUTIONARY THEORY OF ECONOMIC CHANGE 128-34 (1982); Astrid H. Lassen, Frank Gertsen & Jens O. Riis, *The Nexus of Corporate Entrepreneurship and Radical Innovation*, 15 CREATIVITY INNOVATION MGMT. 359, 366 (2006) (the "flexibility" required for innovation entails both "the ability to react quickly to changes" and "the ability to incorporate change as a continuous consideration in the organization" such that change "is perceived as a natural process"); Mark Casson, *Entrepreneurship and the Theory of the Firm*, 58 J. ECON. BEHAV. ORG. 327, 333 (2005) ("Competition is also a source of volatility . . . [e]ntrepreneurs need to monitor the launch of their rivals' initiatives so that they can neutralize their impacts quickly.").

²¹² See Frame & White, *supra* note 110, at 120.

²¹³ *Id.*

²¹⁴ See GUIZOT, *supra* note 194, at 44-54.

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transaction costs and increase performance (i.e., investment returns).²¹⁵ A major source of transaction costs stems from managers, to whom investors delegate investment decisionmaking power, consuming investor wealth, taking on too much risk, or failing to take on enough risk to sufficiently engage in activities such as innovation.²¹⁶ A primary task of organizational law and contracting is thus to reduce these types of agency costs by aligning incentives.²¹⁷ Public corporations limit agency costs through the market for corporate control, outside monitoring by an independent board of directors and activist shareholders, granting employee stock options, and other mechanisms.²¹⁸ By contrast, hedge funds do not have a corporate-style independent board of directors. Additionally, because the fund's limited partners cannot freely transfer control (voting) rights and there is no secondary market for shares of the fund, hedge fund managers are insulated from the market for corporate control.²¹⁹

Hedge funds, however, do employ governance mechanisms to resolve agency problems so investors can “assure themselves of getting a return on their investment.”²²⁰ Unlike public corporations, ownership and management in a hedge fund are not fundamentally separated.²²¹ Hedge fund managers are typically substantial investors in the underlying funds that they advise.²²² In contrast to corporate manager compensation, which is derived in substantial part from a fixed salary relatively insensitive to performance, hedge fund managers

²¹⁵ Oliver E. Williamson, *Strategizing, Economizing, and Economic Organization*, 12 *STRAT. MGMT. J.* 75, 79 (1991) (identifying the main task of the transaction cost theory of the firm as “align[ing] transactions, which differ in their attributes, with governance structures, which differ in their costs and competencies, in a discriminating (mainly, transaction cost economizing) way.”); Robert J. David & Shin-Kap Han, *A Systematic Assessment of the Empirical Support for Transaction Cost Economics*, 25 *STRAT. MGMT. J.* 39, 40 (2004) (noting that the central claim of the transaction cost economics is “that transactions will be handled in such a way as to minimize the costs involved in carrying them out.”).

²¹⁶ See generally Sanford Grossman & Oliver D. Hart, *An Analysis of the Principal-Agent Problem*, 51 *ECONOMETRICA* 7 (1983); Houman B. Shadab, *Innovation and Corporate Governance: The Impact of Sarbanes-Oxley*, 10 *U. PENN. J. BUS. & EMP. L.* (forthcoming 2008) (discussing agency costs from the failure to innovate); Speech, Chester S. Spatt, Chief Economist and Director, Office of Economic Analysis U.S. Securities and Exchange Commission, *Conflicts of Interest in Asset Management*, May 12, 2005.

²¹⁷ Eugene F. Fama, *Agency Problems and the Theory of the Firm*, 88 *J. Political Econ.* 288 (1980); Romano, *Corporate Law and Corporate Governance*, 5 *INDUSTRIAL AND CORPORATE CHANGE* 277, 277-78 (1996) (“The fundamental task of corporate law is to provide a framework of governance institutions that mitigate the agency problem”); Andrei Shleifer & Robert W. Vishny, *A Survey of Corporate Governance*, 52 *J. Fin.* 737, 737 (1997) (“Corporate governance deals with the ways in which suppliers of finance to corporations assure themselves of getting a return on their investment.”). See also Michael C. Jensen & William H. Meckling, *Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure*, 3 *J. FIN. ECON.* 305, 308 (1976).

²¹⁸ See generally Shleifer & Vishny, *supra* note 217.

²¹⁹ See also Ribstein, *supra* note 11, at 19.

²²⁰ Shleifer & Vishny, *supra* note 217, at 737 (surveying and defining corporate governance issues from a “straightforward agency perspective”).

²²¹ Ribstein, *supra* note 11, at 8.

²²² See *supra* Section I.B.1.

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receive the bulk of their compensation from high-powered incentive fees completely dependent on performance.²²³ Although there are short-term limitations placed on investor redemptions, relative underperformance may lead to liquidation of the fund if a sufficient portion of investors redeem their capital.²²⁴ Performance-based compensation, limited partner liquidation rights, and the need to return to investors to raise capital serve as substitute governance mechanisms for the strong voting rights and share transferability found in public companies.²²⁵

Hedge fund governance takes place through in a flat organizational structure with little management hierarchy and without investment decisions being subject to outside monitoring and interference by non-managers. This type of structure is generally conducive to innovation. Innovation stems from learning and from discovering new knowledge, either contained by individuals within the firm or from the external environment,²²⁶ and is facilitated by decentralized and flexible governance structures that allow knowledge to be efficiently generated and acted upon.²²⁷ Hedge fund governance allows a fund to quickly absorb new information and adapt investment strategies and other aspects of operations to changing economic conditions. By contrast, outside monitoring and hierarchical corporate governance devices are generally less suited to facilitate the types of activities that support innovation.²²⁸

The differences in governance structures between hedge funds and public companies underlie a critical difference between the relationship of governance structures to performance in the corporate context and that of hedge funds. In the corporate context, empirical governance research finds that public companies generally adopt governance structures to reduce transaction costs and maximize

²²³ See *id.*; Ribstein, *supra* note 11, at 4.

²²⁴ See *supra* note 209.

²²⁵ See Ribstein, *supra* note 11, at 12, 15.

²²⁶ O'SULLIVAN, *supra* note 107 at 12-14 (characterizing innovation as a cumulative learning process based upon the existing "common stock of knowledge"); Per Davidsson, Harry J. Sapienza & Shaker A. Zahra, *Entrepreneurship and Dynamic Capabilities: A Review, Model and Research Agenda*, 43 J. MGMT. STUD. 917, 932 (2006) (innovative "learning . . . depends on what [firms] already know"); Keith Pavitt, *Innovation Process*, in HANDBOOK ON INNOVATION 86, *supra* note 107 at 88 (noting that some of the knowledge learned in the innovation process is firm-specific). The ability to innovate from knowledge external to the firm reflects what organizational researchers refer to as a firm's "absorptive capacity." See Wesley M. Cohen & Daniel Levinthal, *Absorptive Capacity: A New Perspective on Learning and Innovation*, 35 ADMIN. SCI. QTRLY. 128, 128 (1990). See also Tunji Adegbesan & Joan E. Ricart, *What Do We Really Know About When Technological Innovation Improves Performance (and When It Does Not)?* 12-13 (IESE Business School University of Navarra Working Paper, 2007) (reviewing innovation research to find that "innovativeness is dependent on a firm's ability to leverage external knowledge, integrating it with its internal knowledge sources.").

²²⁷ See generally Shadab, *supra* note 216 (finding that public companies with more decentralized governance structures are associated with more innovation activities).

²²⁸ *Id.* at Section II.E.

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overall firm value.²²⁹ Because these choices are based in part upon firm-specific characteristics, how managers act over time, and how the firm performs,²³⁰ there is no single set of corporate governance devices that cause performance advantages and benefit investors.²³¹ By contrast, hedge fund fees and fee structure, lockups and other liquidity-restricting provisions are determined and disclosed to investors before any capital contributions are made and are held constant over the course of the life of a fund.²³² Accordingly, differences in hedge fund governance structures may account for systematic performance differences among different funds.²³³

2. Hedge Fund Manager Incentives

Hedge fund manager incentives are primarily derived from managerial co-investment and performance-based fees.²³⁴ The success of hedge funds in innovating is likely due in part to this incentive structure. Innovative activities tend to involve a relatively higher degree of risk than non-innovative ones.²³⁵ Innovation by definition involves something new and unknown, and therefore requires undertaking activities with a relatively higher degree of uncertainty

²²⁹ See generally Roberta Romano, *Corporate Law and Corporate Governance*, 5 INDUSTRIAL CORP. CHANGE 277 (1996).

²³⁰ See Samjai Bhagat, Brian Bolton & Roberta Romano, *The Promise and Peril of Corporate Governance Indices* 41-45 (University of Colorado, University of New Hampshire, Yale Law School, NBER and ECGI Working Paper October 7, 2007) (reviewing literature on the endogeneity between corporate performance and governance structures); M. Babajide Wintoki, *Endogeneity and the Dynamics of Corporate Governance* 4-6 (University of Georgia, Terry College of Business, Working Paper, March 2007), http://papers.ssrn.com/sol3/papers.cfm?abstract_id=970986 (last accessed Sept. 7, 2007); N. K. Chidambaran, Darius Palia & Yudan Zheng, *Does Better Corporate Governance “Cause” Better Firm Performance?* 5-6 (Rutgers Business School Working Paper, March 2007) (concluding from the impact of changes in governance structures on firm value that “firms are endogenously optimizing their governance structure in response to observable and unobservable firm characteristics”).

²³¹ Chidambaran et al., *supra* note 230, at 28-29 (finding that good and bad changes in governance structures lead to both positive and negative performance changes, no differences in performance between firms have good or bad changes, and that corporations with good governance do not outperform those with worse governance); J. Harold Mulherin, *Corporations, Collective Action and Corporate Governance: One Size Does Not Fit All*, 124 PUB. CHOICE 179, 199 (2005) (finding that “central policy implication of the prior research and new supporting evidence is that one size does not fit all in corporate governance”); Bhagat et al., *supra* note 230, at 67-68 (same).

²³² Agarwal et al, *supra* note 28, at 2.

²³³ *Id.* at 3.

²³⁴ See *id.* at 4 (“we estimate the *total* delta, the overall pay–performance sensitivity measure, as the total expected dollar increase in the manager’s compensation for a one-percent increase in fund’s NAV [which] combines the delta from investors’ assets (manager’s option delta) and the delta from the manager’s co-investment.”) (emphasis in original). Career concerns also creates incentives for hedge fund managers, and have been found to align incentives. Stephen J. Brown, William N. Goetzmann & James Park, *Careers and Survival: Competition and Risk in the Hedge Fund and CTA Industry*, 56 J. FIN. 1869, 1869, 1184-85 (2001).

²³⁵ Bengt Holmstrom, *Agency Costs and Innovation*, 12 J. ECON. BEHAV. ORG. 305, 309 (1989).

regarding their outcomes.²³⁶ As innovation researchers suggest, performance-based compensation provides incentives to take such risks.²³⁷ Furthermore, a fund manager's compensation attributable to the performance fee is effectively the same as a payout from a call option with a "strike price" set at the value of the fund when each investor joins.²³⁸ A call option gives the option holder the right to purchase a security at a predetermined strike price, yielding a profit equal to the difference in the market price and strike price (minus the purchase price of the option). When a hurdle rate is employed by a hedge fund, the manager begins the investment period "out of the money," a position that may optimally align incentives.²³⁹ That a hedge fund performance fee has the same payout as a call option likely reflects the more general fact that the incentives and gains related to innovation are also the same as the payout from an option.²⁴⁰

As might be expected, managerial co-investment helps to align incentives and increase performance. Although few empirical studies assess the impact of managerial co-ownership on fund performance, a study by Agarwal et al. of a representative sample of 7,535 hedge funds from 1995 to 2004 found a positive and statistically significant relationship between co-investment and performance.²⁴¹ However, co-investment beyond a certain level may decrease performance to the extent that high co-investment results in the fund manager becoming too cautious.²⁴² The optimal range of co-investment is an issue yet to be analyzed by empirical researchers.²⁴³

²³⁶ Mary O'Sullivan, *Finance and Innovation*, in HANDBOOK ON INNOVATION 86, *supra* note 107 at 257-58; Pavitt, in HANDBOOK ON INNOVATION 86, *supra* note 107 at 88 ("Innovation is inherently uncertain, given the impossibility of predicting accurately the cost and performance of a new artifact, and the reaction of users to it.").

²³⁷ O'SULLIVAN, *supra* note 107 at 60-61 ("[T]he prospects of sharing in the gains of successful innovation by the investing organization can lead even mobile participants to forgo the lure of the market and remain committed to the pursuit of organizational goals."); Paulina Ramirez & Andrew Tylecote, *Corporate Governance and Innovation: The U.K. Compared with the U.S. and "Insider" Economies*, 35 RES. POL'Y, 160, 162 (2006); Vincent L. Barker II & George C. Mueller, *CEO Characteristics and Firm R&D Spending*, 48 MGMT. SCI. 782, 793 (2002); Jeffrey L. Coles, Naveen D. Daniel & Lalitha Naveen, *Managerial Incentives & Risk-Taking*, 79 J. FIN. ECON. 431, 464 (2006).

²³⁸ William N. Goetzmann, Jonathan E. Ingersoll & Stephen Ross, *High-Water Marks and Hedge Fund Management Contracts*, 4 J. FIN. 1685, 1714-16 (2003); Mark J.P. Anson, *Hedge Fund Incentives Fees and the "Free Option"*, J. ALT. INVESTMENTS 43, 43-44 (Fall 2001).

²³⁹ See Agarwal et al., *supra* note 28, at 4.

²⁴⁰ See Steven R. Grenadier & Allen M. Weiss, *Investment in Technological Innovations: An Option Pricing Approach*, 44 J. FIN. ECON. 397 (1997); John E. Core & Jun Qian, *Option-Like Contracts for Innovation and Production* (University of Pennsylvania Financial Institutions Center Working Paper, January 2000).

²⁴¹ Agarwal et al. found a positive and significant correlation between managerial ownership and performance such that a one standard deviation increase in ownership increases returns by about 1.5%. Agarwal et al., *supra* note 28, at 5, 12-13, 36. See also Le Moigne Savaria, *supra* note 203, at 424 (2006) (finding in a sample of 3,775 funds from 1989 to 2005 that funds with the personal capital of managers invested had higher returns).

²⁴² Roy Kouwenberg & William T. Ziemba, *Incentives and Risk-Taking in Hedge Funds*, 31 J. BANKING FIN. 3291 (2007) (concluding that "if the manager's own stake in the fund is substantial

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The impact of performance fees on performance cuts in two directions. Performance fees may benefit investors to the extent that they incentivize managers to innovate, expend more effort, and attract more talent to the industry than otherwise available. However, performance fees are a cost to investors deducted from the gains of the fund. Performance fees thus benefit investors so long as the incentive/talent-drawing effect results in net-of-fee gains higher than investors' alternative investment options.²⁴⁴ In assessing the impact of performance fees on investors, a threshold issue is whether a performance-based fee structure reduces agency costs relative to investment funds that compensate managers solely based upon assets under management. The empirical evidence generally answers this question in the affirmative, finding that performance fees in part account for why hedge funds outperform mutual funds (which cannot by law charge performance fees),²⁴⁵ and that the minority of hedge funds that do not charge performance fees underperform those that do.²⁴⁶ Performance-based compensation in hedge funds therefore seems to provide the appropriate incentives to facilitate innovation.

When isolating the impact of the performance-fee *rate* on performance, the empirical evidence is mixed. Most studies examining the issue find that hedge fund returns increase as does the rate of the performance fee.²⁴⁷ However, some studies find no relationship between incentive fee rate and performance.²⁴⁸ The

(e.g. > 30%), risk taking will be reduced considerably”); LHABITANT, *supra* note 10, at 33 (noting that “a successful fund manager at the end of his [or her] career will have so large a commitment in the fund that he [or she] will refrain from taking risks, even though these are well remunerated”).

²⁴³ See Agarwal et al, *supra* note 28, at 18 (finding that very high managerial co-investment is correlated with negative but not statistically significant returns).

²⁴⁴ William N. Goetzmann, Jonathan E. Ingersoll & Stephan A. Ross, *High-Water Marks and Hedge Fund Management Contracts*, 4 J. FIN. 1685, 1704-05 (2003) (discussing formal conditions under which performance fees are justified).

²⁴⁵ Carl Ackermann, Richard McEnally & David Ravenscraft, *The Performance of Hedge Funds: Risk, Return, and Incentives*, 54 J. FIN. 833 (finding that in a sample of funds from 1988–1995, hedge funds consistently outperformed mutual funds in part because of incentive fees); Bing Liang, *On the Performance of Hedge Funds*, 55 FIN. ANAL. J. 72 (Jul/Aug 1999) (finding that hedge funds exhibit superior risk-adjusted returns as compared to mutual funds).

²⁴⁶ Cecile Le Moigne & Patrick Savaria, *Relative Importance of Hedge Fund Characteristics*, 20 FIN. MARKETS PORTFOLIO MGMT. 419, 424 (2006). *But see* Kouwenberg & Ziemba, *supra* note 242, at 3308 (finding that “hedge funds with incentive fees have significantly lower mean returns (net of fees) and worse risk-adjusted performance”).

²⁴⁷ Bing Liang, *On the Performance of Hedge Funds*, 55 FIN. ANALYSTS J. 72 (Jul/Aug 1999) (finding average hedge fund returns positively related to performance fees); William Fung & David A. Hsieh, *Hedge-Fund Benchmarks: Information Content and Biases*, 58 Fin. Anal. J. 22 (2002); C. Ackermann, R. McEnally & D. Rosencraft, *The Performance of Hedge Funds: Risk, Return and Incentives*, 54 J. Fin. 833 (1999) (same); Franklin R. Edwards & Mustafe O. Cagalayan, *Hedge Fund Performance and Manager Skill*, 21 J. Futures Mkts. 1003 (2001) (same for a sample of funds from January 1990 to August 1998); Hung-Gay Fung, Xiaoqing Eleanor Xu & Jot Yau, *Global Hedge Funds: Risk, Return, and Market Timing*, 58 FIN. ANALYSTS J. 19 (2002) (same for sample of 115 equity funds from 1994 to 2000).

²⁴⁸ Stephen J. Brown & William N. Goetzmann & Roger J. Ibbotson, *Offshore Hedge Funds: Survival and Performance 1989-1995*, 72 J. Bus. 91 (1999) (finding no relationship between

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evidence is also mixed regarding the impact of performance fees on hedge fund survival, although no study finds that funds with higher incentive fees and high water marks have an increased probability of failure.²⁴⁹ These discrepancies may be attributable to the fact that hedge fund manager incentives are based not only upon the performance fee rate, but also on factors such as managerial co-investment, the presence of high water marks and hurdle rates, and the timing of investments into the fund. After taking into account all of these incentives facing hedge fund managers, Agarwal et al. found that hedge funds perform better when total incentives are higher—in the presence of higher performance fees, more managerial co-investment into the fund, and higher high water marks.²⁵⁰

The existence of a high water mark ensures that managers are not paid a performance fee unless they produce a gain for investors.²⁵¹ The impact on managerial incentives is straightforward: a high water mark creates a high-powered incentive to produce a positive return. Empirical studies have found that funds with high water marks perform better than those without.²⁵² In particular, using a sample of 8,752 hedge funds, Chakraborty and Ray found that high water marks induce managers at or just under the mark to expend more effort.²⁵³

However, the utilization of a high water mark in conjunction with performance fees may cause the interests of hedge fund managers and investors to diverge in some instances. If a fund is significantly below its high-water mark such that earning a performance fee requires a substantial gain by the end of the year, the manager might take on excessive risk and “swing for the fences”

incentive fee rates and performance); Schneeweis, Thomas, Hossein Kazemi, & George Martin, *Understanding Hedge Fund Performance: Research Issues Revisited: Part I*, 5 J. ALT. INV. 6 (2002) (finding little relationship between performance fees and returns in a group of long/short equity funds).

²⁴⁹ BARTH et al., *supra* note 37, at 63-64 (funds with higher management and performance fees are less likely to fail); Naohiko Baba & Hiromichi Goko, *Survival Analysis of Hedge Funds* 27 (Bank of Japan Working Paper, March 2006) (finding funds with higher performance fees are less likely to be operational); Guillermo Baquero, Jenketer Horst & Marno Verbeek, *Survival, Look-Ahead Bias and the Performance of Hedge Funds*, 40 J. FIN. QUANT. ANAL. 493, 504 (2005) (finding “the higher the incentive fee, ceteris paribus, the more likely it is that the fund will liquidate in the next quarter”).

²⁵⁰ Agarwal et al, *supra* note 28, at 3-5. *See also* Liang, *supra* note 247, at 74 (finding that funds with high watermarks outperformed funds without). In a separate study, Agarwal et al. found that hedge fund managers with higher incentives and opportunities to artificially manage their earnings may be doing so to improve performance results. Vikas Agarwal, Naveen D. Daniel & Narayan Y. Naik, *Why is Santa So Kind to Hedge Funds? The December Return Puzzle* 1-3 (Working Paper Marh 29, 2007).

²⁵¹ William N. Goetzmann, Jonathan E. Ingersoll & Stephan A. Ross, *High-Water Marks and Hedge Fund Management Contracts*, 4 J. FIN. 1685, 1686 (2003) (noting that “[h]igh-water mark contracts have the appealing feature of paying the manager a bonus only when the investors make a profit, and in addition, requiring that the manager make up any earlier losses before becoming eligible for the bonus payment”).

²⁵² Agarwal et al., *supra* note 28, at 15, 16, 21 (finding that “the presence of a high-water provision improves performance by 21%” and increases alpha by 2.4%).

²⁵³ Indraneel Chakraborty & Sugata Ray, *Effort, Risk and Walkaway Under High Water Mark Style Contracts*, 2, 20 (University of Pennsylvania Working Paper, Jan. 16, 2008).

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because coming in at just below or far below the high-water mark will both result in the manager not being paid a performance fee.²⁵⁴ Chakraborty and Ray found some evidence of this effect: returns for funds 10 percent below their high-water mark were more volatile than those at the mark, and funds further from the high-water mark took relatively poorer risks.²⁵⁵ Furthermore, if a fund is substantially below its high-water mark such that earning a performance fee is highly unlikely, managers may have less incentive to perform and may leave or voluntarily shut down the fund, potentially resulting in lower returns to investors. To prevent individual managers from leaving the employment of the fund, some hedge funds allow for a reduced performance fee allocation even if the high water mark is not achieved, and others reset the high water mark at a level below that required for an investor to recoup losses.²⁵⁶ Managers also seem to value continuing the fund more than earning performance fees, as evidenced by the tendency of managers to cut back risk to ensure survival of the fund even though doing so may jeopardize surpassing the high-water mark.²⁵⁷

3. Illiquidity Transaction Costs

Although the limitations hedge funds place on capital redemptions impose a unique transaction cost on investors, these limitations generally benefit investors through higher returns. Investing is a transaction between the investor and the hedge fund where the investor purchases shares in exchange for an expected future gain. Greater restrictions on redemption increase the cost of the transaction to investors because the longer an investor is required to commit capital, potentially greater is the opportunity cost from not being able to deploy capital elsewhere and the risk an investor will not be able to exit if the hedge fund experiences losses. Redemption restraints give hedge fund investments the quality of asset-specificity. Assets have specificity to the extent they are committed to a particular investment and not easily redeployed to a different transaction.²⁵⁸ As

²⁵⁴ All About Alpha.com, New Research Illustrates Wide-ranging Implications of the Ubiquitous “High Water Mark,” Jan. 21, 2008, <http://allaboutalpha.com/blog/2008/01/21/new-research-illustrates-wide-ranging-implications-of-the-ubiquitous-high-water-mark/>. At least one hedge fund manager has sought to assure investors that such an incentive would not affect her conduct by employing a compensation contract paying the performance fee every three years instead of annually. Jenny Anderson, *Starting a Revolution in the Pay Structure for Hedge Fund Managers*, N.Y. TIMES, Nov. 17, 2006.

²⁵⁵ Chakraborty & Ray, *supra* note 253, at 2.

²⁵⁶ LEDERMAN, *supra* note 11, at § 2:3.3[C][1], 2-11-12.

²⁵⁷ Chakraborty & Ray, *supra* note 253, at 2-3. *See also* Stavros Panageas & Mark M. Westerfield, *High-Water Marks: High Risk Appetites? Convex Compensation, Long Horizons, and Portfolio Choice* 4, 14 (Working Paper August 2007), available at <http://ssrn.com/abstract=616962> (modeling the value of fund continuation as being a disciplining force on risk-taking); Baba & Goko, *supra* note 249, at 27 (finding that hedge funds with higher high water marks are more likely to be operational).

²⁵⁸ Williamson, *Transaction Cost Economics: The Governance of Contractual Relations*, 22 J. LAW. ECON. POL. 233, 255 (1979) (“asset specificity refers to durable investments that are undertaken in support of particular transactions, the opportunity costs of which investments is much lower in best alternative uses or by alternative users should the original transaction be prematurely terminated”).

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the seminal work of Oliver Williamson shows, asset-specificity gives rise to transaction costs because uncertainty about future economic outcomes and the ability of parties to take advantage of each other leaves those owning investment specific assets vulnerable to unexpected changes in asset prices or opportunism by counterparties.²⁵⁹ Likewise, when a hedge fund invests in illiquid assets the fund is itself vulnerable to losses if, before an investment realizes its full gains, investors prematurely withdraw funds or lenders demand additional collateral. Illiquid investments, which are not often traded, require more time than liquid investments for gains to be realized.²⁶⁰ Hedge funds must be able to lock in capital and prevent capital withdrawals so managers can exert the control required to capitalize on their illiquid investments.²⁶¹

Empirical studies confirm that redemption restrictions allow hedge funds to successfully implement relatively long-term investment strategies involving illiquid securities without having to prematurely returning capital to investors.²⁶² As a result, investors are compensated with higher returns in exchange for bearing transaction costs from redemption restrictions.²⁶³ This illiquidity premium in part reflects a return to innovation. Innovative companies generally foster asset-specificity to increase performance.²⁶⁴ Maintaining a sufficiently long commitment to innovative activity is necessary to earn a positive return on the underlying investment because the benefits of innovation may not pay off immediately.²⁶⁵ Lockups and other restrictions on investor share redemption facilitate the type of financial commitment generally associated with innovation by allowing the fund the time to benefit from a new illiquid investment strategy. Although hedge fund liquidity restrictions may only delay redemption by several months, they are long-term relative to the funds' active investment strategies to allow the funds enough time to capture the gains from innovation.

²⁵⁹ *Id.* at 251-54 (noting that a “critical dimension” for describing contractual relations is the degree to which investments are asset-specific).

²⁶⁰ LEDERMAN, *supra* note 11, at § 2:2.3[D][1], 2-14; George A. Aragon, *Share Restrictions and Asset Pricing: Evidence from the Hedge Fund Industry*, 8 J. FIN. ECON. 33, 34 (2007) (arguing that “share restrictions allow funds to efficiently manage illiquid assets”).

²⁶¹ *See also* Ribstein, *supra* note 11, at 10 (noting that capital lock-in is a feature required for all successful firms). Indeed, the cost of redemption restrictions is a consequence of hedge fund investors' inability to exit through a secondary market.

²⁶² Agarwal et al., *supra* note 28, at 9, 17; BARTH et al., *supra* note 37, at 63–64; Baba & Goko, *supra* note 249, at 27 (“funds with a longer redemption notice period and a lower redemption frequency have higher survival probabilities.”).

²⁶³ Agarwal et al., *supra* note 28, at 9, 17; Liang, *supra* note 247, at 78 (1999) (finding hedge fund performance to be higher the longer the lockup period); Aragon, *supra* note 260, at 34.

²⁶⁴ O’SULLIVAN, *supra* note 107, at 33.

²⁶⁵ *Id.* at 20, 60 (financial commitment consists of institutions that “support the ongoing access of a business organization to the financial resources required to undertake and sustain the development and utilization of productive resources until such a time as these resources can generate returns”); Holmstrom, *supra* note 235, at 309; Benn Lawson & Danny Samson, *Developing Innovation Capability in Organisations: A Dynamic Capabilities Approach*, 5 INT’L J. INNOVATION MGMT. 377, 4 (2001) (Business Source Premier database version, on file with author) (noting that “innovation is a force of instability, often requiring long-term vision and commitment to yield results”).

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III. HEDGE FUNDS AND INVESTOR PROTECTION

Hedge funds' ability to reduce the risk of loss to investment portfolios has an important relationship to a fundamental policy objective of U.S. securities law. By disclosing material information and reducing the exposure of investment capital to losses, hedge funds complement the legislative and regulatory objective of investor protection.

A. Diversification and Investor Protection

Investor protection is a hallmark goal of federal securities law and an animating principle of the SEC.²⁶⁶ Investor protection means protecting investors from economic losses stemming from fraud and more subtle forms of opportunism by issuers, traders, and other market participants. The legislative history of the Securities Act and the Exchange Act demonstrates that Congress was concerned with ordinary investors being subjected to fraud, inadequate disclosure, and manipulation of stock prices.²⁶⁷ The primary means by which U.S. securities law protects investors is by mandating the “full and fair disclosure of the character of securities,”²⁶⁸ combined with liability for fraud or violations of specific disclosure requirements.²⁶⁹ The purpose of the disclosure regime is not to prevent investors from taking on high risks, but rather to protect investors by enabling them to make informed investment decisions based upon accurate, complete, and timely company disclosures.²⁷⁰

²⁶⁶ See, e.g., Securities Act § 2(b), 15 U.S.C. § 77b(b) (2000) (“Whenever pursuant to this subchapter the [Securities and Exchange] Commission is engaged in rulemaking and is required to consider or determine whether an action is necessary or appropriate in the public interest, the Commission shall . . . consider . . . the protection of investors . . .”); Securities and Exchange Act § 3(f), 15 U.S.C. 78f(a) (2000) (stating substantially same); Investment Company Act § 2(c), 15 U.S.C. 80a-2c (2000) (stating substantially same).

²⁶⁷ C. Edward Fletcher III, *Sophisticated Investors Under the Federal Securities Laws*, 6 DUKE L. J. 1081, 1133-34 (1988). See also *Chiarella v. United States*, 445 U.S. 222, 228 n.10 (1980) (“The essential objective of securities legislation is to protect those who do not know market conditions from the overreachings of those who do.”); Phillip A. Loomis, Jr., *The Securities Exchange Act of 1934 and the Investment Advisers Act of 1940*, 28 GEO. WASH. L. REV. 214, 226 (1959-1960) (noting that periodic reporting under the Exchange Act “is an essential part of the effort to remedy abuses in exchange trading” because “the absence of public disclosure of the facts facilitates manipulation, speculation on inside information, and other improper practices”); Exchange Act §§ 8-11, 16, 15 U.S.C. §§ 78h-j, 78j-1, 78p (2000) (prohibiting manipulative and abusive trading practices by insiders, speculators and others).

²⁶⁸ Securities Act, Preamble.

²⁶⁹ LOUIS LOSS & JOEL SELIGMAN, *FUNDAMENTALS OF SECURITIES REGULATION* 30 (4th ed. 2001) (noting that the results of the Securities Act are “primarily twofold” in that the “disclosure requirement will in itself prevent from fraudulent transactions” in addition to the Act’s “stringent civil liability provisions”).

²⁷⁰ See S. Rep. No. 47, 73d Cong., 1st Sess. 1 (1933) (noting that the “basic policy [of the Securities Act] is that of informing the investors of the facts concerning securities to be offered for sale in interstate and foreign commerce and providing protection against fraud and misrepresentation.”); *SEC v. Ralston Purina Co.*, 346 U.S. 119, 124 (1953) (“The design of the [Securities Act] is to protect investors by promoting full disclosure of information thought necessary to informed investment decisions.”); Company Act § 1(b)(1), 15 U.S.C. § 80a-1(b)(1)

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From the perspective of financial economics, the ultimate goal of investor protection regulation is the maximization of risk-adjusted returns: mandating truthful disclosures enables investors to minimize losses by making informed choices about the potential risks and rewards of purchasing certain securities. Disclosure helps to inform investors about the market risk of securities, and thereby facilitates successful diversification. In this way, investors are not protected against losses per se, but only against those losses whose underlying risk is not priced into the security in the form of a higher return. Prohibiting fraud also facilitates the maximization of risk-adjusted returns. Even though fraud is a type of idiosyncratic risk that can be minimized through diversification, fraud undermines investor protection in part because it may misinform investors about the market risk of securities and thereby prevents efficient portfolio diversification. Furthermore, because investment losses equally reduce investor welfare regardless of whether they stem from fraud or investment risk, to the extent financial innovation enables investors to further diversify their portfolios, it too advances the same goal as investor protection. Accordingly, because hedge funds are uniquely able to diversify a portfolio from market risks, the funds advance the same goal sought by investor protection regulation in a way other investment intermediaries cannot.

B. Hedge Fund Disclosures

Although hedge funds are relatively opaque investment vehicles because they are not subject to federal registration and reporting requirements and managers make efforts to keep private proprietary investment strategies,²⁷¹ as a matter of law and practice, the funds typically make disclosures sufficient for investors to make informed investment decisions.

There are two legal grounds for hedge fund disclosure. First, hedge funds are subject to liability under the Securities Act, the Exchange Act, and the Advisers Act for making fraudulent or misleading statements.²⁷² As interpreted by case law, because a fund makes some disclosures to potential investors, it is

(2000); John E. Tracy & Alfred B. MacChesney, *The Securities and Exchange Act of 1934*, 32 MICH. L. REV. 1025, 1048 (1934) (noting that the Exchange Act disclosure requirements facilitate accurate “evaluation of prices of securities”); *Goldstein v. SEC.*, 451 F.3d 873, 876, (D.C. Cir. 2006) (noting that the purpose of the Advisers Act is to “substitute a philosophy of full disclosure for the philosophy of caveat emptor’ in the investment advisory profession”) (quoting *SEC. v. Capital Gains Research Inc.*, 375 U.S. 180, 186 (1963)); Phillip A. Loomis, Jr., *The Securities Exchange Act of 1934 and the Investment Advisers Act of 1940*, 28 GEO. WASH. L. REV. 214, 245 (1959) (noting the registration and disclosure requirements of the Advisers Act sought to provide “a compulsory census of investment advisers and which would provide in small degree for the regulation of some of their activities”) (internal quotation omitted).

²⁷¹ Benjamin S. Bernanke, Chairman, Bd. of Governors of the Fed. Reserve Sys., *Hedge Funds and Systemic Risk*, Remarks at the Federal Reserve Bank of Atlanta’s 2006 Financial Markets Conference (May 16, 2006), (transcript available at <http://www.federalreserve.gov/newsevents/speech/bernanke20060516a.htm>) (noting that “[i]t is commonly observed that hedge funds are ‘opaque’—that is, information about their portfolios is typically limited and infrequently provided”).

²⁷² See *supra* Section I.C.2 and Section I.D.1.

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required to make additional disclosures to ensure no statements are misleading.²⁷³ Second, hedge funds usually make private offerings under the requirements of Rule 506 and according to the judicially-defined statutory section 4(2) exemption.²⁷⁴ This latter exemption requires that hedge funds disclose to investors information of the type disclosed in a Securities Act registration statement.²⁷⁵ Accordingly, to fulfill their obligations under federal law, hedge funds make true, accurate, and comprehensive disclosures to investors.²⁷⁶

There are also economic incentives for hedge funds to make disclosures. To satisfy investors while fulfilling their legal duties under the antifraud laws and section 4(2), hedge funds typically furnish directly to potential investors a private placement memorandum (“PPM”).²⁷⁷ A PPM contains the type of information that would be provided by a registration statement publicly filed under section 5 of the Securities Act along with the unique facts and circumstances about the fund.²⁷⁸ Accordingly, hedge funds typically disclose the following information in connection with a private placement: a basic description of the fund including its investment objectives, strategies, and the types of securities the fund purchases; risks pertaining to its investment strategy and regulatory and tax issues; a description of how fees are calculated and conflicts of interest by the managers or other principals; a summary of the terms of the fund, how it is managed and organized, and how investors can redeem shares; and financial statements including net asset value and how it is calculated.²⁷⁹ Third parties such as

²⁷³ See *First Virginia Bankshares v. Benson*, 559 F.2d 1307, 1317 (5th Cir. 1977) (noting that “a duty to speak the full truth arises when a defendant undertakes a duty to say anything.”).

²⁷⁴ SHARTSIS, *supra* note 11, at 120 (noting that “[h]edge funds typically rely on the safe harbor of Regulation D Rule 506 . . . in addition to relying on the statutory section 4(2) exemption, in offering and selling their interests.”); LEDERMAN, *supra* note 11, at § 4:2.1, 4-3 (noting that hedge funds typically raise capital “pursuant to a private placement exempted from registration under section 4(2) of the Securities Act and Rule 506 of Regulation D”); LARRY D. SODERQUIST & THERESA A. GABALDON, *SECURITIES LAW* 72 (1998) (noting the importance of the section 4(2) private placement exemption even in light of Rule 506 because, among other reasons, it minimizes liability for making an unregistered public offering).

²⁷⁵ See *supra* note 85.

²⁷⁶ LEDERMAN, *supra* note 11, at § 4:2.2, 4-12 (noting that “in light of various federal and state anti-fraud provisions, a well advised hedge fund prepares a comprehensive offering memorandum, even if the offering is directed solely to accredited investors, to ensure that all material information is conveyed.”); SHARTSIS, *supra* note 11, at 4 (same).

²⁷⁷ SEC STAFF REPORT, *supra* note 2, at 46 (“Most hedge funds provide written information to their investors in the form of a private offering memorandum or private placement memorandum”); SHARTSIS, *supra* note 11, at 118 (“Instead of merely providing access to information [similar to what would be provided by a registration statement], the issuer may furnish directly the information that would be provided by a registration statement, as in a private offering memorandum that fully discloses such information.”).

²⁷⁸ SEC STAFF REPORT, *supra* note 2, at 47-49 (noting the information typically disclosed in a PPM); SHARTSIS, *supra* note 11, at 118 (“A hedge fund’s private offering memorandum should contain all the information required in a registration statement”); LEDERMAN, *supra* note 11, at § 4:2.2, 4-13.

²⁷⁹ SEC STAFF REPORT, *supra* note 2, at 47-49; LEDERMAN, *supra* note 11, at § 4:2.2, 4-13-14; SHARTSIS, *supra* note 11, at 144-158.

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Morningstar are also increasingly compiling and making public information relevant to evaluating and investing in different hedge funds.²⁸⁰

Furthermore, as competition for investor capital increases and investors become more sophisticated and comfortable with the funds, investors are increasingly demanding that hedge funds disclose information about the types of investments they make, their risk management policies, and other practices.²⁸¹ Indeed, hedge funds, their investors, and third parties such as trade groups are increasingly recommending substantial transparency as a best practice.²⁸² As the industry becomes more prominent and institutionalized, and as competition for investors grows, hedge funds are likely to further expand and standardize disclosures to avoid liability and meet investor demand.²⁸³

C. Hedge Funds and Loss Protection

Based upon their historical returns, hedge funds have furthered the same goal that investor protection regulation seeks by helping investors maximize risk-adjusted returns. Even though hedge funds are exposed to their own systematic risk factors and despite their potential for large-loss risks, when added to a traditional portfolio of stocks and bonds, hedge funds nonetheless lower overall investment risk and therefore help diversify a portfolio.²⁸⁴ Indeed, in some circumstances investing in a diversified portfolio of hedge funds may be superior to holding any traditional investments whatsoever.²⁸⁵

1. Performance in the Modern Hedge Fund Industry

The hedge fund industry did not exist in its current form until the mid-1990s. Before that time, the industry was less than 1 percent of the size that it is now, operations were less standardized and sophisticated, and data about industry-

²⁸⁰ See Shadab, *supra* note 2, at 156-59; Jeff Benjamin, *Hedge Funds Go Prime Time*, INVESTMENTNEWS, Feb. 28, 2008.

²⁸¹ Indeed, some hedge fund advisers voluntarily register and submit to the disclosure obligations of the Advisers Act to attract investors. SHARTSIS, *supra* note 11, at 17 (noting that “some investment advisers choose to register with the SEC to gain whatever marketing cachet SEC registration might afford”); SEC STAFF REPORT, *supra* note 2, at 22 n.76; Registration Under the Advisers Act of Certain Hedge Fund Advisers, Investment Adviser Act Release No. 2266, 69 Fed. Reg. 45181 (proposed July 28, 2004) (estimating that 30% to 50% of hedge fund managers voluntarily register).

²⁸² Notably, investors do not typically demand and best practices do not recommend position-level transparency. Nor would such information be generally useful to investors. See, e.g., The Bank of New York, Casey, Quirk, and Associates, Institutional Demand for Hedge Funds 2: A Global Perspective 10 (2006); BOOKSTABER, *supra* note 206, at 220-21, 225-26.

²⁸³ *The Hedge Fund 100*, INST. INVESTOR, June 2002; Christine Williamson, *Institutional Interest Lights Transparency Fire*, PENSIONS & INVESTMENTS, Oct. 15, 2007.

²⁸⁴ See *supra* Section II.B.4.

²⁸⁵ See Todd Brulhard & Peter Klein, *Faulty Hypotheses and Hedge Funds*, CAN. INVESTMENT REV. 6, 10-11 (2005) (concluding that large allocations to hedge funds appropriate because extreme returns are larger among stock indices than hedge fund indices), available at www.aima-canada.org/doc_bin/SUMMER2005_aimawinner.pdf.

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wide performance was much less available.²⁸⁶ Various studies estimate that, since the mid-1990s, average industry-wide returns have been anywhere from nine to 12 percent.²⁸⁷ Since that time, there have been three periods where either overall markets or specific systematic risk factors caused economywide losses, thereby testing the ability of hedge funds to offer protection against market fluctuations. First was the Russian debt crisis of 1998. On August 17, 1998, the government of Russia caused massive fluctuations in systematic risk factors by devaluing its currency and defaulting on its debt, among other actions.²⁸⁸ These economic shocks caused losses in many large hedge funds and ultimately led to a \$3.6 billion private bailout of the now-infamous hedge fund Long Term Capital Management (LTCM).²⁸⁹ Yet despite LTCM's losses, in August 1998 hedge funds as a whole fared better than the market, losing 7.75 percent whereas the S&P 500 was down 14.46 percent.²⁹⁰

A period more indicative of hedge funds' ability to offer protection against market downturns was the recession from 2000 to 2002 following the crash of the technology bubble. From 2000 to 2002, the S&P 500 and the NASDAQ Composite Index respectively had annual losses of 15.5 percent and 30.6 percent. Meanwhile, the average annual return for hedge funds was a gain of approximately 3.4 percent.²⁹¹ Figure 2 compares average yearly hedge fund returns to those of the general market from 1997 to 2007.²⁹² As Figure 2 illustrates, hedge fund returns, while often lower than market returns on an absolute basis, preserved investor wealth while the market suffered massive losses.

²⁸⁶ BARTH ET AL., *supra* note 37, at 4 (listing total assets of hedge funds by year from 1981 to June 2006); Mercer Oliver Wyman, *New Study Reveals Strengthened Global Hedge Fund Industry Risk Management Practices and Highlights Areas for Improvement* (2006), http://www.oliverwyman.com/ow/pdf_files/Global_Hedge_Fund_RM_MOW_0606.pdf.

²⁸⁷ *See, e.g.*, Chen & Ibbotson, *supra* note 199, at 16 (finding the compounded annual return for hedge funds from 1995 to April 2006 to be 9%); Kat & Miffre, *supra* note 199, at 7-8 (finding an annualized average return from hedge funds of 12% from January 1985 to August 2004).

²⁸⁸ LHABITANT, *supra* note 10, at 16.

²⁸⁹ HEDGE FUNDS, LEVERAGE, AND THE LESSONS OF LONG-TERM CAPITAL MANAGEMENT, REPORT OF THE PRESIDENT'S WORKING GROUP ON FINANCIAL MARKETS 14 (1999).

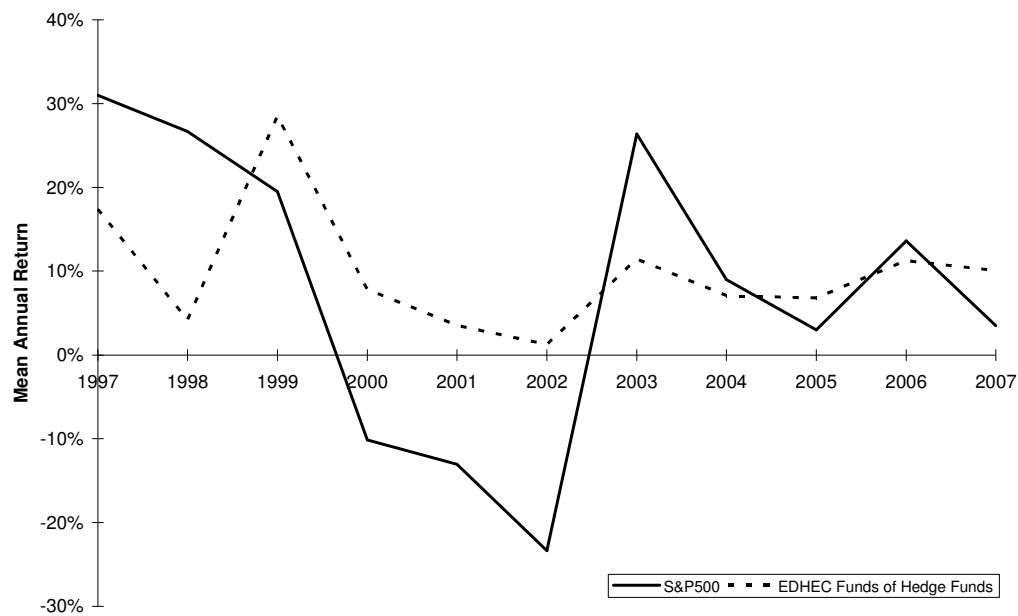
²⁹⁰ LHABITANT, *supra* note 10, at 525, fig. 23.10.

²⁹¹ These average annual hedge fund returns are based upon the average of those in Malkiel & Saha, *supra* note 191, at 81-83 and Fung et al., *supra* note 205, at 2-3, 25 tbl. 1. These studies are used because they correct for upward biases in hedge fund return data.

²⁹² Annual returns for S&P are obtained from EconStats, S&P 500 Total Return (Including Dividends) Index, http://www.econstats.com/eqty/eqea_mi_2.htm. Hedge fund returns are based upon the EDHEC Funds of Funds index, which is the return to a diversified portfolio of hedge funds. *See* EDHEC Alternative Index, Funds of Funds, http://www.edhec-risk.com/indexes/pure_style/downloads/one_page_summary_reports/fof.pdf; EDHEC Risk Funds of Funds (follow Historical Returns), http://www.edhec-risk.com/indexes/pure_style/fof/strategy_view. Using the return data from funds of hedge funds is a methodologically sound way to approximate average hedge fund performance. *See* Fung & Hsieh, *supra* note 185, at 15 (noting that funds of hedge funds "are actual pools of hedge funds, and, as such, they directly reflect actual investment experience in hedge funds").

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FIGURE 2: HEDGE FUND MEAN ANNUAL RETURNS COMPARED TO U.S. EQUITY MARKET RETURNS FROM 1997 TO 2007



Besides offering protection from annual stock market losses, hedge funds as a class have also offered protection from losses on a monthly basis. Returns to hedge funds are typically higher than those of the stock market in months when the market returns a loss.²⁹³ By one estimate, from January 1994 to December 2005, whenever the S&P 500 had a down month, it averaged a loss of 3.53 percent whereas during those same months the average monthly hedge fund return was a loss of 0.30 percent.²⁹⁴

2. Hedge Funds During the Credit Crisis

In the third major test for the hedge fund industry, which began in July of 2007 as losses from the subprime mortgage market initiated a global credit crisis, hedge funds have thus far generally protected investors from economic losses. A subprime mortgage is a home loan to a borrower without the requisite measure of creditworthiness to qualify for a lower interest “prime” mortgage; hence, this type of loan has a higher probability of delinquency or default.²⁹⁵ Due principally to a slowdown in housing appreciation in 2006, delinquencies and defaults in subprime loans began to sharply increase in 2006.²⁹⁶ Hedge funds were exposed to subprime loans through their investments in various tranches of subprime-

²⁹³ CRESTMONT RESEARCH, PERSPECTIVES ON HEDGE FUND INVESTING 18 (2007), available at <http://www.crestmontresearch.com/pdfs/HF%20Industry%20Presentation.pdf>.

²⁹⁴ LHABITANT, *supra* note 10, at 523-25, fig. 23.8.

²⁹⁵ John Kiff & Paul Mills, *Money for Nothing and Checks for Free: Recent Developments in U.S. Subprime Mortgage Markets* 3 (Int'l Monetary Fund Working Paper WP/07/188 July 2007).

²⁹⁶ *Id.* at 7-9.

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backed CDOs and other mortgage backed securities. Commercial banks were exposed through having made subprime loans and investing in subprime-backed CDOs. Investment banks that earned fees underwriting subprime-backed CDOs were exposed to the mortgages by retaining tranches of CDOs they did not sell.²⁹⁷

By February 2007, deterioration in the subprime market began to cause losses in individual firms, and by June 2007, in the overall economy. Numerous large, global commercial and investment banks suffered a combined \$146 billion in losses as a result of writing-down the value of subprime-backed CDO assets on their books.²⁹⁸ In addition, investors in several large and prominent hedge funds such as those sponsored and managed by Bear Stearns, Goldman Sachs, Citibank, and Sowood Capital either experienced massive losses or were completely wiped out, and others were unable to withdraw their capital due to restrictions placed on redemptions.²⁹⁹ From June 22, 2007, when Bear Stearns announced it had bailed out two subprime-invested hedge funds, through May 30, 2008, the U.S. stock market lost 6.8 percent in value while U.S. financial sector stocks in particular were down by 29.59 percent.³⁰⁰ Because subprime-related losses caused market participants to question the value of debt securities generally, a “credit crunch” ensued as lenders substantially curtailed their lending activities, capital became more scarce, and the issuance and trading of CDOs and other debt securities dramatically decreased.³⁰¹

Yet despite the losses to several prominent hedge funds, the funds as a whole returned positive gains during what may be considered approximately the

²⁹⁷ Matthew Goldstein, *Why Merrill Lynch Got Burned*, BUS. WEEK, Oct. 25, 2007 (reporting that Merrill Lynch was “left holding billions of dollars in less attractive pieces of CDOs that haven’t been sold to investors”); Vikas Bajaj, *Bankers’ Lesson From Mortgage Mess: Sell, Don’t Hold*, N.Y. TIMES, Nov. 5, 2007 (“Though many details are unclear, it appears that the banks kept a sizable part of the bonds issued by their C.D.O.’s on their own books this spring and summer.”).

²⁹⁸ BRITISH BROADCASTING SERVICE, *TIMELINE: SUB-PRIME LOSSES, HOW DID THE SUB-PRIME CRISIS UNFOLD?*, February 14, 2008; WALL STREET JOURNAL, *SUBPAR EARNINGS: COMPANIES BLAME HOUSING, CREDIT PROBLEMS FOR WEAKNESS*, Jan. 22, 2008 (compiling stories about financial companies reporting subprime-related losses); Carrick Mollenkamp & Katarina Bart, *UBS’s Mortgage Woes Increase*, WALL ST. J., Page C1, Jan. 31, 2008; Donna Kardon & Andrew Dowell, *Citigroup Swings to a Loss, Plans to Raise More Capital*, Wall St. J., Jan. 16, 2008; Pierre Paulden et al., *Wall Street Abandons Neediest Clients, Cuts Credit*, BLOOMBERG, Feb. 2008.

²⁹⁹ Yalman Onaran, *Bear Stearns Tells Fund Investors “No Value Left,”* Bloomberg, July 18, 2007; Matthew Goldstein & David Henry, *Bear Bets Wrong*, BUS. WEEK, Oct. 22, 2007; Katherine Burton & Jenny Strasburg, *Sowood to Return Capital After Assets Fall 60 Percent*, Bloomberg, Aug. 4, 2007; Katherine Burton, *Goldman Global Equity Hedge Fund Rises 12% After Cash Infusion*, Bloomberg Aug. 23, 2007; Gregory Zuckerman, *Hedge Funds Feel New Heat*, Wall St. J., Page A1, Feb. 23 2008; Tom Cahill & Alexis Xydias, *GO Capital Halts Redemptions From Global Hedge Fund*, BLOOMBERG, March 12, 2008.

³⁰⁰ The S&P 500 closed on June 22, 2007 at 1502.56 and on May 30, 2008 at 1400.38. See ECONSTATS, http://www.econstats.com/eqty/eq_d_mi_1.htm. On the same days, the iShares Dow Jones US Financial Sector Index (ticker: IYF) closed at 116.45 and 81.99, respectively. See Yahoo! Finance, <http://finance.yahoo.com/q/hp?s=IYF&a=05&b=22&c=2007&d=00&e=31&f=2008&g=d>.

³⁰¹ Paulden et al., *supra* note 298; Jody Shenn, *CDO Market Is Almost Frozen, JPMorgan, Merrill Say*, BLOOMBERG, Feb. 5, 2008.

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first year of the credit crunch. From June 1, 2007 through May 30, 2008, hedge funds returned an estimated 1.83 percent to 4.97 percent, depending on which hedge fund data set is used and whether a composite index or a diversified funds of hedge funds strategy is considered to be the more truly representative measure of the funds' returns.³⁰² Furthermore, while the banking and finance sector suffered acute losses from subprime exposure, the sample of hedge funds in the Hedge Fund.Net strategy index that invested primarily in real estate related securities gained 30.06 percent in the 12 months subsequent to June 1, 2007.³⁰³ Indeed, several hedge funds earned massive gains by employing innovative trading strategies to profit from subprime risk exposures.³⁰⁴

Hedge funds' superior performance relative to other financial institutions and the market as a whole is in part attributable to financial innovation by the funds and, accordingly, the legal regime enabling and providing incentives for such innovation. First, hedge funds' flexible management structures and investment policies allowed them to rapidly adapt their trading strategies to mitigate or even profit from subprime losses.³⁰⁵ Second, hedge fund manager incentives stemming from co-investment and performance fees led them to manage and limit risk exposures to subprime-backed securities while at the same time seeking strategies to profit from their misvaluation. Hedge fund managers routinely ignored evaluations of mortgage-backed securities issued by credit rating agencies and instead did their own proprietary research.³⁰⁶ Third, because of hedge funds' abilities to short sell and to trade derivatives at low cost, they were able to actually employ innovative investment strategies to hedge risk and profit from erroneous valuations of subprime-backed securities. For example, the hedge fund managed by John Paulson profited \$15 billion by implementing a

³⁰² The cumulative returns from June 2007 to May 2008 based upon the monthly returns were 1.83% for the EDHEC Funds of Funds index and 4.97% for the Credit Suisse/Tremont Hedge Fund Index. Data for the EDHEC index is available at http://www.edhec-risk.com/performance_and_style_analysis/Hedge_funds_performance and data for the CS/T index is available at <http://www.hedgeindex.com>.

³⁰³ HedgeFund.Net, *Strategy Focus Report: Real Estate and Mortgage Sector Hedge Funds*, May 5, 2008, http://www.hedgefund.net/dailyemailreports/Strategy_Focus_Report_Real_HFN_Estate_and_Mortgage_Sector_050508.pdf.

³⁰⁴ See *infra* note 307 and accompanying text.

³⁰⁵ CREDIT SUISSE TREMONT, HEDGE FUNDS HOLD STEADY IN 2007 3-4, Dec. 13, 2007 ("Many hedge funds were able to profit in a difficult environment due to their ability to produce attractive risk adjusted returns over short and long term investment horizons by adjusting their positions to de-correlate with the broad market."). See also Gregory Zuckerman, *Hedge Funds Bounce Back—In a Big Way*, WALL ST. J. Nov. 19, 2007.

³⁰⁶ See Rich Blake, *House Money*, TRADER MONTHLY 40, November 2007 (reporting that hedge fund managers Paul Ullman stated that he "can't rely on ratings agencies or underwriters to tell us [a credit derivative] is high-grade" and that mortgage "[d]efaults and delinquency likelihoods and prepayment drop-offs . . . are all, to some extent, knowable if you put the time in."), available at <http://www.traderdaily.com/magazine/article/12161.html>; Zuckerman, *supra* note 206. See also Christine Richard & Katherine Burton, *Ackman Devoured 140,000 Pages Challenging MBIA Rating*, BLOOMBERG, Jan. 31 2008.

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novel investment strategy that entailed purchasing CDS protection and short selling CDO tranches and the ABX subprime mortgage index.³⁰⁷

Due in part to the legal regime under which they operate, mutual funds and banks were unable to protect their investors during the credit crisis as hedge funds did. Mutual fund managers lack the incentives of hedge fund managers from co-investment and performance fees, are unable to adapt their investment strategies to changing market conditions, and are limited in their ability to employ short sales and derivatives which were required to mitigate or profit from subprime-related losses.³⁰⁸ Accordingly, mutual funds invested in stocks and bonds suffered losses along with the rest of the market. Commercial bank operators likewise do not possess the high-powered incentives of hedge fund managers to manage risk. In addition, because commercial banks are limited by law primarily to the business of making loans, they were unable to diversify their investments to reduce their exposure to losses from subprime mortgages.³⁰⁹ Perhaps most importantly, unlike hedge funds, commercial banks are regulated and insured by federal banking law, which undermines the incentive for banks and their creditors to appropriately manage risks and engage in other forms of market discipline.³¹⁰

Investment banks, on the other hand, have the same ability as hedge funds to employ short sales and derivatives and also have high-powered incentives to engage in due diligence and investment strategy innovation. This ability explains why some investment banks were able to profit from subprime-related securities as did hedge funds. For example, through their proprietary trading desks, Goldman Sachs and Deutsche Bank utilized derivatives and short sales to earn profits of an estimated \$4 billion and \$1 billion respectively on trades related to subprime loan losses.³¹¹ Career concerns and the bonus compensation of

³⁰⁷ Zuckerman, *supra* note 206. Other hedge funds also used a combination of leverage, short sales and derivatives to profit from subprime losses. See FINalternatives, *Hedge Fund Gains 1,000%, Preps Short Credit Fund*, Nov. 28, 2007 (reporting that the portfolios of manager Andrew Lahde “hold short positions in AA tranches down to BBB- on the ABX Index”); David Gaffen, *Making Money Off Subprime Declines*, Marketbeat, WSJ.com, Feb. 8, 2008 (noting that hedge fund manager Don Brownstein profited from subprime by “us[ing] a combination of the ABX and a basket of single name credit default swaps, which we were short”); Mark Pittman, *Betting on a Crash—The Gamble of J. Kyle Bass*, NEW ZEALAND HERALD, Jan. 1, 2008 (reporting that hedge fund manager J. Kyle Bass “used the leveraging effect of derivatives to sell short about US\$1.2 billion of sub-prime securities”); Rich Blake et al., *Fourth Annual Trades of the Year*, TRADER MONTHLY 77, February/March 2008 (noting that Pershing Square hedge fund stands to gain \$3 billion from short positions on MBIA stock combined with investing in CDSs on MBIA’s holding company).

³⁰⁸ See *supra* notes 154-159 and accompanying text.

³⁰⁹ See *supra* notes 147-149 and accompanying text.

³¹⁰ Peter J. Wallison, *Healthy Hedge Funds, Sick Banks*, American Enterprise Institute for Public Policy Research, Financial Services Outlook, February 2008.

³¹¹ Kate Kelley, *How Goldman Won Big On Mortgage Meltdown*, WALL ST. J., Dec. 14, 2007; Page A1 (Goldman trader Michael “Swenson and his traders began shorting certain slices of the ABX, or betting against them, by buying credit-default swaps”); Jacqueline Simmons & Elena Logutenkova, *Deutsche Bank Payday Surgeons on Subprime Trading Bet*, Bloomberg July 30,

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investment bank executives and traders provided substantial incentives to engage in the type of research and contrarian investment strategies required to mitigate losses or profit from the subprime collapse. Nonetheless, investment bank professionals lack the full panoply of hedge incentives and governance structures most conducive to benefiting from financial innovations such as CDOs. A reason why Goldman Sachs' and Deutsche Bank's trades were relatively uncommon is likely in part because, unlike hedge fund managers, investment banking executives and traders do not face the risk of losing their own co-invested capital and are compensated without having to regain prior investor losses.³¹²

Furthermore, hedge funds' less hierarchical uncorporate governance structures generally led the funds to take a more integrated approach toward risk management and investment strategy. By contrast, large investment banks had trouble properly integrating the CDO innovation into their established risk-management practices, a deficiency typical of established firms attempting to integrate an innovation with existing risk-management routines.³¹³ Merrill Lynch, for example, suffered \$14.1 billion in losses from subprime-backed securities in part because credit risk management was inappropriately segregated from market risk management.³¹⁴ Because investment banks have a relatively more hierarchical governance structure and multiple lines of business, internal conflicts were generated by taking long and short positions in CDOs. In part because investment banks recommended and sold CDOs to clients, the traders at Goldman Sachs had "heated debates" about how much capital to devote to trading against subprime loans, and Deutsche Bank's head trader responsible for profiting from the subprime collapse had to endure significant criticism from colleagues for taking investment positions against the housing market.³¹⁵

It should be noted that comparing hedge fund return figures with those of equities and the performance of other types of financial institutions might exaggerate the benefits of hedge funds. As previously discussed, hedge funds may not allow investors to withdraw their capital when desired whereas stock

2007; Blake et al., *Fourth Annual Trades of the Year*, TRADER MONTHLY 74, February/March 2008.

³¹² See Richard Beales & Rob Cox, *Lightly Regulated, Rightly*, WALL ST. J., Feb. 11, 2008, at C12 (noting that in contrast to hedge funds "[i]nvestment bankers are often playing with faceless shareholders' money" and that "[b]onuses based partly on individual success are almost always going to outweigh any losses on bankers' stock holdings in a firm that had a bad year").

³¹³ DAVID BESANKO, DAVID DRANOVE, MARK SHANLEY & SCOTT SCHAEFER, *ECONOMICS OF STRATEGY* 436 (4th ed. 2006) (noting that established firms already invested in a particular method of operation may lack incentives to adapt to change); Deborah Dougherty & Trudy Heller, *The Illegitimacy of Successful Product Innovation in Established Firm*, 5 ORG. SCI. 200, 214 (1994) (finding that a common barrier to innovation exists where "the constituent activities of new product development do not fit into, or are not a part of, the legitimate system of thought and action"); Wim Vanhaverbeke & Nico Peeters, *Embracing Innovation as Strategy: Corporate Venturing, Competence Building and Corporate Strategy Making*, 14 CREATIVITY INNOVATION MGMT. 246, 247 (2005).

³¹⁴ See Susanne Craig & Randall Smith, *Merrill's Risk Manager*, WALL ST. J., Jan. 18, 2008, at C1.

³¹⁵ Kelley, *supra* note 311; Blake et al., *supra* note 311.

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investments can be exited daily in the secondary markets. In addition, hedge funds are not typically in the business of making loans or underwriting securities, and therefore should not be expected to suffer the recent losses stemming from making mortgage loans and underwriting complex and innovative securities backed by such loans.

IV. CONCLUSION

The historical performance of hedge funds suggests that the hedge fund legal regime allows investors to benefit from financial innovation despite the unique risks and complexity brought about by their innovative investment strategies. As policymakers seek to ensure that investor protection is not compromised in the midst of rapid financial innovation, the outcomes achieved by hedge funds provide important insights about what type of regulatory and governance regime facilitates innovation while maintaining investor protection. First, the lack of legal restrictions on the funds' ability to employ leverage, short sell, and use derivatives shows that investment flexibility is required to create and employ innovative investment strategies with relatively low exposures to market risk. Second, hedge funds' uncorporate governance indicates that high-powered incentives to utilize financial innovation will help managers strike an appropriate balance between risk-taking and practicing risk management. A general lesson from the law and economics of hedge funds is that when a legal regime permits financial intermediaries to be flexible in their investment strategies and aligns the incentives of investors and innovators through performance fees and co-investment by managers, financial innovation is likely to complement investor protection.

The role of hedge funds in advancing the goal of investor protection suggests that the funds should be available to a broader class of investors so that more investors can benefit from the downside protection generally provided by the funds. This can be accomplished by reducing the wealth-based qualifications required to invest in hedge funds.³¹⁶ In addition, policymakers should revisit the restrictions on mutual funds being able to charge performance fees and utilize leverage, short sales, and derivatives. Amending the Company Act to permit mutual funds to more easily employ hedge fund-like investment strategies is another approach to making the benefits of hedge fund investing more widely available. Nonetheless, the inability of hedge funds to remain immune from fluctuations in the overall market and credit crisis in particular shows that the funds are no panacea for the enduring problem of investment risk. Investors, managers, and policymakers should remain vigilant about the inherent complexities of investing and the ability of losses to rapidly spread across all types of investment intermediaries regardless of the legal regime under which they operate.

³¹⁶ See generally Shadab, *supra* note 2 (discussing why permitting sophisticated retail investors to have access to hedge funds promotes wealth-maximization and investor protection); Steven M. Davidoff, *Black Market Capital*, COLUM. BUS. L. REV. (forthcoming, 2008).