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

HOUMAN B. SHADAB*

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. In 2008, as losses from the U.S. mortgage market transformed to an international financial crisis, global equities dropped 42 percent while hedge funds worldwide lost a comparatively smaller 19 percent for their investors. 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 while maintaining a relatively healthy balance between risk taking and 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 without wide-ranging regulation. The role of the funds in advancing the same goal as investor protection suggests that they should legally be available to a broader class of investors.

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* Senior Research Fellow, Mercatus Center at George Mason University. B.A. 1998, University of California at Berkeley; J.D. 2002, University of Southern California. I would like to thank for their invaluable comments Jerry Ellig, Timothy Becker, Arthur Laby, Larry Ribstein, Victor Fleischer and other participants at the University of Illinois Fall 2008 Corporate Colloquium, and for their invaluable research assistance Brian Andrew, Mark Adams, Anthony Skriba and Katelyn E. Christ. All errors are my own.

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

Houman B. Shadab

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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. Although banks allow depositors to earn relatively 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. 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 consistently able to reduce losses during market downturns.

In 2008, as losses from the U.S. mortgage market transformed to an international financial crisis, global equities lost 42 percent of their value while hedge funds worldwide lost a comparatively smaller 19 percent for their investors and with lower monthly volatility.[4] Although large numbers of hedge funds were

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[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 woth 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 142 and accompanying text.

[4] The MSCI World Index fell from 1588.80 on January 1, 2008 to 920.226 on December 31, 2008. *See* MSCI Index Performance http://www.mscibarra.com/products/indices/stdindex/performance.html (follow The World Index Free) (data on file with author); CREDIT SUISSE TREMONT, ONE FOR THE RECORD BOOKS: HEDGE

closed due to poor returns from the ensuing economic turmoil, the funds also proved far more resilient than the banking sector, which several times was in danger of collapsing and dependent on government capital and guarantees to function. To be sure, investors were justifiably frustrated with hedge fund returns, managers preventing investors from withdrawing capital, and certain aspects of hedge fund reporting.[5] Going forward, investors will likely see lower fees and smaller minimum investments and more timely access to their own capital; and the funds will likely increase disclosures and rely even more on independent service providers.[6] The industry is also likely to become less leveraged, face greater competition from passive replicator funds, and more concentrated as smaller funds close, are bought out, or are unable to afford to comply with new and costly risk management practices and new regulation.[7]

Nonetheless, the rapid growth and increasing sophistication of the hedge fund industry over the last decade has enabled it to adapt to the new realties created by the financial crisis. As the financial crisis continues, hedge funds will likely be well-positioned to take advantage of new investment opportunities and continue to meet investor demand for returns less correlated to the overall market than those achieved by traditional investment strategies.[8] Although hedge funds can no longer be considered "absolute return" vehicles in the sense of producing positive returns in all market conditions as was often claimed by hedge fund industry professionals, their massive outperformance of the general market in the worst of economic conditions suggests that the funds deserve their namesake.

This Article finds that the economic outcomes achieved by hedge funds are likely in large part attributable to their governing legal regime. Although regulators and law and finance scholars have recognized the benefits of hedge funds to investors and the broader economy,[9] neither have systematically connected the outcomes produced by hedge funds with the federal securities regime and governance structures under which they operate.[10] While scholars

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FUND PERFORMANCE IN 2008 1, January 2009 (displaying the returns to the Credit/Suisse Tremont Hedge Fund Index in 2008 and comparing the standard deviation of the Index with that of global and U.S. equities).

5 EDHEC-RISK ASSET MANAGEMENT RESEARCH CENTRE, HEDGE FUND REPORTING SURVEY, NOVEMBER 2008, http://www.hedgeweek.com/redirector/2034/289403.

6 *See* FINAlternatives, *New Hedge Fund Platform Provides Access To Top Tier Managers*, Jan. 30, 2009; Tom Sullivan, *Better Disclosure, Courtesy Madoff*, BARRON'S, Jan. 27, 2009.

7 Joseph A. Giannone, *As Hedge Funds Flop, Replication Funds Get Chance*, REUTERS, Jan. 26, 2009.

8 *See* Tommaso Sanzin, *Manager Capacity vs. Market Capacity*, AllAboutAlpha.com, Jan. 4, 2009; Steve Johnson, Change *on the Cards for Hedge Funds*, FINANCIAL TIMES, Jan. 18, 2009 (reporting that a hedge fund consultant stated that "[w]e have got 30 new managers launching at the moment, which is more than I have ever had in the last 12 years"); FINAlternative, *Hedge Funds See 'Lifetime' Opportunity In 2009*, Jan. 23, 2009; Alex Akesson, *Eurekahedge Forecasts More Hedge Fund Launches in 2009*, HEDGECO.NET, Jan. 27, 2009.

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

10 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

have attributed the unique benefits of hedge fund activists to the legal regime under which the funds operate,[11] this Article moves beyond the relatively small group of hedge funds that seek to influence company managers and analyzes the dominant mode of hedge fund activity which consists of trading financial instruments and other assets. Failing to draw broader conclusions may have important policy implications, as financial innovation by hedge funds generally has the result of protecting investor wealth during 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.[12] Second are hedge funds' uncorporate 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 capital. These novel investments strategies often include utilizing innovations in financial instruments such as complex 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. Nonetheless, hedge fund innovation is not without its downsides. Relative to investing in stocks and other liquid assets, hedge funds create unique costs for their investors in the form of higher company-specific risk and short-term limitations on the ability of investors to withdraw their capital. On balance, however, innovation by hedge funds helps investors to diversify a traditional portfolio of stocks and bonds and thereby reduce exposures to overall market risk. As suggested by empirical studies on the sources of hedge fund returns, the superior risk-adjusted performance of hedge funds does not stem

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"very little research has focused on the interactions between hedge fund legal structures and their risk, performance or strategy focus").

[11] *See infra* notes 197-198.

[12] 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 financial instrument, such as stock options and futures, whose price is derived from the value of some other underlying asset. *See* FRANÇOIS-SERGE LHABITANT, HANDBOOK ON HEDGE FUNDS 151-52, 126-29, 142-50 (2006).

solely from the skills of hedge fund managers, but also from the unique strategies that they pursue which, at root, are enabled and incentivized by legal regime under which they operate.

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. Insofar as the outcomes that hedge fund activities produce for their own investors are concerned, the regulatory regime is adequate. Fundamental reform is not warranted except to broaden the range of investors able to benefit from hedge funds.[13]

I. THE HEDGE FUND LEGAL REGIME

Numerous sources of law apply to hedge funds.[14] Hedge funds are governed by the entity law of the state or offshore jurisdiction in which they are organized 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 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 securities regulation. However, the funds operate so as to be totally excluded from federal law applicable to investment companies. Nonetheless, hedge funds are fully subject to federal prohibitions on fraud, market manipulation, and insider trading, and must make public disclosures in connection with trading registered securities.

A. Uncorporate Governance

A "hedge fund" consists of three basic entities: investors, the fund itself, and the investment adviser/management company.[15] U.S.-based hedge funds

[13] The impact that hedge funds have on investors in other companies, the funds' impact on systemic risk, and the regulatory concerns implicated by such issues are beyond the scope of this Article.

[14] The discussion of law applicable to hedge funds in this Section is limited primarily to those laws most relevant to the economic activities of hedge funds described in Sections II and III and is by no means exhaustive. Other bodies of law potentially applicable to hedge funds not discussed in this Article include state law and federal regulation under the Commodity Exchange Act for hedge funds trading commodity interests, the Employee Retirement Income Security Act applicable to hedge funds accepting capital from certain qualifying pension investors, and various industry-wide efforts at self-regulation or the adoption of best practices. *See* SCOTT J. LEDERMAN, HEDGE FUND REGULATION § 7:2 (2007) (discussing pension related regulation); *id.* at §§ 4:5, 6:13 (discussing commodities related regulation); Press Release, United States Treasury Department, *PWG Private-Sector Committees Release Best Practices for Hedge Fund Participants*, April 15, 2008, http://www.treas.gov/press/releases/hp927.htm; Hedge Fund Working Group, Hedge Fund Standards: Final Report, Jan. 2008, http://www.pellin.co.uk/HFWG/Final-Report.pdf; Verret (discussing hedge fund self-regulation).

[15] Other entities that constitute the core of hedge fund service providers include one or more prime brokers, a custodian, a fund administrator, and an auditor. *See* LHABITANT, *supra* note 12, at 90-108.

typically adopt some type of uncorporate form and are structured as limited partnerships or limited liability companies (LLCs).[16] A hedge fund limited partnership is made up of two types of partners, limited partners and the general partner. The limited partners provide capital as the fund's investors.[17] Limited partner 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.[18] 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 additional capital will undermine the ability of the manager to make profitable trades.[19] 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.[20]

Although state partnership statutes permit a partnership agreement to grant voting rights to limited partners,[21] in practice hedge fund limited partnerships do not typically grant any voting rights to their limited partners.[22] To avoid losing their limited liability, limited partners do not participate in management decisions.[23] 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.[24]

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

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[16] *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); LEDERMAN, *supra* note 14, at § 2:3, 2-4. Because the difference between hedge funds structured as limited partnerships or LLCs is generally not important for the purposes this Article, the analysis here of limited partnerships applies equally to LLC except whereas otherwise noted.

[17] *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).

[18] *See*, *e.g.*, Del. Rev. Unif. Ltd. Partnership Act § 17-303.

[19] LEDERMAN, *supra* note 14, at § 2:2.4, 2-4.

[20] HAMMER ET AL., *supra* note 16, at 89.

[21] *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").

[22] LEDERMAN, *supra* note 14, 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.").

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

[24] *See infra* Section I.B.2.

portfolio.[25] 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.[26] 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.[27]

Courts in Delaware and other states interpret fiduciary duties as contractual in nature such that anything short of an intentional breach of the partnership agreement typically will not constitute a breach of fiduciary duty.[28] 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.[29] 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.[30] To prevent hedge fund managers from being subject to personal liability, the general partner of a hedge fund is typically a company organized as an LLC or some other limited liability entity such as a limited partnership or Subchapter S corporation.[31]

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 manager in minimizing tax burdens. As a limited partnership and LLC,

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[25] HAMMER ET AL., *supra* note 16, at 89, 94; LEDERMAN, *supra* note 14, 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.

[26] HAMMER ET AL., *supra* note 16, at 90.

[27] 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).

[28] 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).

[29] HAMMER ET AL., *supra* note 16, at 90; LEDERMAN, *supra* note 14, at § 2:3.3[F], 2-19-20; Susan Ferris Wyderko, Testimony Concerning Hedge Funds Before the Subcommitee on Securities and Investment of the United States Committee on Banking, Housing, and Urban Affairs (May 16, 2006).

[30] *See* Del. Code Ann. tit. 6, § 17-403; HAMMER ET AL., *supra* note 16, at 92.

[31] HAMMER ET AL., *supra* note 16, at 88 n.4, at 91-92; LEDERMAN, *supra* note 14, 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. HAMMER ET AL., *supra* note 16, at 92.

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 who report such items own their own personal income tax returns.[32] 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.[33] 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.[34]

B. The Hedge Fund Operating Agreement

The wide-ranging flexibility of the law of limited partnerships, LLCs, and other forms of uncorporate governance serves as a virtually blank slate upon which hedge finds 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 business entity statutes.[35] Hedge funds utilize lengthy and detailed operating agreements to define 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 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.[36] The management fee covers expenses for operating and administering the fund such as for overhead, personnel salary, office leases and physical capital costs.[37] Management fees are typically used throughout the asset management industry including by publicly registered mutual funds.[38]

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. Performance is typically calculated on an annual basis.[39] Hedge fund performance-based fees typically range from 15 to

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[32] HAMMER ET AL., *supra* note 16, at 88-89, 92.

[33] LEDERMAN, *supra* note 14, at § 2:3.3, 2-7; HAMMER ET AL., *supra* note 16, at 89.

[34] HAMMER ET AL., *supra* note 16, at 89.

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

[36] HAMMER ET AL., *supra* note 16, at 327; LEDERMAN, *supra* note 14, at § 2:3.3[A], 2-8.

[37] LEDERMAN, *supra* note 14, at § 2:3.3[A], 2-8.

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

[39] LEDERMAN, *supra* note 14, at § 2:2.3.

20 percent of profits in excess of prior losses and net of management fees.[40] Performance-based compensation is contractually structured as an income allocation to the management company contingent upon the fund's performance, and not as a fixed fee for services.[41] 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.[42]

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.[43] 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.[44] 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.[45] 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.[46]

In addition to earning compensation from performance fees, hedge fund manager compensation may also be derived from the manager's own investment in the fund. Managers often co-invest a significant portion of their own capital directly in the underlying funds they manage.[47] Using a comprehensive database of hedge funds from 1994 to 2002, Agarwal et al. estimated the average investment by managers accounted for 7.1 percent of fund assets, with the median

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[40] JAMES R. BARTH ET AL., HEDGE FUNDS: RISKS AND RETURNS IN GLOBAL CAPITAL MARKETS, MILKEN INSTITUTE 32-33 (December 2006); LEDERMAN, *supra* note 16, at § 2:3.3[C], 2-10.

[41] LEDERMAN, *supra* note 16, at § 2:3.3[C], 2-10.

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

[43] HAMMER ET AL., *supra* note 16, at 329-330; LEDERMAN, *supra* note 14, at § 2:3.3[C][1], 2-11.

[44] HAMMER ET AL., *supra* note 16, at 329; LEDERMAN *supra* note 14, at § 2:3.3[C][1], 2-11.

[45] HAMMER ET AL., *supra* note 16, at 330-31; LEDERMAN, *supra* note 14, at § 2:3.3[C][2], 2-12.

[46] HAMMER ET AL., *supra* note 16, at 330-31; LEDERMAN, *supra* note 14, at § 2:3.3[C][2], 2-12.

[47] HAMMER ET AL., *supra* note 16, at 92; LEDERMAN, *supra* note 14, at § 2:2.2, 2-3.

manager owning 2.4 percent of the fund.[48] Hedge fund investors often desire co-investment by managers to align the manager's incentives with their own.[49]

2. Restrictions on Share Liquidity

Investors' financial rights in a limited partnership are overwhelmingly determined by contract.[50] Limited partnership law generally leaves it up to the operating agreement to determine when and under what circumstances a limited partner is entitled to a distribution of capital, and permits limited 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.[51] 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.[52] Operating agreements generally restrict investors' ability to withdraw capital to a periodic basis (ranging from monthly to quarterly to annually)[53] and may permit the manager to bar withdrawals at its sole discretion. In addition, investors must typically give 30 to 90 days notice before being able to withdraw capital.[54] Hedge funds may also implement a "lockup" period that prohibits a capital contribution from being withdrawn after it is first invested in the fund.[55] Lockup periods are typically less than one quarter, but may be as long as two years.[56] 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.[57]

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

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[48] 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; European Central Bank, Financial Stability Review 50, Chart 1.41 (June 2008) (finding that 35 percent of hedge funds had the personal capital of their manager invested in the fund), http://www.ecb.int/pub/pdf/other/financialstabilityreview200806en.pdf.

[49] 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).

[50] RIBSTEIN, *supra* note 28, at 294.

[51] Del. Code Ann. tit.6 §17-702(a).

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

[53] LEDERMAN, *supra* note 14, at § 2:2.4, 2-4; HAMMER ET AL., *supra* note 16, at 3. By comparison, publicly registered mutual funds are required to redeem shares to investors *daily*. Company Act 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).

[54] LEDERMAN, *supra* note 14, at § 2:3.3[D][3], 2-16.

[55] *Id*.

[56] *Id*. at § 2:3.3, 2-16-17. BARTH ET AL., *supra* note 40, at 38-41 (showing that a majority of hedge funds have a lockup period of less than one quarter).

[57] LEDERMAN, *supra* note 14, at § 2:3.3[D][3][b], 2-16.

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.[58] 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.[59] Third, hedge funds place restrictions on the trading of their shares so as to not be deemed a publicly traded partnership with its associated higher tax burden.[60]

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"). All hedge fund managers are subject to provisions of the Advisers Act, and a significant portion are registered investment advisers. By definition, however, are completely excluded from any provision of the Company Act.

1. Investment Company Law

The Company Act was passed in wake of the stock market crash of 1929 and government allegations of pervasive self-dealing and investor abuse in the investment fund industry.[61] 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."[62] A registered investment company 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.[63]

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[58] *See infra* Section II.D.3.

[59] *See infra* Section I.C.

[60] LEDERMAN, *supra* note 14, at § 2:3.3[D][2] at 2-15.

[61] 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.

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

[63] *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

The investment activities of hedge funds would deem them an "investment company" under the Company Act except that the funds 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.[64] 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.[65] Qualified purchasers include natural persons owning at least $5 million in investments and certain companies with at least $100 million in securities investments.[66] 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.

Because hedge funds are excluded from the Company Act, the funds are not subject to the restrictions on the investment activities of investment companies imposed by the Company Act and its regulations.[67] 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.[68] 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.[69] While any particular hedge fund may not fully utilize each of these trading activities (for instance, a substantial portion of hedge funds utilize little to no leverage[70]), exclusion from

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).

[64] 15 U.S.C. § 80a-3(c)(1).

[65] 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.

[66] 15 U.S.C. § 80a-2(a)(51)(A)(i); 17 C.F.R. § 270.2a51-1(g)(2) (1997); LEDERMAN, *supra* note 14, at § 5:1.2 (explaining that qualified institutional buyers under Rule 144A of the Securities Act generally meet the definition of qualified purchaser)

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

[68] Company Act § 18(c) (debt restriction for closed-end investment companies), § 18(f) (debt restriction for open-end investment companies).

[69] Emerald Management Co., SEC No-Action Letter (Jan. 21, 1978); LEDERMAN, *supra* note 14, at § 5:2.7, 5-28-29; Talley & Love, *supra* note 67 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.

[70] Leverage measures the extent to which an investor's returns are magnified through borrowing or some other means such as the utilization of derivatives. Although hedge funds are often mistakenly viewed as highly leveraged institutions, only a small portion of the industry is highly leveraged. *See* Roger Merritt & Eileen Fahey, FitchRatings, Credit Policy, Hedge Funds: The Credit Market's New Paradigm 4 (June 5, 2007) (estimating leverage for different types of credit strategy hedge funds). In general, hedge fund leverage has steadily and substantially decreased

the Company Act's restrictions is necessary for the successful operation of a hedge fund.

The Company Act also imposes additional restrictions on the most widely utilized type of registered investment company known as "mutual funds."[71] Mutual funds are prohibited from investing greater than 15 percent of the net value of their assets in illiquid securities, such as the privately placed securities issued by hedge funds.[72] Mutual funds may also not utilize lock-ups because open-end investment companies return capital to investors within seven days of a redemption request.[73] Furthermore, mutual funds typically have relatively narrowly defined investment strategies and lack the flexibility to quickly adapt their strategies to changing market conditions because deviating from an investment policy deemed "fundamental" requires shareholder approval.[74] In addition, mutual funds holding themselves out as a "diversified" fund are prohibited, with respect to 75 percent of their assets, from holding more than 10 percent of the voting securities of any single issuer, or having the securities of an issuer constitute more than 5 percent of the mutual fund's net asset value.[75]

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

since 1998. From 1998 to 2004, researchers at the Bank for International Settlements estimated that average hedge fund leverage dropped from about 8 times assets to 3 times assets. *See* Patrick McGuire et al., *Time-varying Exposures and Leverage in Hedge Funds*, BIS QUARTERLY REVIEW 69 March 2005. The Organization for Economic Co-operation and Development (OECD) estimated that in 2007 average gross hedge fund leverage was 3.9 to 1, which means that for every 3.9 dollars in hedge fund assets, one dollar was equity and the rest was borrowed (or the economic equivalent of borrowing was achieved by using derivatives). Adrian Blundell-Wignall, *An Overview of Hedge Funds and Structured Products: Issues in Leverage and Risk,* FIN. MARKETS TRENDS 48 (2007). *See also generally* Patrick McGuire & Kostas Tsatsaronis, Estimating Hedge Fund Leverage, BIS Working Papers, September 2008. Other estimates of hedge fund leverage have found similarly low measures. *See* IMF, Global Financial Stability Report Financial Stress and Deleveraging Macro-Financial Implications and Policy 41, Box 1.5 (October 2008); European Central Bank, Financial Stability Review 45, Chart 1.32 December 2008.

[71] For a fuller discussion of registered investment companies, *see infra* notes 178-184 and accompanying text.

[72] 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).

[73] Company Act § 22(e).

[74] 15 U.S.C. § 8-a-13(a)(1)-(4); Talley & Love, *supra* note 72 at § 8.2.1[B]; LEDERMAN, *supra* note 14, at § 5:2.7, 5-27.

[75] Company Act § 5(b)(1). To minimize their tax liability, mutual funds must also comply with the diversification rule of the Internal Revenue Code, which requires mutual funds to meet the same diversification rule with respect to 50 percent of its assets. *See* Internal Revenue Code § 851(b)(3).

others about whether to purchase or sell certain securities.[76] An adviser must register under the Advisers Act if it holds its services out to the public as an investment adviser, advises an investment company registered under the Company Act, or advises 15 or more clients.[77] However, a hedge fund manager may gain exemption from the Advisers Act by qualifying as a private adviser under section 203(b)(3), 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.[78] The foregoing adviser registration rules are likely to be modified in 2009 by the 111th Congress. On January 29, 2009, Senators Charles Grassley and Carl Levin introduced the Hedge Fund Transparency Act which would require most hedge fund advisers to register with the SEC and publicly disclose basic information, among other requirements.[79]

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.[80] Advisers Act regulation 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.[81] Under the Advisers Act, fraudulent or misleading statements or omissions need not be willful to be unlawful; negligence is sufficient for liability.[82] In addition, registered managers must disclose basic information about the manager on Form ADV, either to investors or the SEC.[83] This includes information about its investment strategies[84] along with material facts about the financial condition of the management company.[85]

Unregistered managers are not subject to any limitations on charging performance fees.[86] By contrast, a fund manager registered as an investment adviser is generally prohibited from charging a performance fee to clients based

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

[77] 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).

[78] 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).

[79] Senator Carl Levin, Senate Floor Speech on Introduction of the Hedge Fund Transparency Act, http://levin.senate.gov/senate/statement.cfm?id=307472.

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

[81] 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).

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

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

[84] Form ADV, Part II, http://www.sec.gov/about/forms/formadv.pdf.

[85] 17 C.F.R. § 275.206(4)-4(a)(1)-(2).

[86] HAMMER ET AL., *supra* note 16, at 333.

solely upon the client's capital gains (i.e., the fund's profits).[87] However, a registered adviser may charge a profit-based performance fee if advising a fund excluded from the Company Act under section 3(c)(7),[88] or if all investors in the fund meet the definition of "qualified client."[89] A qualified client includes natural persons and companies having at least $1.5 million in net worth or at least $750,000 managed by the adviser.[90] In addition, a registered adviser is permitted to charge a performance fee if the fee symmetrically increases or decreases in proportion to the performance of the fund averaged over a specified period of time or relative to an external benchmark of performance.[91] Symmetric performance-based fees, also known as "fulcrum fees," are only utilized by approximately two percent of U.S. mutual funds, in part due to accepted commercial practice and the incentives fulcrum fees create for investors to exit early or not join well-performing funds.[92]

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 federal securities laws.[93] 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.[94] 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

[87] Advisers Act § 205(a)(1), 15 U.S.C. § 80b-5(a)(1) (2006) (prohibiting a registered adviser from being paid compensation "on the basis of a share of capital gains upon or capital appreciation of the funds or any portion of the funds of the client").

[88] Advisers Act § 205(b)(4); 15 U.S.C. § 80b-5(b)(4).

[89] Advisers Act Rule 205-3(d)(1), 17 C.F.R. § 275.205-3(d)(1).

[90] *Id*.

[91] Advisers Act § 205(b)(1)-(2), 15 U.S.C. § 80b-5(b)(1)-(2).

[92] Sophia Grene, *A Cautious Embrace of Performance Fees*, FIN. TIMES, Jan. 7, 2008, at 9; Kahan & Rock, *supra* note 197, at 1050.

[93] Exchange Act Rule 3a11-1 ("The term equity security is hereby defined to include any . . . limited partnership interest"); Securities and Exchange Commission v. Parkersburg Wireless Limited Liability Company, 991 F. Supp. 6 (D. D .C. 1997) (holding that LLC interests are "securities" under the Securities Act and Exchange Act).

[94] 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).

any fact so that a statement that was made is misleading.[95] 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.[96] Under Rule 10b-5, hedge fund managers are also liable for utilizing material nonpublic information to purchase or sell securities in violation of a fiduciary duty—insider trading.[97] In addition, under various provisions of the Exchange Act and Securities Act, hedge funds are prohibited from manipulating the prices of publicly or privately held securities.[98]

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.[99] Section 5 of the Securities Act requires all interstate issuers of securities to file a registration statement.[100] Registration statements generally consist of a prospectus to be delivered to investors before or accompanying a sale, other information to be filed with the SEC, and a third category of information to be made available to investors upon request.[101] 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.[102]

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."[103] First, section 4(2) of the Securities Act specifically exempts nonpublic offerings of securities by an issuer from the requirements of section 5.[104] 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

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[95] 15 U.S.C. § 77q(a) (applying its provisions to any "offer or sale of any security").

[96] Exchange Act § 10(b), 15 U.S.C. § 78j; Rule 10b-5, 17 C.F.R. § 240.10b-5 (2007). Furthermore, under the Securities Act mere negligence is sufficient to be liable for fraud. Aaron v. SEC, 446 U.S. 680, 701-02 (1980).

[97] LEDERMAN, *supra* note 14, at § 8:3.3.

[98] LARRY D. SODERQUIST, UNDERSTANDING THE SECURITIES LAWS § 14:5 (4th ed. 2004).

[99] Securities Act § 5(a), 15 U.S.C. § 77a (2006).

[100] Securities Act § 5, 15 U.S.C. § 77e (2006).

[101] HAMMER ET AL., *supra* note 16, at 145, 157 (describing the components of disclosure for registration statement on Form N-1A and Form S-1).

[102] *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.

[103] SEC STAFF REPORT, *supra* note 2, at 14.

[104] 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").

factors.[105] 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.[106]

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 investors[107] (although it does not limit the number of investors a hedge fund may have[108]). 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 $200,000 (or $300,000 in joint spousal income if married).[109] 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."[110] 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.[111] Hedge funds seeking the safe harbor provision of Rule 506 must also exercise reasonable care to prevent the resale of their securities.[112] Securities purchased pursuant to a Rule 506 private placement

[105] SEC v. Ralston Purina Co., 346 U.S. 119, 125-26 (1953); HAMMER ET AL., *supra* note 16, 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*.

[106] 346 U.S. at 125-26.

[107] 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).

[108] 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.

[109] 17 C.F.R. § 230.501(a). The SEC on December 27, 2006 proposed new rules 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). The proposed rules were never finalized.

[110] 17 C.F.R. § 230.506(b)(1).

[111] 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).

[112] *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*.

cannot be resold by the purchaser without registration or qualification for another exemption from registration.[113]

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.[114] 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.[115]

2. Disclosures Relating to Trading Registered Securities

Hedge funds must comply with various requirements under the Exchange Act arising out of their investments in public companies.[116] First, all hedge funds and their mangers are required to disclose large shareholdings of public 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.[117] 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.[118] In addition, to increase publicly available knowledge about institutional shareholdings, under section 13(f) hedge funds owning more than $100 million in stock traded on a national exchange are required to quarterly disclose to the public all of their equity holdings and weekly to the SEC certain short sale positions.[119]

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[113] 17 C.F.R. § 230.502(d) (1997).

[114] 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.").

[115] 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 14, at § 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).

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

[117] 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).

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

[119] Exchange Act Rule 13f-1(b); 17 C.F.R. § 240.13f-1(b) (2007); U.S. Securities and Exchange Commission, Disclosure of Short Sales and Short Positions by Institutional Investment Managers, 73 Fed. Reg. 61678, Oct. 17, 2008.

E. Hedge Funds Versus Corporate Governance

The foregoing analysis demonstrates that hedge fund governance structures are quite different from those applicable to registered investment companies and public companies more generally. The particular governance devices adopted by hedge funds are explicable, in part, by the transaction cost theory of the firm, according to which companies adopt governance structures aligned with transaction-specific characteristics in order to reduce transaction costs and increase performance[120] which, in the case of hedge funds, is measured by investment returns. A major source of hedge fund transaction costs stems from managers, to whom investors delegate investment decisionmaking power, unduly consuming investor wealth, taking on too much risk, or failing to take on enough risk to sufficiently engage in activities such as innovation.[121] A primary task of organizational law and contracting is thus to reduce these types of agency costs by aligning incentives.[122]

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.[123] Registered investment companies must also have a board of directors, 40 percent of whom are independent.[124] By contrast, hedge funds do not have a corporate-style independent board of directors. Additionally, because hedge fund limited partners cannot freely transfer their control (voting) rights and there is no secondary market for shares of the fund, hedge fund managers are insulated from

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[120] 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.").

[121] *See generally* Sanford Grossman & Oliver D. Hart, *An Analysis of the Principal-Agent Problem*, 51 ECONOMETRICA 7 (1983); 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; Houman B. Shadab, *Innovation and Corporate Governance: The Impact of Sarbanes-Oxley*, 10 U. PENN. J. BUS. & EMP. L. 955, 978-79 (2008) (discussing agency costs from a failure to innovate).

[122] 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).

[123] *See generally* Shleifer & Vishny, *supra* note 122.

[124] Company Act § 10(a), 15 U.S.C. § 80a-10(a) (2006).

the market for corporate control.[125] Hedge fund governance takes place through a flat organizational structure with little management hierarchy and without investment decisions being subject to outside monitoring and interference by non-managers.

Hedge funds do, however, employ governance mechanisms to resolve agency problems so investors can "assure themselves of getting a return on their investment."[126] Unlike public corporations, ownership and management in a hedge fund are not fundamentally separated.[127] Hedge fund managers often have a substantial ownership stake in the underlying funds that they advise.[128] In addition, the compensation of corporate managers is comprised in substantial part from a large fixed salary and pension (estimated to be approximately 38 percent of total compensation for CEOs) not directly dependent upon the manager's contribution to company performance.[129] By contrast, the fixed portion of hedge fund manager compensation (the 1 to 2 percent management fee) is relatively small compared to what could be earned through earning performance fees by realizing gains for investors.[130] Although there are short-term limitations placed on investor redemptions, relative underperformance will lead investors to redeem their capital and may even cause a forced liquidation of the fund.[131] 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.[132]

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 investing. Hedge funds 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

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[125] *See also* Ribstein, *supra* note 16, at 19.

[126] Shleifer & Vishny, *supra* note 122, at 737 (surveying and defining corporate governance issues from a "straightforward agency perspective").

[127] Ribstein, *supra* note 16, at 8.

[128] *See supra* notes 47-48.

[129] *See* Lucian A. Bebchuk & Robert J. Jackson, Jr., *Executive Pensions*, 30 J. CORP. L. 823, 850 Tbl. 8 (2005) (finding that the mean base salary plus pension was 38.6 percent of total compensation for S&P 500 CEOs that left the company during 2003 and the first five months of 2004).

[130] Ribstein, *supra* note 16, at 4.

[131] *See infra* Section II.C.3. for a fuller discussion of hedge funds' need to continually return to investors for capital.

[132] *See* Ribstein, *supra* note 16, at 12, 15. For a somewhat parallel comparison of private equity and corporate governance *see* Ronald W. Masulis & Randall S. Thomas, *Does Private Equity Create Wealth?, The Effects of Private Equity and Derivatives on Corporate Governance*, U. Chicago L. Rev. (forthcoming 2009).

conditions, and the uncorporate 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 sector of the economy is to facilitate investment activities by matching up investors seeking positive returns on their capital with firms seeking to raise financial capital by selling securities.[133] 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 exit an investment and the fees paid to third-party asset managers.[134] Ultimately, financial innovation enables investors to get the most for 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.[135] Categories of innovations include new products for consumers (i.e., goods and services), new methods of production, and new forms of business organization.[136] In the financial sector, financial product innovations such as exchange 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,[137] and

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[133] *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.").

[134] 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.

[135] 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 Processed-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").

[136] *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).

[137] 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,

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 have helped market participants to better manage risk.[138] Financial organizational innovations such as the SecondMarket trading platform has increased the liquidity of and helped to create markets for privately traded equity and debt securities (including those backed by mortgages).[139]

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 the skill of an asset manager in implementing investment strategies. Managerial skill is typically measured and represented by the quantity alpha (α). Another source of higher returns is higher risk. Risk is the likelihood that purchased assets will decrease in price and thereby impart a loss to an investor.[140] Higher risk is a source of higher returns because investors must be compensated for taking greater risks.[141] For example, stocks typically have higher returns than bonds because taking an equity position in a company to share in its profits is generally riskier than making that company a loan to receive interest payments.[142]

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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.

[138] 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).

[139] Aline van Duyn, *SecondMarket Enters New Territory*, FINANCIAL TIMES, Dec. 11, 2008, http://www.ft.com/cms/s/0/7b50b6f4-c728-11dd-97a5-000077b07658.html .

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

[141] *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).

[142] BREALY ET AL., *supra* note 141, at 147-49.

Modern portfolio theory focuses on those returns attributable to risk and teaches that investors should seek to maximize risk-adjusted returns.[143] 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.[144] 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.[145] 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.[146] 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.[147] 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 risk arise from the particular circumstances of a company or related issuers, such as management quality and employee retention.[148] Market risk, by contrast, is the risk that the value of an investment will increase or decrease along with fluctuations in the overall market.[149] Market risk arises because economywide changes often impact a significant if not overwhelming portion of individual companies and other issuers, and thereby

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[143] 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).

[144] LHABITANT, *supra* note 12, at 455.

[145] Malkiel, *supra* note 140, at 29-30.

[146] LHABITANT, *supra* note 12, at 443-44.

[147] 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 14, at § 1:3, 1-18; LHABITANT, *supra* note 12, 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; HEDGECO.NET, SHARPE VS SORTINO RATIO (2003), http://www.hedgeco.net/sharpe-ratio-sortino-ratio.htm.

[148] BREALY ET AL., *supra* note 141, at 162. Unique risk is also referred to in the finance literature as "unsystematic" risk or "idiosyncratic" risk. *See* Malkiel, *supra* note 140, at 34.

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

cause the prices of securities of different companies to move up or down together.[150]

Although investments with higher returns 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).[151] As explained by Nobel Prize-winning economist James Tobin, diversification cautions investors against putting all their "eggs in one basket."[152] Diversification reduces risk to the extent the returns of different securities are independent of one another, i.e., have a low correlation.[153] 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.[154] Empirical research shows that idiosyncratic risk can be minimized by purchasing the securities of approximately 20 different companies.[155] Diversification is so important in making wealth-maximizing investment decisions that it is widely referred to as the *only* "free lunch" in economics.[156]

Once an investment portfolio is diversified with respect to idiosyncratic risk, the remaining risk to a portfolio comes from market risk.[157] Properly understood, risk is therefore not about the risk of individual securities, but rather a portfolio-level issue regarding the impact of adding securities on the likelihood of a portfolio experiencing losses.[158] Market risk is the sensitivity of a portfolio's or an individual security's price to movements in the general market, and it is represented by the quantity known as beta (β).[159] 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).[160]

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[150] BREALY ET AL., *supra* note 141, at 162; Malkiel, *supra* note 140, at 34.

[151] Malkiel, *supra* note 140, at 32.

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

[153] *See* Malkiel, *supra* note 140, at 32–33.

[154] BREALY ET AL., *supra* note 141, at 161-62

[155] *Id*. at 162.

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[157] *See* BREALY ET AL., *supra* note 141, at 167; Malkiel, *supra* note 140, at 35-36.

[158] LHABITANT, *supra* note 12, at 540.

[159] BREALY ET AL., *supra* note 141, at 167.

[160] *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.

Diversification can decrease market risk by purchasing securities from different asset classes because securities from different classes are exposed to different sources of market risk.[161] For example, stocks are generally exposed to fluctuations in the overall economy, while bonds are exposed to changes in interest rates.[162]

The capital asset pricing model shows that investors are generally awarded higher returns only for investing in securities with more market risk (higher beta).[163] 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.[164] 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.[165]

Arbitrage Pricing Theory (APT) goes one step further by unpacking market risk into various components.[166] 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.[167] 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.[168] In sum, diversification among securities and across classes of

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161 LHABITANT, *supra* note 12, at 539-541.

162 *Id*. at 548.

163 BREALY ET AL., *supra* note 141, at 188-89; Malkiel, *supra* note 140, at 35.

164 BREALY ET AL., *supra* note 141, at 182-85.

165 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).

166 *See*, *e.g.*, Rall & Ross, *supra* note 149, at 122-26 (reviewing APT).

167 BREALY ET AL., *supra* note 141, at 199.

168 *See* Rall & Ross, *supra* note 149, 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

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

2. Transaction Costs and Idiosyncratic Risk

Constructing a diversified portfolio requires a sufficient 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 and in other assets.[169] 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.[170] Investment intermediaries do, however, introduce transaction costs that investors would not bear if investing on their own and may provide no net value to investors.

The two most economically significant investment intermediaries are depository institutions and registered investment companies.[171] 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.[172] Depository institutions include commercial banks, savings and loans institutions, and credit unions.[173] 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.[174] Furthermore, depository institutions allow investors (depositors) to diversify and lower idiosyncratic risk by to lending their funds to numerous borrowers and using the institution's superior expertise in making and monitoring loans.[175] However, loan-making is inherently limited in its ability to maximize depositors' risk-adjusted returns. For example, commercial banks are prohibited by law from owning stock in public companies, and can therefore only earn the relatively safer

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

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

170 *Id.* at 114-120; CECCHETTI *supra* note 134, at 259. Of course, borrowers often raise funds directly by issuing securities such as stocks and bonds. *Id*.

171 CECCHETTI *supra* note 134, at 330-31.

172 *Id*. at 286.

173 *Id*.

174 *Id*. at 264-67.

175 *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).

but relatively lower returns on debt investing.[176] Banks are also restricted in their use of derivatives to hedging their loan-related risks,[177] 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,[178] 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.[179] Closed-end registered investment companies offer fixed numbers of shares that trade in secondary markets.[180] 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).[181]

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.[182] A mutual fund's performance is evaluated by comparing a fund's returns to the overall

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[176] 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).

[177] 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.").

[178] As of the end of the third quarter 2008, the total assets managed by U.S. mutual funds managed was $10.63 trillion, closed-end funds managed $238.44 billion, and unit investment trusts managed $1.35 billion. *See* Investment Company Institute, Archive of "Trends" Releases, http://www.ici.org/stats/mf/arctrends/; Investment Company Institute, Closed-End Fund Statistics, http://www.ici.org/stats/ce; Investment Company Institute, Unit Investment Trust Statistics, http://www.ici.org/stats/uit/.

[179] 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").

[180] SEC, *supra* note 179.

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

[182] LEDERMAN, *supra* note 14, at § 1:3, 1-16-17 (noting that traditional investment strategies consist of stock, bond, and other fixed-income investments).

performance of the market or other relevant benchmark.[183] Mutual funds are an improvement over banks because they offer investors a relatively low-cost method to invest in a diverse portfolio of stocks and bonds that typically earn higher returns than bank deposits.

However, the relatively higher returns of mutual funds come with increased risk. Mutual funds specializing in equities, for instance, 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.[184] For instance, the Company Act's requirement that a registered investment company must offset a short position hampers the ability of mutual funds to engage in short sales to reduce the exposure of the fund to decreases in stock prices and hence market risk. Accordingly, during economic downturns mutual funds typically remain invested in securities even as they continue to decrease in value.

3. Hedge Fund Investment Strategies and Market Risk

While depository institutions and mutual funds benefit investors by reducing investment transaction costs and idiosyncratic risk, hedge funds are uniquely able to reduce losses from market risk. Exclusion from the definition of "investment company" under the Company Act permits hedge funds to employ leverage, short sales, and derivatives without having to comply with the Act's restrictions with respect to those activities. Not having to comply with the Company Act enables hedge funds to more easily pursue investment strategies with a low correlation to the overall market than mutual funds, which typically seek returns relative to the overall market (or a segment of the market).[185] Hedge funds' low correlation strategies requires the funds to utilize innovative investment strategies that go beyond traditional long-only investments in stocks and bonds. In 1949, Alfred Winslow Jones started the first modern 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.[186] Since that time, so-called "long-short equity" funds have become a primary strategy and in 2008 were employed by approximately 40 percent of hedge funds comprising 27 percent of industry assets.[187]

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[183] 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).

[184] See supra Section I.C.1.

[185] LEDERMAN, *supra* note 14, at § 1:3, 1-17; LHABITANT, *supra* note 12, at 32.

[186] LHABITANT, *supra* note 12, at 8-10.

[187] EUREKAHEDGE, THE EUREKAHEDGE REPORT 11 January 2009 (estimating strategy composition of North American hedge funds).

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.[188] 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.[189] Convertible bond arbitrage strategies were first utilized by the proprietary trading desks of large investment banks.[190] 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.[191] 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).[192] Other relative value trading strategies include fixed income arbitrage and equity market neutral funds.[193]

Corporate event driven strategies seek to profit from trades based upon extraordinary events in a company such as mergers or bankruptcies.[194] 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.[195] Other event driven funds include those that invest in underperforming securities and those that engage in corporate activism.[196] Compared to institutional shareholders such as mutual funds and pensions funds, hedge funds are much more active in monitoring and influencing corporate managers and practice innovative means of cooperating with managers.[197] Empirical studies strongly suggest that hedge fund

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[188] STEFANINI *supra* note 165, at 14.

[189] *Id.* at 99-100; LHABITANT, *supra* note 12, at 279-84.

[190] LHABITANT, *supra* note 12, at 287-88.

[191] STEFANINI *supra* note 165, at 167.

[192] *Id.* at 173-174.

[193] For general descriptions of these sub-strategies *see* LHABITANT, *supra* note 12, at 197-214, 297-310.

[194] STEFANINI *supra* note 165, at 14.

[195] *Id.* at 75-76, 82-83.

[196] *Id.* at 14.

[197] *See* Marcel Kahan & Edward B. Rock, *Hedge Funds in Corporate Governance and Corporate Control*, 155 U. PENN. L. REV. 1021, 1042-45 (2006-2007). *See also generally* Robert C. Illig, *What Hedge Funds Can Teach Corporate America: A Roadmap for Achieving Institutional Investor Oversight*, 57 AM. U. L. REV. 225 (2007-2008).

activism generally benefits investors of the companies that hedge funds influence.[198]

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.[199] 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.[200] Although global macro funds accounted for approximately 32 percent of hedge fund assets in 1994,[201] by 2008 approximately 8 percent of fund assets were involved with the strategy.[202]

The foregoing innovative hedge fund investment strategies have the general effect of reducing an investor's exposure to market risk. This is demonstrated by hedge funds generally exhibiting betas lower than equity mutual funds, both in the aggregate and across the vast majority of specific fund strategies.[203] Using overlapping but not equivalent time periods, Figure 1 compares the betas of the foregoing main hedge fund strategies versus that of equity mutual funds separated into three groups by beta. Figure 1 illustrates that all four 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.[204]

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[198] *See generally* Alon Brav, Wei Jan, Frank Partnoy & Randall Thomas, *Hedge Fund Activism, Corporate Governance, and Firm Performance*, 63 J. FIN. 1729 (2008); Thomas W. Briggs, *Corporate Governance and the New Hedge Fund Activism: An Empirical Analysis*, 32 J. CORP. L. 681 (2006-2007); Christopher P. Clifford, Value creation or destruction? Hedge funds as shareholder activists, 14 J. CORP. FIN. 323 (2008).

[199] *Id.* at 239-40. *See also* STEVEN DROBNY, INSIDE THE HOUSE OF MONEY: TOP HEDGE FUND TRADERS ON PROFITING IN THE GLOBAL MARKETS (2006) (describing the wide array of global macro strategies through interviews with hedge fund managers).

[200] *Id.* at 240-41; LHABITANT, *supra* note 12, at 12-15, 327-50.

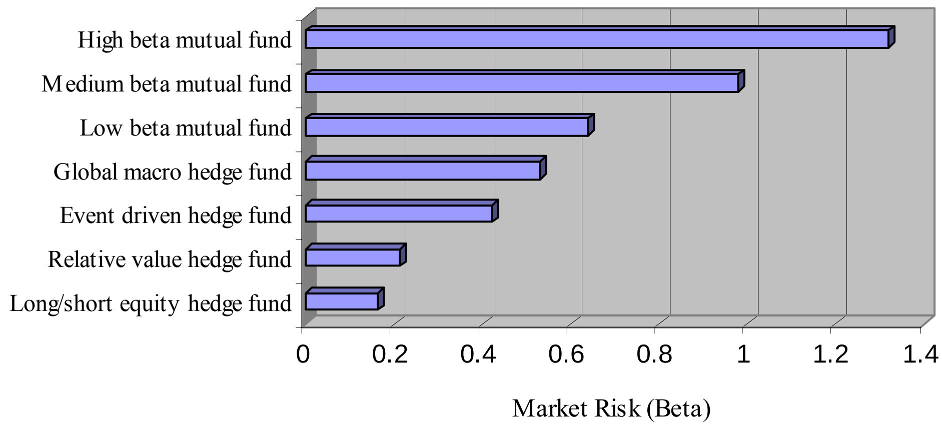
[201] BARTH ET AL., *supra* note 40, at 19.

[202] EUREKAHEDGE, *supra* note 187.

[203] *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).

[204] Capocci & Hübner, *supra* note 203, 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). 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.

Figure 1: Market Risk of Hedge Funds Versus Mutual 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 systematic 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.[205] Fung and Hsieh also applied APT to determine what specific systematic risk factors are common to hedge funds.[206] They found that hedge funds are exposed to a set of non-standard risk factors such as the difference between returns to small and large cap stocks.[207] Accordingly, hedge fund innovation helps to diversify a portfolio

[205] *See* William K.H. Fung & David A. Hsieh, *Hedge Funds: An Industry in Its Adolescence*, 91 ECON. REV. 1, 8 (2006). Notwithstanding their typically low correlation to market movements, hedge fund returns may become more correlated to general market trends during downturns. 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).

[206] 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").

[207] Fung & Hsieh, *supra* note 208, at 71.

by lowering exposures to standard market risks and broadening the types 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 broadening the types of risks investors are exposed to results in a higher overall risk of loss. More generally, the benefits of hedge fund innovation must be weighed against the costs and risks unique to investing in hedge funds. These costs and risks include unique transaction costs and higher company-specific risks than public companies.

First, hedge funds typically require investors to bear unique transaction costs because, unlike making bank deposits or purchasing mutual fund shares, hedge funds charge a relatively high management fee and also constrain investors' ability to immediately withdraw capital.[208] If a hedge fund fails to outperform other collective investment vehicles with lower management fees, the hedge fund fees are not worth bearing. In addition, despite their generally low correlation to market risk factors, hedge funds may not be an attractive investment to investors seeking to withdraw their capital due to the redemption restrictions often exercised by the funds.[209]

In addition, hedge funds' low correlation to market risk factors also comes at the expense of increasing company-specific risk. Unlike traditional stocks and bonds whose returns are normally distributed like a bell curve, particular hedge fund's returns are typically more asymmetric. Hedge fund returns exhibit the higher moment statistical return properties of negative skew and high kurtosis.[210] 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.[211] Yet despite individual hedge funds' generally higher company-specific risk, the funds as a whole exhibit lower overall risk than the equity market. To adequately measure the net impact of hedge funds on overall investment risk, downside risk measures must be utilized in addition to the market

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

[209] *See generally* Andrew Ang & Nicolas P.B. Bollen, Locked Up By a Lockup: Valuing Liquidity As a Real Option, (Columbia Business School and Vanderbilt University Working Paper, Nov. 13, 2008) (modeling the costs of hedge fund lockups to investors), http://ssrn.com/abstract=1291842.

[210] *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).

[211] *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).

risk measure discussed above.[212] 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 were less risky than all other asset classes except government bonds.[213] 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. As discussed in Section III, hedge funds continued to lose less than the overall stock market through 2008.

C. Hedge Fund Governance and Innovation

Hedge funds' flat uncorporate governance structure is a successful adaptation to the needs of an investment fund required to innovate to be successful. Innovation stems from learning and from discovering new knowledge, either contained by individuals within the firm or from the external environment,[214] and is facilitated by decentralized and flexible governance structures that allow knowledge to be efficiently generated, disseminated, and acted upon.[215] Flat, uncorporate governance allows a fund to quickly absorb new information and adapt investment strategies and other aspects of operations to changing economic conditions.[216] Furthermore, hedge fund governance devices (e.g., performance fees, lockups) foster the types of incentives and financial

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[212] *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).

[213] LHABITANT, *supra* note 12, at 520, fig. 23.3.

[214] O'SULLIVAN, *supra* note 135 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 135 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.").

[215] *See generally* Shadab, *supra* note 121 (arguing that public companies with more decentralized governance structures are associated with more innovation activities).

[216] By contrast, outside monitoring and hierarchical corporate governance devices are generally less suited to facilitate the types of activities that support innovation. *Id.*

commitment conducive to implementing innovation activities.[217] By 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. Managerial Performance-Based Incentives

Hedge fund manager incentives are primarily derived from managerial co-investment and performance-based fees.[218] 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.[219] Innovation by definition involves something new and unknown, and therefore requires undertaking activities with a relatively higher degree of uncertainty regarding their outcomes.[220] As innovation researchers suggest, performance-based compensation provides incentives to take such risks.[221] 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.[222] A call option gives the option holder the right to

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[217] Measuring the performance-impact of particular hedge fund governance devices likely suffers from well-known endogeneity problems. *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). However, because hedge fund governance devices are established and disclosed to investors before any capital contributions are made and are typically held constant over the course of the life of a fund, measuring the relationship between hedge fund governance and performance may be less prone to error in practice. Agarwal et al., *supra* note 48, at 2.

[218] *See* Agarwal et al., *supra* note 48, 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).

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

[220] Mary O'Sullivan, *Finance and Innovation*, *in* HANDBOOK ON INNOVATION 86, *supra* note 135 at 257-58; Pavitt, *in* HANDBOOK ON INNOVATION 86, *supra* note 135 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.").

[221] O'SULLIVAN, *supra* note 135 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).

[222] 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).

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.[223] That a hedge fund performance fee has the same payout as a call option likely reflects the more general phenomenon that the incentives and gains related to innovation are also the same as the payout from an option.[224]

Managerial co-investment unsurprisingly seems 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.[225] 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.[226] The optimal range of co-investment is an issue yet to be analyzed in-depth by empirical researchers.[227]

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 better talent to the industry. 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 greater than investors' alternative investment options.[228] 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

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[223] *See* Agarwal et al., *supra* note 48, at 4.

[224] *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).

[225] Agarwal et a. 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 48, at 5, 12-13, 36. *See also* Le Moigne & Savaria, *supra* note 230, at 424 (finding in a sample of 3,775 funds from 1989 to 2005 that funds with the personal capital of managers invested had higher returns).

[226] 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 (e.g. > 30%), risk taking will be reduced considerably"); LHABITANT, *supra* note 12, 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").

[227] *See* Agarwal et al., *supra* note 48, at 18 (finding that very high managerial co-investment is correlated with negative but not statistically significant returns).

[228] 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).

affirmative, finding that performance fees in part account for why hedge funds outperform mutual funds (which cannot by law charge performance fees),[229] and that private investment funds that do not charge performance fees underperform those that do.[230] 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.[231] However, some studies find no relationship between incentive fee rate and performance.[232] The 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.[233] 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

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[229] 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).

[230] 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 226, at 3308 (finding that "hedge funds with incentive fees have significantly lower mean returns (net of fees) and worse risk-adjusted performance").

[231] 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. Caglayan, *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).

[232] 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 incentive fee rates and performance); Thomas Schneeweis, 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).

[233] BARTH et al., *supra* note 40, 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").

total incentives are higher—in the presence of higher performance fees, more managerial co-investment into the fund, and higher high water marks.[234]

The existence of a high water mark ensures that managers are not paid a performance fee unless they produce a gain for investors.[235] The primary 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.[236] Using a sample of 8,752 hedge funds from January 1990 to December 2005, Chakraborty and Ray found that high water marks induced managers at or just below the mark to expend more effort.[237]

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" because either coming in at just below or far below the high-water mark will equally result in the manager not being paid a performance fee.[238] Chakraborty and Ray found 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 more and relatively poorer risks.[239] On the other hand, excessive risk-taking may be constrained by a desire to prevent the fund from collapsing, losing co-invested funds, or ending up far below the high water

[234] Agarwal et al., *supra* note 48, at 3-5. *See also* Liang, *supra* note 231, 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).

[235] 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").

[236] Agarwal et al., *supra* note 48, at 15, 16, 21 (finding that "the presence of a high-water provision improves performance by 21%" and increases alpha by 2.4%).

[237] Indraneel Chakraborty & Sugata Ray, Effort, Risk and Walkaway Under High Water Mark Style Contracts, 2, 20 (University of Pennsylvania Working Paper, Oct. 29, 2008), http://ssrn.com/abstract=1083089.

[238] 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.

[239] Chakraborty & Ray, *supra* note 237, at 2.

mark in the first place.[240] Using a sample of 4,990 hedge funds from January 1994 through December 2007, Clare and Motson found that hedge fund managers well below their high water mark do not increase their risk taking activities even though doing so may jeopardize earning performance fees.[241] To prevent individual managers from leaving the employment of a fund well below its high water mark, some hedge fund operating agreements 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.[242]

2. Illiquidity Transaction Costs

Although the limitations hedge funds place on capital redemptions impose transaction costs on investors, a tradeoff is that these limitations generally have the benefit of 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.[243] As the seminal work of Oliver Williamson explains, 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.[244] 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.

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[240] *See* Stavros Panageas & Mark M. Westerfield, *High-Water Marks: High Risk Appetites? Convex Compensation, Long Horizons, and Portfolio Choice*, J. Fin. 4, 14-15 (forthcoming 2009) (arguing through mathematical modeling that a desire to avoid falling below the high water mark restrains hedge fund manager risk-taking), http://ssrn.com/abstract=1316667; James E. Hodder & Jens C. Jackwerth, *Incentive Contracts and Hedge Fund Management*, 42 J. FIN. QUAT. ANAL. 811 (2007) (arguing through mathematical modeling that managerial co-investment induces managers to reduce risk as fund value fall below the high water mark).

[241] Andrew Clare & Nick Motson, Locking in the Profits or Putting it All on Black? An Investigation into the Risk-Taking Behaviour of Hedge Fund Managers 3 City University London - Sir John Cass Business School Working paper, Nov. 26, 2008), http://ssrn.com/abstract=1307713.

[242] LEDERMAN, *supra* note 14, at § 2:3.3[C][1], 2-11-12.

[243] 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").

[244] *Id*. at 251-54 (noting that a "critical dimension" for describing contractual relations is the degree to which investments are asset-specific).

Illiquid investments, which are not often traded, require more time than liquid investments for gains to be realized.[245] 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.[246]

Empirical studies suggest 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.[247] As a result, investors are compensated with higher returns in exchange for bearing transaction costs from redemption restrictions.[248] This illiquidity premium in part reflects a return to innovation. Innovative companies generally foster asset-specificity to increase performance.[249] 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.[250] 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.

3. Lack of Public Financing

A third hedge fund governance device is the need to obtain and keep investor capital in the private equity markets. Hedge funds do not have access to relatively stable sources of external capital provided by the public secondary markets and the reputational benefits of being publicly listed on a stock exchange. Accordingly, fund managers have a strong incentive to engage in those activities necessary to obtain capital and prevent investors from withdrawing it.

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[245] LEDERMAN, *supra* note 14, 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").

[246] *See also* Ribstein, *supra* note 16, 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.

[247] Agarwal et al., *supra* note 48, at 9, 17; BARTH et al., *supra* note 40, at 63–64; Baba & Goko, *supra* note 233, at 27 ("funds with a longer redemption notice period and a lower redemption frequency have higher survival probabilities.").

[248] Agarwal et al., *supra* note 48, at 9, 17; Liang, *supra* note 231, at 78 (1999) (finding hedge fund performance to be higher the longer the lockup period); Aragon, *supra* note 245, at 34.

[249] O'SULLIVAN, *supra* note 135, at 33.

[250] *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 219, 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").

The basic business model of a hedge fund derives from a manager "believ[ing] he has a set of skills that could earn above average risk adjusted returns."[251] The type of skill required for a successful hedge fund is skill in generating new and unique knowledge about the future prices of financial instruments or other assets, 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.[252] 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 are 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.[253] To increase assets under management without reducing overall returns, hedge funds must therefore implement new investment strategies.

Competitive pressures in the hedge fund industry also drive innovation. Barriers to entry in the hedge fund industry are low.[254] 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.[255] Furthermore, because trading strategies are not subject to intellectual property right protection, hedge fund managers often go to great lengths to protect their proprietary strategies and investment positions.[256] Nonetheless, the superior returns obtained by a particular hedge fund trading strategy may be short-lived as rival managers and other traders in the markets discover and imitate the trading strategies of other managers.[257] There are also an

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[251] Fung & Hsieh, *supra* note 205, at 2 (emphasis in original).

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

[253] 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 fund sizes and returns"); Le Moigne & Savaria, *supra* note 230, at 419, 420 (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 48, at 20-21; LHABITANT, *supra* note 12, at 520.

[254] LEDERMAN, *supra* note 14, at § 1:4.2, 1-21-1-23.

[255] 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.

[256] *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).

[257] BOOKSTABER, *supra* note 256 at 195 (noting the risk of a fund's positions being traded against once known by others).

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 mediocre hedge funds.[258] Because hedge fund investors are relatively quick to withdraw capital from underperforming funds,[259] 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 large part attributable to funds voluntarily closing for failure to meet investment objectives, reflect the importance of outperforming rivals.[260]

Finally, hedge funds must innovate as part of their overall strategy to keep up with a constantly changing economic world.[261] Financial innovation is often a response to broad macroeconomic changes in general price levels, interest rates, and currency exchange ratios.[262] Accordingly, greater macroeconomic instability will tend to spur more financial innovation, often in an attempt to reduce the risks from such change.[263] 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

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[258] Vikas Agarwal, Nicole M. Boyson & Narayan Y. Naik, *Hedge Funds for Retail Investors? An Examination of Hedged Mutual Funds*, J. FIN. QUANT. ANAL. (forthcoming), http://ssrn.com/abstract=891621; 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.

[259] 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.

[260] 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).

[261] *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.").

[262] *See* Frame & White, *supra* note 138, at 120.

[263] *Id.*

continually monitored and often require managers to make incremental innovations to their investment strategies to attain their objectives.[264]

D. Alpha and the Hedge Fund Legal Regime

Notwithstanding the generally higher company-specific risks of hedge funds, their lower exposures to market risk and downside risk means that hedge funds have lower *overall* investment risk and thereby help to diversify an investment portfolio.[265] Indeed, numerous studies document that hedge funds produce superior risk-adjusted returns (alpha) relative to traditional long-only investments.[266] Hedge fund alpha therefore reflects the gains to investors from

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[264] *See* ARMELLE GUIZOT, THE HEDGE FUND COMPLIANCE AND RISK MANAGEMENT GUIDE 44-54 (2007).

[265] A large body of academic finance literature supports the proposition that hedge funds lower the risk of traditional portfolios despite the funds' relatively higher company-specific risk. *See* Jean-François Bacmann & Gregor Gawron, *Fat-Tail Risk in Portfolio of Hedge Funds and Traditional Investment*, *in* HEDGE FUND INSIGHTS, *supra* note 211, 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 211, 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 211, 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. Of course, 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 hedge funds are added. *See* Bacmann & Gawron *supra* note 265, 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 211, at 3-4.

[266] *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; Peng Chen & Roger G. Ibbotson, The A,B,Cs of Hedge Funds: Alphas, Betas, and Costs 14, Yale ICF Working Paper No. 06-10, Sept. 2006, http://ssrn.com/abstract=733264; Kat & Miffre, The Impact of Non-Normality Risks and Tactical Trading on Hedge Fund Alphas, Cass Business School Finance Working Paper, 16-17 May 24, 2006 (finding the representative hedge fund manager to have superior trading skills but noting that previous studies and their own may

hedge fund innovation. One likely source of hedge fund alpha is the superior investment skill of hedge fund managers.[267] Another likely source are the systematic risk exposures that arise from managers utilizing non-traditional investment strategies.[268] Hedge funds' systematic risk factors may give rise to hedge fund alpha because the funds' unique returns reflect compensation for bearing unique risks.[269] Because hedge funds' utilization of innovative strategies is due in part to the hedge fund legal regime (which enables and provides incentives for hedge fund managers to take on hedge fund-specific systematic risks), then some combination of hedge funds being excluded from the Company Act and operating subject to the incentives provided by their uncorporate governance devices likely explains their superior performance. The hedge fund legal regime is a likely source hedge fund alpha.

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.[270] Investor protection means protecting investors

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overstate alpha), http://ssrn.com/abstract=424368; Capocci & Hübner, *supra* note 203, at 77 (finding that hedge funds as a whole "[d]eliver significant excess returns").

[267] Studies finding a lack of long-term and industry-wide persistence in performance by hedge fund managers undermine the notion that superior performance on an industry-wide basis is solely a result of manager skill. *See* Martin Eling, *Does Hedge Fund Performance Persist? Overview and New Empirical Evidence*, EURO. FIN. MGMT. (forthcoming 2009). *See also* John M. Griffin & Jin Xu, How Smart are the Smart Guys? A Unique View from Hedge Fund Stock Holdings, AFA 2008 New Orleans Meetings Working Paper (finding that hedge fund managers are not better at picking stocks than mutual fund managers), http://ssrn.com/abstract=924242.

[268] Duen-Li Kao, *Battle for Alphas: Hedge Funds Versus Long-Only Portfolios*, 52 FIN. ANALYSTS. J. 23-25 (2002) (describing how the unique legal structure applicable to hedge funds may explain the author's finding that hedge funds outperform long-only portfolios); Rajna Gibson & Songtao Wang, Hedge Fund Alphas: Do They Reflect Managerial Skills or Mere Compensation for Liquidity Risk Bearing?, Swiss Finance Institute Research Paper No. 08-37, 2008 (finding that hedge fund alpha is a return for making illiquid investments), http://ssrn.com/abstract=1304541.

[269] In the context of providing an alternative to manager skill as an explanation for superior hedge fund performance, hedge fund systematic risk exposures are often referred to as "alternative beta." *See* Roman Tancar & Jan Viebeg, *Alternative Beta Applied—An Introduction to Hedge Fund Replication*, FIN. MARKETS PORTFOLIO MGMT. 259, 260-63 (2008).

[270] *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).

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.[271] The primary means by which U.S. securities law protects investors is by mandating the "full and fair disclosure of the character of securities,"[272] combined with liability for fraud or violations of specific disclosure requirements.[273] 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.[274]

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

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[271] 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).

[272] Securities Act, Preamble.

[273] 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").

[274] *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) (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).

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 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 public registration and disclosure requirements and managers often keep their particular investment strategies and positions private,[275] 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.[276] As interpreted by U.S. courts, a fund making some disclosures to potential investors must also make additional disclosures to ensure that its communications are not misleading.[277] Second, hedge funds usually make private offerings under the requirements of Rule 506 and according to the judicially-defined statutory section 4(2) exemption.[278] This latter exemption requires hedge funds to disclose to investors the type of information contained in a Securities Act registration statement.[279]

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[275] 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").

[276] *See supra* Section I.C.2 and Section I.D.1.

[277] *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.").

[278] HAMMER ET AL., *supra* note 16, 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 14, 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).

[279] *See supra* note 105.

Accordingly, to fulfill their obligations under federal law, hedge funds must make true, accurate, and comprehensive disclosures to investors.[280]

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").[281] A PPM is a widely-utilized form disclosure which 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.[282] 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.[283] Hedge funds also make periodic disclosures to investors, with one survey finding that 89 percent of surveyed hedge fund managers made at least monthly disclosures to investors.[284] Hedge funds typically utilize third parties such as prime brokers, custodians, and administrators that have direct access to the fund's investment positions and the ability to verify the fund's true investment returns.[285] Third parties such as Morningstar are also

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[280] LEDERMAN, *supra* note 14, 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."); HAMMER ET AL., *supra* note 16, at 4 (same).

[281] 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 . . . ."); HAMMER ET AL., *supra* note 16, 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.").

[282] SEC STAFF REPORT, *supra* note 2, at 47-49 (noting the information typically disclosed in a PPM); HAMMER ET AL., *supra* note 16, at 118 ("A hedge fund's private offering memorandum should contain all the information required in a registration statement . . . ."); LEDERMAN, *supra* note 14, at § 4:2.2, 4-13.

[283] SEC STAFF REPORT, *supra* note 2, at 47-49; LEDERMAN, *supra* note 14, at § 4:2.2, 4-13-14; HAMMER ET AL., *supra* note 16, at 144-158.

[284] PRICEWATERHOUSECOOPERS, TRANSPARENCY VERSUS RETURNS: THE INSTITUTIONAL INVESTOR VIEW OF ALTERNATIVE ASSETS 50 (March 2008). *See also* Email from Bruce Gibney & Alda Leu, Clarium Capital Management LLC to Nancy M. Morris, Secretary, Securities and Exchange Commission at 5 (Mar. 9, 2007), http://www.sec.gov/comments/s7-25-06/s72506-566.pdf (stating that "[i]t is routine for hedge funds to provide monthly reports [to investors], and many provide weekly and even daily reports of performance").

[285] LHABITANT, *supra* note 12, at 93-103. The antifraud law applicable to hedge funds and their utilization of independent service providers provides substantial, though certainly not perfect, assurances against fraud. *See* Chidem Kurdas, *Does Regulation Prevent Fraud? The Case of Manhattan Hedge Fund*, 13 INDEPENDENT REV. 325, 326-27 (2009). For example, the multibillion dollar securities fraud carried out by Bernard Madoff was possible in part because Madoff did not

increasingly compiling and making public information relevant to evaluating and investing in different hedge funds.[286]

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.[287] Indeed, hedge funds, their investors, and third parties such as trade groups are increasingly recommending substantial transparency as a best practice.[288] 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.[289] This is especially the case after the subprime-initiated financial crisis and the Madoff scandal, which have likely served to make investors more wary of opaque manager disclosures.[290]

C. Hedge Funds and Protection from Financial Losses

Based upon their historical returns, hedge funds have furthered the same goal that investor protection regulation seeks to advance by helping investors maximize risk-adjusted returns. When added to a traditional portfolio of stocks and bonds, hedge funds have can lower overall investment risk and therefore help diversify a portfolio.[291] Indeed, in some circumstances investing in a diversified portfolio of hedge funds may be superior to holding any traditional investments whatsoever.[292]

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manage a hedge fund and did not utilize independent services providers. Felix Salmon, *Can Hedge Funds Be Fraudulent?*, Potfolio.com, Dec. 15, 2008.

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

287 Indeed, some hedge fund advisers voluntarily register and submit to the disclosure obligations of the Advisers Act to attract investors. HAMMER ET AL., *supra* note 16, 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).

288 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 ___ at 220-21, 225-26.

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

290 *See* Ivy Schmerken, *New Era in Hedge Fund Transparency?*, ADVANCED TRADING, Jan. 20, 2009.

291 *See supra* Section II.D.

292 *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

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-wide performance was much less available.[293] Since the mid-1980s, average industry-wide returns have been approximately 9 percent.[294] Since the late-1990s, 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.[295] 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).[296] Yet despite LTCM's losses, in August 1998 hedge funds as a whole fared better than the market, losing 7.75 percent compared to a lose of 14.46 percent for the S&P 500.[297]

A period more indicative of the protection that hedge funds provide against market downturns was the recession from 2000 to 2002 following the crash of the technology bubble. Figure 2 compares average yearly hedge fund returns to those of the general market from 1997 to 2007.[298] As Figure 2 illustrates, hedge fund returns, while often lower than market returns on an absolute basis, preserved investor wealth when the broader market was negative.

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extreme returns are larger among stock indices than hedge fund indices), *available at* www.aima-canada.org/doc_bin/SUMMER2005_aimawinner.pdf.

[293] BARTH ET AL., *supra* note 40, 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.

[294] *See*, *e.g.*, Kat & Miffre, *supra* note 266, at 7-8 (finding an annualized average return from hedge funds of 12 percent from January 1985 to August 2004). *See also* Chen & Ibbotson, *supra* note 266, at 16 (finding the compounded annual return for hedge funds from 1995 to April 2006 to be 9 percent).

[295] LHABITANT, *supra* note 12, at 16.

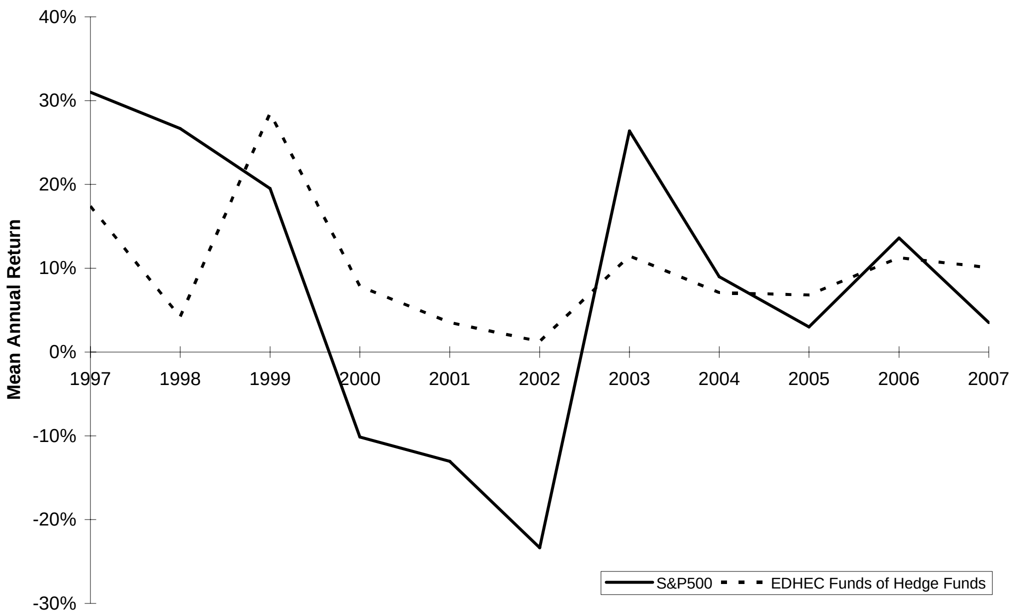
[296] HEDGE FUNDS, LEVERAGE, AND THE LESSONS OF LONG-TERM CAPITAL MANAGEMENT, REPORT OF THE PRESIDENT'S WORKING GROUP ON FINANCIAL MARKETS 14 (1999).

[297] LHABITANT, *supra* note 12, at 525, fig. 23.10.

[298] Returns for the S&P 500 are obtained from EconStats, S&P 500 (Large Cap) Index, http://www.econstats.com/eqty/eqea_mi_1.htm. Hedge fund annual 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. For annualized returns from 1997 to 2007 see Véronique Le Sourd, Hedge Fund Performance in 2007, EDHEC Risk and Asset Management Research Centre 9 (2008). Using funds of hedge funds returns is a sound method to approximate average hedge fund performance. *See* Fung & Hsieh, *supra* note 205, 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").

From 2000 to 2002, the average return of the S&P 500 Index was -15.5 percent while the average annual return for hedge funds during the same period was a gain of approximately 4.2 percent.

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



In addition to offering protection from annual stock market losses, hedge funds as a class have also offered protection from monthly losses. Returns to hedge funds are typically higher than those of the stock market in months when the market returns a loss.[299] 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.[300]

2. Hedge Fund Performance During the Financial Crisis

The third major test for the hedge fund industry began in late 2007 as losses from the U.S. subprime mortgage market initiated a global financial crisis. 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.[301] Due principally to a slowdown in housing appreciation in 2006, delinquencies and defaults in the

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

[300] LHABITANT, *supra* note 12, at 523-25, fig. 23.8.

[301] 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).

previously growing number of subprime loans began to sharply increase in 2006.[302] Losses on subprime mortgages spread not only to banks that made the loans, but also to other financial institutions such as investment banks, mutual funds, pension funds, and hedge funds. These institutions invested in securities backed by mortgages (mortgage-backed securities) and securities themselves backed by mortgaged-backed securities (known as collateralized debt obligations, or CDOs).[303] Because subprime-related losses caused market participants to question the value of all types of debt securities and the creditworthiness of financial institutions, a "credit crunch" ensued as lenders substantially curtailed their lending activities and the issuance and trading of CDOs and other debt securities dramatically decreased.[304] Through September 2008, global financial institutions lost a total of $760 billion from writing down the value of loan assets including debt securities backed by mortgages.[305]

Hedge funds were far from immune from the financial crisis.[306] In 2008, hedge funds suffered the worst losses in their history. Hedge funds lost 19 percent and their investors withdrew a record $149 billion in capital.[307] Investors in several large and prominent hedge funds such as those sponsored and managed by Bear Stearns, Goldman Sachs, Citadel, and Peloton Partners either experienced massive losses or were completely wiped out, and others were unable to withdraw their capital due to restrictions placed on redemptions.[308] Like other financial institutions, hedge funds realized losses due to having to write down the value of

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[302] *Id*. at 7-9.

[303] INTERNATIONAL MONETARY FUND (IMF), GLOBAL FINANCIAL STABILITY REPORT FINANCIAL STRESS AND DELEVERAGING MACRO-FINANCIAL IMPLICATIONS AND POLICY 35 Box 1.4 (October 2008) (displaying investors in mortgage-related securities), http://www.imf.org/external/pubs/ft/gfsr/2008/02/pdf/text.pdf.; BANK FOR INTERNATIONAL SETTLEMENTS (BIS), BASEL COMMITTEE ON BANKING SUPERVISION, THE JOINT FORUM, CREDIT RISK TRANSFER, DEVELOPMENTS FROM 2005 TO 2007, 9-10, 16-17 (July 2008) (describing CDO investors), http://www.fsforum.org/publications/r_0804c.pdf?noframes=1.

[304] Pierre Paulden et al., *Wall Street Abandons Neediest Clients, Cuts Credit*, BLOOMBERG, Feb. 2008; Jody Shenn, *CDO Market Is Almost Frozen, JPMorgan, Merrill Say*, BLOOMBERG, Feb. 5, 2008.

[305] IMF, *supra* note 300, AT 15-17.

[306] Hedge funds did not initiate the crisis nor seem to have meaningfully exacerbated its associated losses. *See* Houman B. Shadab, Hedge Funds and the Financial Market, Written Testimony Before the House Committee on Oversight and Government Reform 7-14 Nov. 14, 2008, http://oversight.house.gov/documents/20081113102107.pdf.

[307] CREDIT SUISSE TREMONT, *supra* note 4, at 1.

[308] Matthew Goldstein & David Henry, *Bear Bets Wrong*, BUS. WEEK, Oct. 22, 2007; Katherine Burton, *Goldman Global Equity Hedge Fund Rises 12% After Cash Infusion*, Bloomberg Aug. 23, 2007; Louise Armitstead, *Hedge Fund Legends Hit by Financial Crisis*, TELEGRAPH, April 6, 2008; Richard Wachman, *Bloodbath in Mayfair as Half of All Hedge Funds Face Termination*, GUARDIAN UK, Oct. 26, 2008; MarketFolly, 2008 Hedge Fund Performance Numbers: December & Year-End, Jan. 20, 2009, http://www.marketfolly.com/2009/01/2008-hedge-fund-performance-numbers.html; Henny Sender, *On Wall Street: Hedge Fund Won't Let Go*, FINANCIAL TIMES, Dec. 12, 2008.

loan assets.[309] However, hedge fund investments in mortgage-related securities were far behind those of other market participants.[310] Hedge fund losses in 2008 were distributed across a wide range of hedge fund investment strategies.[311] Yet despite the unprecedented 19 percent annual loss, hedge fund performance in 2008 was an all time high relative to the U.S. public equity market, which lost 38.47 percent of its value.[312] Hedge funds also far outperformed stock mutual funds, which lost an average of 37.6 percent in 2008.[313] In contrast to the banking sector, the hedge fund industry was never in danger in collapsing. New hedge funds continued to be opened throughout the financial crisis.[314]

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-related losses.[315] After the collapse of investment bank Bear Stearns in March of 2008, hedge funds began using more than just one prime broker (such as Bear Stearns) to shield themselves against the risk of another prime broker collapsing; when investment bank Lehman Brothers declared bankruptcy on September 15, hedge funds largely avoided losses associated with Lehman's custody of hedge fund assets.[316] Hedge funds have also been adopting other new best practices throughout the financial crisis.[317]

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[309] INTERNATIONAL MONETARY FUND, *supra* note 305, at 14-16 (estimating that hedge funds and certain other nonbank financial institutions incurred $60 billion in losses through October 2008).

[310] Hedge funds held an estimated 10 percent of CDO equity securities in 2007, which account for about half of all hedge fund CDO investments. In a typical CDO structure, less than 5 percent of the securities are equity, which means that the overwhelming majority of CDO securities were purchased by institutions other than hedge funds. *See* John Lipsky, First Deputy Managing Director, International Monetary Fund, The Global Economy and Financial Markets: Where Next?, Speech at the Lowy Institute, Sydney, Australia, July 31, 2007, http://www.imf.org/external/np/speeches/2007/073107a.htm (estimating that hedge funds purchased 10 percent of CDO equity); BIS, *supra* note 303, at 53 Table C.1.

[311] *See generally* CREDIT SUISSE TREMONT, *supra* note 4.

[312] Econ Stats, S&P 500 Large Cap Index, http://www.econstats.com/eqty/eqea_mi_1.htm.

[313] Rob Wherry, *Our Mutual Fund Report Card for 2008*, SMART MONEY, Jan. 7, 2009.

[314] James Mackintosh, *Hedge Funds Cut Down to Size?*, FINANCIAL TIMES, Jan. 11, 2009; Johnson, *supra* note 8.

[315] 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.

[316] Pierre Cooper, *Hedge Funds Swerve Lehman Crash*, HFMWeek, Sept. 2008. *See also* Sameer Shalaby, *The End of the Single Prime Broker Model*, ADVANCED TRADING, Sept. 30, 2008.

[317] Pauline Skypala, *Hedge Funds Move to Self-Regulate*, FINANCIAL TIMES, Jan. 4, 2009; Ivy Schmerken, Hedge *Funds Outsource to Independent Fund Administrators*, WALL STREET & TECH., Jan. 6, 2009.

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.[318] Third, because of hedge funds' abilities to short sell and to trade derivatives without Company Act restrictions, they were able to employ innovative investment strategies to profit from subprime risk exposures.[319]

Due in part to the legal regime under which they operate, mutual funds and banks were unable 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. 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.[320] 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.[321]

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

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[318] *See* Rich Blake, *House Money*, TRADER MONTHLY 40, November 207 (reporting that hedge fund manager 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 256. *See also* Christine Richard & Katherine Burton, *Ackman Devoured 140,000 Pages Challenging MBIA Rating*, BLOOMBERG, Jan. 31 2008.

[319] Zuckerman, *supra* note 256 (reporting that the hedge fund managed by John Paulson profited $15 billion by implementing a novel investment strategy that entailed purchasing CDS protection and short selling CDO tranches and the ABX subprime mortgage index); 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"); RISK, *Hedge Fund of the Year—Stark Investments*, Jan. 2008, Vol. 21 (reporting that two Wisconsin-based hedge funds profited by short selling bonds associated with subprime mortgages).

[320] *See supra* notes 176-179 and accompanying text.

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

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.[322] Career concerns and the bonus compensation of 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 fund incentives and governance structures most conducive to benefiting from financial innovations such as CDOs.[323] A reason why Goldman Sachs' and Deutsche Bank's trades were relatively uncommon is likely in part because, unlike hedge fund managers, investment bank traders and underwriters do not typically face the risk of losing their own co-invested capital and are compensated without having to first recoup prior investor losses. Investment bank professionals engaging in underwriting activities earned performance-based compensation based in large part on the amount of fees they generated for the bank in the previous year, and not on whether the securities they issued produced long-term gains for clients or increased the price of the investment bank's stock. [324]

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.[325] Merrill Lynch,

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[322] 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 Burgeons on Subprime Trading Bet*, Bloomberg July 30, 2007; Blake et al., *Fourth Annual Trades of the Year*, TRADER MONTHLY 74, February/March 2008.

[323] *See also* Steven M. Davidoff, A Partnership Solution for Investment Banks?, Deal Professor, N.Y. Times, Aug. 20, 2008, http://dealbook.blogs.nytimes.com/2008/08/20/a-partnership-solution-for-investment-banks/.

[324] *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").

[325] 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).

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.[326] 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 addition, hedge fund managers were able to evaluate the mortgage-related securities market without any preconceived notion about value. Investment banks, on the other hand, had sold mortgage-related securities to their clients and retained such securities on their balance sheets,[327] and therefore had both economic and reputational reasons to believe that such securities were sound investments. For these reasons, 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 his colleagues for taking investment positions against the housing market.[328]

IV. CONCLUSION

The historical performance of hedge funds suggests that the hedge fund legal regime creates sustained benefits for investors despite the unique risks and complexity brought about by the funds' innovative investment strategies. The lack of legal restrictions on the ability of hedge funds to employ leverage, short sell, and use derivatives strongly suggests that investment flexibility is highly conducive toward creating and utilizing innovative investment strategies with relatively low exposures to market risk. In addition, hedge funds' uncorporate governance indicates that hedge fund-like incentives to utilize financial innovation help financial market decisionmakers strike a relatively healthy balance between risk taking and risk management. A general lesson from the law and economics of hedge funds is that when a legal regime permits financial institutions to be flexible in their investment strategies and aligns the incentives of investors and innovators through the right mix of performance fees and managerial co-investment, financial innovation will complement investor protection.

As policymakers in light of the financial crisis seek to ensure that investor protection is not compromised by rapid financial innovation, the outcomes achieved by hedge funds provide important lessons about what type of regulatory and governance regime facilitates innovation while maintaining investor protection. Hedge funds substantially outperformed the public equity markets as a whole and the heavily regulated mutual fund industry. Unlike banks and other financial institutions, the hedge fund sector was never in danger of collapsing nor

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

[327] Vikas Bajaj, *Bankers' Lesson From Mortgage Mess: Sell, Don't Hold*, N.Y. TIMES, Nov. 5, 2007 (reporting "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.").

[328] Kelley, *supra* note 322; Blake et al., *supra* note 322.

did losses from hedge funds threaten the financial system and lead to federal rescue measures. The performance of the hedge fund sector undermines the notion that a regulatory regime consisting of mandatory disclosure, direct government oversight, and limitations on risk taking is necessary to advance investor protection.

From the perspective protecting hedge fund investors, additional hedge fund regulation does not seem warranted. Instead, 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. In testimony on May 22, 2003 before the House Committee on Financial Services, then SEC Chairman William H. Donaldson noted that "there is a definite need to examine how hedge funds, properly run and properly disclosed, can be allowed to be purchased by retail investors."[329] One approach to achieving this goal is to reduce the wealth-based qualifications required to invest in hedge funds.[330] Hedge funds possess risk and disclosure characteristics comparable to a wide range of investment opportunities that U.S. retail investors are currently permitted to invest in, such as mutual funds that employ hedge fund-like strategies and exchange-traded funds that track the performance of niche market sectors and those that attempt to replicate the returns of hedge funds.[331] Hedge funds also typically make disclosures sufficient for a wide range of investors to make informed investment decisions. In addition, the companies and products unsophisticated retail investors *are* permitted to invest in are not uniformly safer or less prone to fraud, easier to understand, or even more meaningfully transparent than hedge funds.[332] Another approach to making the benefits of hedge funds more widespread is for policymakers to lift the restrictions on mutual funds being able to charge (asymmetric) performance fees and utilize leverage, short sales, and derivatives. This approach was suggested by the SEC in a 2003 staff report on the growth of hedge funds.[333]

Because hedge fund innovation generally complements the goal of investor protection regulation, permitting a wider range of investor to invest in the funds would likewise advance regulatory policy goals. Nonetheless, the inability of hedge funds to remain immune from fluctuations in the overall market and the financial crisis in particular shows that the hedge fund legal regime is no panacea for the enduring problem of investment risk. Investors, managers, and creditors should remain vigilant about the inherent complexities of investing and the ability

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[329] The Long and Short of Hedge Funds: Effects of Strategies for Managing Market Risk: Hearing Before the Subcomm. on Capital Markets, Insurance, And Government Sponsored Enterprises of the H. Comm. on Financial Services, 108th Cong. 16 (2003).

[330] *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).

[331] *See* Houman B. Shadab, *An Artifact of Law: U.S. Prohibition of Retail Hedge Funds*, 24 J. FIN. TRANSFORMATION 73, 77-78 (2008).

[332] *Id.*

[333] SEC STAFF REPORT, *supra* note 2, at 104.

of losses to rapidly spread across all types of investment intermediaries, regardless of the legal regime under which they operate.