


2007

# The Challenge of Hedge Fund Regulation

Houman B. Shadab  
*New York Law School*

Follow this and additional works at: [https://digitalcommons.nyls.edu/fac\\_articles\\_chapters](https://digitalcommons.nyls.edu/fac_articles_chapters)

 Part of the [Banking and Finance Law Commons](#), and the [Securities Law Commons](#)

---

## Recommended Citation

Shadab, Houman B., "The Challenge of Hedge Fund Regulation" (2007). *Articles & Chapters*. 1176.  
[https://digitalcommons.nyls.edu/fac\\_articles\\_chapters/1176](https://digitalcommons.nyls.edu/fac_articles_chapters/1176)

This Article is brought to you for free and open access by the Faculty Scholarship at DigitalCommons@NYLS. It has been accepted for inclusion in Articles & Chapters by an authorized administrator of DigitalCommons@NYLS.

# HEINONLINE

Citation:

Houman B. Shadab, The Challenge of Hedge Fund Regulation, 30 Regulation 36 (2007)

Provided by:

New York Law School<br>The Mendik Library

Content downloaded/printed from [HeinOnline](#)

Thu Jan 3 20:41:00 2019

-- Your use of this HeinOnline PDF indicates your acceptance of HeinOnline's Terms and Conditions of the license agreement available at <https://heinonline.org/HOL/License>

-- The search text of this PDF is generated from uncorrected OCR text.

-- To obtain permission to use this article beyond the scope of your HeinOnline license, please use:

## [Copyright Information](#)



Use QR Code reader to send PDF to your smartphone or tablet device

*As other nations expand access to hedge funds, should the U.S. adopt tighter regulation?*

# The Challenge of Hedge Fund Regulation

BY HOUMAN B. SHADAB

*Mercatus Center*

A “hedge fund” is a private investment vehicle that is less regulated than traditional investment companies. The name comes from the funds’ traditional role as “hedgers” against downturns in more conventional investments. Hedge funds have historically taken investment positions that are relatively uncorrelated with broader financial markets or that may be in opposition to broader markets. In more recent years, the term has been expanded to cover funds that employ very complex investment strategies. Once relatively obscure and, by federal statute, reserved for very wealthy investors, hedge funds today manage nearly \$1.5 trillion in assets for investors that include pension funds and university endowments.

Academics, industry professionals, and regulatory authorities overwhelmingly agree that hedge funds benefit the economy by mitigating price downturns, bearing risks that others will not, making securities more liquid, and ferreting out inefficiencies. Those benefits are possible because hedge funds are subject to much less regulation than most investment companies. Compared to mutual funds, hedge funds are less restricted in their use of derivatives and leverage, and have greater incentives to do so because they are not required to disclose their strategies or holdings publicly.

Less regulation also raises important concerns about the risks the funds pose to investors and the funds’ potential to destabilize the economy — the latter concern underscored by the spectacular 1998 contraction of the fund Long-Term Cap-

**Houman B. Shadab** is a senior research fellow in the Mercatus Center at George Mason University. He may be contacted by e-mail at [hshadab@gmu.edu](mailto:hshadab@gmu.edu).

ital Management. Those worries have led to calls for tighter regulation or oversight.

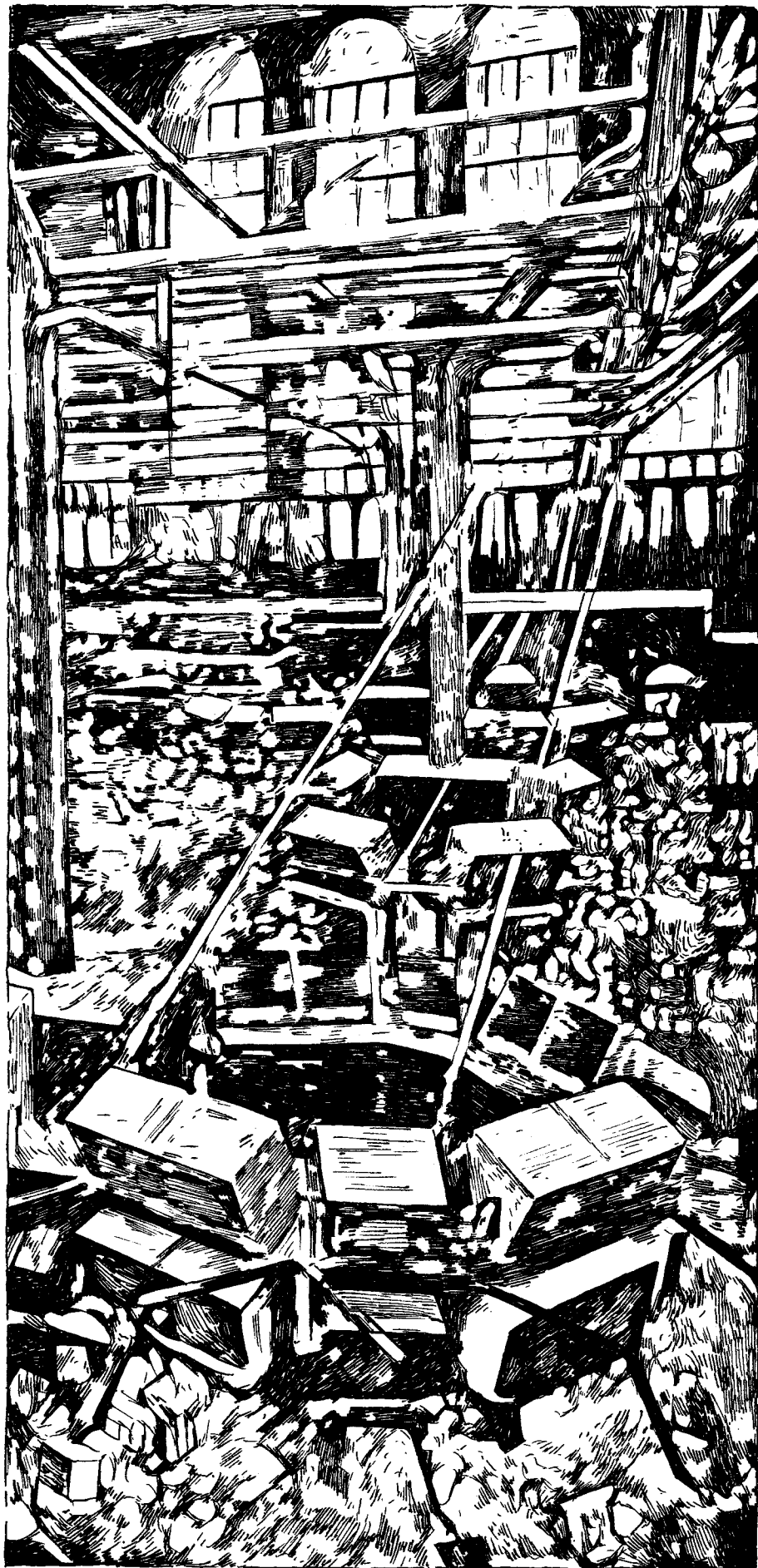
In this article, I will show that such concerns turn out to be less substantial when considered carefully, and that hedge funds are reducing their risks for investors and other market participants. Because more regulation may reduce hedge funds’ benefits to investors and the economy, policymakers should consider whether additional regulation will do more harm than good.

## **HEDGE FUND BASICS**

Because of their different properties and practices, hedge funds as a group are best understood from a legal, not economic, perspective.

Hedge funds typically are exempt from the registration and disclosure requirements of federal securities laws, including the Securities Act of 1933, the Securities and Exchange Act of 1934 (Exchange Act), the Investment Advisers Act of 1940 (Advisers Act), and the Investment Company Act of 1940. The funds are also not prohibited from leveraged trading, short-selling, or concentrated investing. To qualify for those exemptions, hedge funds may not advertise and can only accept investments from large institutions and wealthy individuals.

**REGULATIONS** Despite the exemptions, hedge funds are subject to government regulation and oversight. Federal securities law prohibits hedge funds from fraud and insider trading. In 2006, 86 percent of hedge funds were registered with some regulatory body (such as the Securities and Exchange Commission or Commodity Futures Trading Commission), accord-



MORGAN BALLARD

ing to a Hennessee Hedge Fund Manager Survey. Hedge fund managers are also considered legal fiduciaries under the Advisers Act, which requires fund managers to put the interests of their funds above their personal interests.

Hedge funds must make substantial disclosures to potential investors in order to discharge fiduciary duties and avoid running afoul of anti-fraud rules prohibiting “misleading statements” and “omissions.” The Exchange Act requires hedge funds to report to the SEC any nontrivial holdings in public companies, and also all of their stock holdings on a quarterly basis if the fund has more than \$100 million invested in public companies. It is also not uncommon for a fund to trade futures or commodity options contracts so as to come under the scrutiny of the CFTC, or for a fund to have 25 percent or more of its equity assets owned by a qualified employee benefit plan such that it must comply with the Employee Retirement Income Security Act (ERISA).

Indirect regulation also applies to hedge funds. Federal treasury regulations limit the ability of banks to lend to hedge funds, and Regulation T of the Federal Reserve Board likewise limits securities broker-dealers. Banks must also comply with minimum risk-based capital requirements under the Basel capital accord and are subject to inspection by bank supervisors for exposures to risk.

**MANAGERS AND STYLES** Traditionally, financial market regulation aims to protect investors from fraud and the “agency costs” associated with delegating investment decisions to a third party. The legal and economic structure of hedge funds substantially protects investors. Managers often invest their own money in their funds and, because the funds are usually structured as limited partnerships, managers may be personally on the hook for their funds’ liabilities. Perhaps more importantly, on top of a fixed 1 or 2 percent management fee, managers typically earn a performance-based fee of 20 percent, which usually does not trigger until any previous losses are recouped. Managers therefore have strong incentives to benefit investors

and are discouraged from performance-reducing conduct such as excessive risk-taking. Indeed, hedge fund managers with more control and performance incentives produce higher returns for investors.

Career concerns also constrain hedge fund managers who might otherwise take on too much risk. Studies show that managers' concerns about poor performance and termination offset incentives for excessive risk-taking and that career concerns motivate managers to take on less risk as their experience grows. Creditors and counterparties also monitor managerial conduct, adding another layer of safety for investors. Policymakers should therefore be wary of disturbing a relationship where interests are fundamentally aligned and market failure is not present.

Fund managers employ numerous specific investment styles, each with its own risk and return profile. Three basic styles include directional investing (seeking returns from price gains or declines in specific markets), corporate event-driven (seeking to profit from events like mergers or bankruptcies), and arbitrage (seeking returns based on inefficient price discrepancies). Equity long/short funds, which hedge standard stock purchases by short-selling others, are the most popular, constituting about one-third of the industry. Hedge funds may also focus on specific industries or geographic regions, and they invest in everything from the bonds of failing companies to Hollywood blockbusters.

**MATURING INDUSTRY** The hedge fund industry is experiencing rapid growth, institutionalization, and increasing stability — all signs of an industry that is coming of age.

Today, hedge funds comprise almost \$1.5 trillion in assets spread through more than 10,000 funds worldwide. Analysts expect the size of the industry to double by the end of the decade, but the number of funds to stabilize. Profit opportunities may likewise diminish as the industry becomes more crowded. Returns in 2005 and 2006 were down from prior years, and the rapid inflows of capital may reflect a bubble in some parts of the industry.

Hedge funds increasingly depend upon others to provide services. The most significant service providers are parties on the other side of hedge fund transactions (counterparties), in particular investment banks and securities broker-dealers offering "prime brokerage" services. Those services include consolidation and settling trades, managing risk, and providing leverage through loans, securities lending, and derivatives trading. In addition to being counterparties to individual hedge funds, large investment banks are also leading the institutionalization of hedge funds by becoming managers themselves.

While individual investors comprise the largest source of capital for hedge funds, institutional investors are increasingly participating in them. Although only about 1 percent of U.S. pension assets are invested into hedge funds; over the next several years, the number of pensions and their allocations to hedge funds is expected to increase substantially. As pensions continue to increase their involvement in hedge funds, compliance with the requirements of ERISA will likely be more commonplace.

**PERFORMANCE** Few generalizations meaningful to investors can be made about hedge funds as a whole because returns and risk vary greatly among different strategies. Nonetheless, policymakers should be aware of the following:

In contrast to traditional mutual funds, the goal of most hedge funds is to deliver positive (absolute) returns in both up and down markets. This is possible because, not being subject to most trading regulations, hedge funds may engage in short-selling and other trades to profit from downturns. As a class, hedge funds deliver positive returns but do not always beat general market indices or mutual funds. Academic research estimates that hedge funds returned anywhere from 9 to 14 percent over a period of 10 or more years. Hedge fund returns may or may not beat those of the market as a whole, however; since 2003, hedge funds have underperformed the market.

That hedge fund returns do not consistently outperform the market may come as no surprise, according to classical finance theory. The efficient market hypothesis postulates that current asset prices already reflect all available knowledge relevant to public companies, and trying to pick undervalued stocks is futile. As Burton Malkiel's "random walk" theory famously asserts, active fund managers have no discernable stock-picking ability and investors are better off with a passive and diversified portfolio (e.g., investing in the S&P 500). In a 2005 article in the *Financial Analysts Journal*, Malkiel and Antanu Saha found that, because of biases in performance data, industry-provided hedge fund returns from 1996 to 2003 were overstated by almost 4.5 percent and actually underperformed the market during the same period.

However, hedge funds do have an important virtue in that their returns have relatively low correlation with market returns and can thus help to insulate portfolios from overall market volatility. For instance, in a 2006 National Bureau of Economic Research working paper, Boyson et al. find almost no evidence that extreme losses in currency and equity markets are correlated to extreme losses in the hedge fund sector. In fact, hedge funds escaped the post-Internet bubble bear market and earned positive returns while markets and mutual funds languished.

More generally, when taking risk into account, researchers have found that hedge funds deliver investors superior risk-adjusted performance — so-called "alpha" — in both up and down markets. However, some find that alpha may now be decreasing because the growth in investment in hedge funds means that more money is chasing relatively fewer opportunities, and there is debate about how long the superior performance will persist.

**PERFORMANCE AND POLICY** Given this information, it is curious that hedge funds have gained the attention of policymakers and regulators. Hedge fund investing is not uniformly more risky than investing in a mutual fund or the stock of a single corporation. In down markets, it typically is safer. While some types of hedge funds exhibit erratic returns or an unusually high risk of negative performance, what matters to investors is not the risk of a single fund in isolation, but the potential for several funds to improve an already diverse investment portfolio.

For example, pension plans find hedge funds attractive precisely because they produce some of the high returns of stock investing while reducing losses in market downturns. This allows the pension fund to garner long-term growth while reducing the risk of large losses in a bear market. However, the role hedge funds should play in a portfolio is unsettled, and some argue that hedge funds offer little value to most investors, especially after taxes.

Reducing barriers to investing in hedge funds would allow more people to benefit. Unfortunately, the SEC in December 2006 proposed a rule to increase hedge fund net worth requirements for participants. It is estimated that the proposed new requirements would reduce household participation by 88 percent. That would leave the benefits of individual investment in hedge funds open only to the wealthiest people. By contrast, Australia imposes virtually no restrictions on who may invest in hedge funds registered with the Australian Securities & Investments Commission, and Canada and the United Kingdom may be moving toward opening hedge funds to more investors, following recent moves by several European nations. In light of the benefits hedge funds offer to individual investors, the SEC should increase, rather than decrease, individuals' access.

#### **SYSTEMIC RISK**

A central concern of policymakers is hedge funds' "systemic risk" — the risk they pose to economic actors outside of the groups of hedge fund investors. Systemic risk arises because hedge fund losses can spread to third parties, such as banks and securities traders. Exposing third parties to hidden risks is a market failure to the extent that third parties are unable to act on such risks by, for example, requiring better credit terms with a bank acting as a hedge fund counterparty. Noting the substantial role that funds play in reducing some systemic risks (e.g., short-selling stock during price bubbles) cannot alleviate concerns about systemic risk generally, because the very same activities that reduce some risks may increase others.

Systemic risk is hardly unique to hedge funds (e.g., risk to counterparties and price bubbles). All financial institutions carry a degree of this risk. The question for policymakers is whether hedge funds' systemic risk is socially undesirable and remediable by lawmaking.

**LTCM** The cautionary tale fueling the fears about hedge funds' systemic risk is the implosion, federal bailout, and ultimate folding of Long-Term Capital Management (LTCM). The fund lost \$4.4 billion in 1998 by, among other things, predicting that spreads between the returns on bonds of developing and industrialized nations would narrow. The Federal Reserve organized the bailout, fearing a default by LTCM would send shockwaves throughout the world economy.

LTCM is a spectacular case, to be sure. But it offers little in the way of broader lessons about hedge fund regulation. First, LTCM is not representative of hedge funds today. The fund's loss stemmed from its own unique characteristics combined with a series of very unlikely events, including the 1997 Asian currency crisis and the government of Russia defaulting on its loans

in August of 1998. Second, LTCM's extreme leverage, which rose as high as 30:1 before the Federal Reserve intervened, is now a rarity. Third, if the government had not intervened, LTCM would not have collapsed: a consortium of banks led by Berkshire Hathaway offered to buy the fund's positions and continue to run it. Perhaps most importantly, even if LTCM had collapsed, its counterparties could have absorbed LTCM's losses in the event of a default. The President's Working Group on Financial Markets' 1999 report noted that, as of September 1998, aggregate U.S. bank exposure to all hedge funds through direct lending and derivatives contracts, including LTCM, was only about 1 percent of total bank credit exposures.

**CONTAGION** Instead of the collapse of a single large fund, a more likely source of systemic risk is multiple funds, perhaps even funds with different styles, failing at the same time and spreading shockwaves throughout the economy, a phenomenon known as "contagion." Related aspects of contagion are "liquidity risk" (being required to dump investments at a major loss), risk to counterparties, and "herding" (different funds making the same investment, which might then go bad). For example, several funds may end up on the wrong side of the same investment (herd) and be forced to sell at a major loss (liquidity risk), which, in turn, spreads losses to lenders and the counterparties and third parties who deal with them.

Worries about market failure from contagion are mostly hypothetical. Few academic studies of hedge funds directly address systemic risk, and none conclude that the threat is large or even offer a definitive measure or assessment.

**FUND FAILURE** The low risk of contagion is revealed in how often and what types of funds fail. Although estimates of the rate of hedge fund failure differ significantly, those studies isolating hedge funds that genuinely fail from those that merely stop disclosing returns find failure rates to be somewhere between 3 and 5 percent, with no trend of increasing failure. Indeed, a recent study by the Hennessee Group noted a declining trend in hedge fund attrition and predicted the trend to continue.

A 2003 white paper by Stuart Feffer and Christopher Kundro notes that managers more often chose to liquidate funds because they did not meet performance expectations than because losses forced them to cease operations. Feffer and Kundro also found that operational issues are by far the largest reason hedge funds fail. This finding implies that the strides being made in operational management will reduce the failure rates. Importantly, almost all empirical studies find that larger funds and those with more experienced managers have lower failure rates. This mitigates concerns about the risk of large fund collapses and suggests that the industry may be less prone to failure as the average fund size grows and industry experience becomes more widespread. And even when hedge funds do fail, investors are unlikely to lose all of their capital.

With no measure or complete picture of systemic risk, there is little basis to conclude that such risk is pervasive, unmanageable, or warrants further regulation of hedge funds, particularly as federal limitations on banks and other counterparties already regulate systemic risk exposures. Without a

more definite assessment, any attempt to make hedge funds further internalize systemic risks would at best be premature and require policymakers to act arbitrarily.

### TRENDS

Trends in the hedge fund industry indicate continual improvements in their ability to handle systemic risk and reflect a much larger movement towards stability throughout global financial markets. Policymakers must acknowledge such trends because the history of financial markets regulation reveals that technological and financial innovations often render regulations obsolete, requiring them to be restructured or repealed. The hedge fund industry's rapidly changing structure and practices almost guarantee that new regulation would at best be redundant and might even stifle further developments.

**LEVERAGE** Being leveraged means being able to lose or gain more than the initial amount invested (i.e., the equity capital). Borrowing and using derivatives (contracts whose prices derive from the price of some other asset) are common sources of hedge fund leverage. Significant leverage runs the danger of magnifying losses to many multiples of the capital actually invested.

Though LTCM was heavily leveraged, most accounts indicate that hedge funds generally make much less use of borrowing and derivatives. According to an industry database, as of June 2005, one-third of hedge fund assets used no leverage at all, and over half had a 2:1 ratio (i.e., \$1 of equity for every \$3 of asset value). A 2005 interview-based study by the financial adviser TABB Group estimated that half of all funds have a 3:1 leverage ratio while only 3 percent have a ratio of 7:1 or more. Fixed income arbitrage hedge funds, which have the highest average leverage ratio of 4:1, only make up about 7 percent of the industry. While not perfect comparisons, investment banks and securities firms are typically leveraged at a ratio of 20:1, while commercial banks average about 10:1.

Academic and industry studies also show that, since the time of LTCM, hedge funds have decreased their use of leverage considerably and do not show signs of significant trends in the opposite direction. Hedge funds leveraging through derivatives trading tend to reduce risk exposures, especially with respect to market downturns and crashes. These facts undermine concerns that hedge funds' widespread use of derivatives, once described as "financial weapons of mass destruction" by Warren Buffet, contributes significantly to systemic risk. Studies also overwhelmingly find that greater leverage does not increase the likelihood of hedge fund failure. In any case, in a 2005 *Journal of Financial Economics* article, Anurag Gupta and Bing Liang show that leverage per se does not tell us much about risk. They instead look to whether funds have adequate equity capital relative to the risk of the underlying investments. They found that, as of March 2003, less than 4 percent of operating funds (constituting only 1.2 percent of total assets) were undercapitalized.

**RISK MANAGEMENT** The hedge fund industry has come a long way from LTCM. Since that time, risk management has significantly improved, not only in the hedge fund industry but also

in financial markets more broadly. This contributes to investor protection and economic stability. These improvements are due to rising industry awareness of the collective importance of risk and the shifting economic landscape more generally.

For instance, in response to LTCM, 12 major commercial and investment banks formed the Counterparty Risk Management Policy Group in January 1999. The group issued two massive reports, one in June of 1999 and another in July of 2005, detailing how the financial sector could improve risk management practices. As noted in the 2005 report, and recently attested to by numerous regulators and commentators, developments in financial markets over the better part of the last decade substantially increased resilience to shocks and reduced the already low probability of contagion from hedge funds or other institutions. Those improvements resulted from enhanced risk management, financial innovation, and the greater liquidity brought about by hedge fund and private equity trading.

According to a survey by consultancy Mercer Oliver Wyman, hedge funds and counterparties acted in accordance with third-party recommendations by continuing to standardize procedures, employ more sophisticated controls, and commit significant resources to risk personnel, operations, and external monitoring. For example, stress-testing is now common throughout the industry, as is active monitoring of, and limiting exposure to, concentrated positions.

The underlying economics of the industry are driving the improvements, indicating that hedge funds and counterparties will have the incentive and means to continue along the path toward greater stability. The rising involvement of investment banks as fund managers and as prime brokers, for example, increases capabilities to bear and monitor risk as parties with more sophisticated management systems, expertise, and resources enter the field. Recently, third parties such as Standard and Poor's and Moody's started offering independent hedge fund risk rating services to address investor demand for the information.

As regulators and industry groups duly recognize, hedge fund risk management still faces significant challenges, in particular from valuation difficulties and operational risks associated with private, over-the-counter derivatives trading. The current combination of low interest rates and macroeconomic stability also encourages players like hedge funds to take on more risks. Nonetheless, the industry today seems capable of handling the risk management issues it faces without the need for additional regulation. The failure of Amaranth Advisors in September 2006, the largest collapse in hedge fund history, is a case in point. Although the fund lost \$6.6 billion on natural gas trades in a few weeks (about one-third more than LTCM lost over several months), counterparties and the market hardly noticed. Amaranth's assets were quickly purchased, its losses did not spread beyond investors (who recovered one-third of their investments), and counterparties recovered every penny of their collateral.

**TRANSPARENCY** Closely related to improving risk management, a voluntary increase in transparency is one of the most important changes taking place in the hedge fund industry.

The economic theory of disclosure predicts that hedge funds will disclose information only to the point where the benefits equal the costs. The benefits of disclosure are that a fund can attract more investors, obtain terms more favorable to the fund (e.g., higher fees), and raise capital and enter into trades with counterparties at a lower cost. The costs of mandatory disclosure primarily include the expenses involved in making the disclosure and the decreased competitiveness from informing competitors of proprietary trading strategies.

Hedge funds are increasingly finding that greater transparency is a net benefit, and there is a trend toward disclosing information by voluntarily registering with regulatory bodies. While 61 percent of firms were registered with some regulatory body in 2005, 86 percent of funds are registered today. The increase at least partially reflects registration in response to the now-overturned SEC registration rule. However, that hedge funds are now free to deregister (or could have avoided the registration requirement altogether) indicates that a significant portion of funds found it in their interest to register or remain registered to signal quality to investors. Ninety percent of those funds registered pursuant to the now-defunct SEC rule chose to remain registered.

Hedge funds' incentives to please investors are driving increased transparency. Institutional investors, who are increasingly turning to hedge funds, often demand greater transparency than individual investors and rely more on third-party research services. The same dynamic applies to funds of hedge fund managers. More transparency is also likely to result as competition pushes funds to differentiate themselves. Hedge funds' efforts to reduce costs by outsourcing operational functions are also leading to more transparency by allowing prime brokers and others to track fund investments and trades.

The need for capital is also driving transparency. In February 2007, Fortress Investment Group raised \$634 million by being the first U.S. asset manager involved with hedge funds to go public. In December 2006, Citadel Finance, a unit of a \$12 billion hedge fund, borrowed \$500 million by issuing bonds, another first for U.S. markets. In order to raise the cap-

ital, both Fortress and Citadel were required to disclose previously proprietary information, and some analysts consider the moves part of a larger trend.

However, there is a limit to the benefits of transparency. At some point, hedge funds will lose by making valuable trading strategies available to competitors. But because the optimal amount of disclosure is different for each fund, mandatory disclosure rules would certainly force too much disclosure for some funds and reduce their returns.

There is another shortcoming of mandatory disclosure particular to hedge funds. Because of their complex and dynamic trading strategies, precise risk exposures are often difficult to estimate. That is why Federal Reserve chairman Ben Bernanke in May 2006 noted the insurmountable difficulties for mandatory disclosure to provide useful information about risk. Regulators would need to gather sensitive information from all major financial market participants, process the massive and fluctuating data accurately and at least daily, and respond to a high risk exposure without causing a liquidity crisis (e.g., by forcing funds to simultaneously exit the same risky position). Accordingly, Bernanke rejected the idea that regulators should create a database of hedge fund positions.

New mandatory disclosure requirements would thus not only carry the burden of compliance costs, but could also reduce performance, crowd the market with uninformative data, overwhelm regulators, and undermine the incentives for investors and lenders to engage in due diligence. Accordingly, the case for mandatory disclosure is tenuous at best.

## CONCLUSION

The many remaining questions about hedge funds will keep researchers busy for years to come. Policymakers, however, have strong reason to believe that hedge funds do not pose exceptional risks to investors or economic stability, and that additional regulation runs the danger of dampening fund performance and U.S. competitiveness without any clear benefits. In the face of a rapidly changing industry not suffering from market failure, introducing beneficial regulation is a challenge nearly impossible to meet. **R**

## Readings

- "Do Hedge Funds Deliver Alpha? A Bayesian and Bootstrap Analysis," by Robert Kosowski, Narayan Y. Naik, and Melvyn Teo. *Journal of Financial Economics*, forthcoming.
- "Do Hedge Funds Have Enough Capital? A Value-at-Risk Approach," by Anurag Gupta and Bing Liang. *Journal of Financial Economics*, Vol. 77 (July 2005).
- "Hedge Fund Benchmarks: A Risk-Based Approach," by William Fung and David A. Hsieh. *Financial Analysts Journal*, Vol. 60 (September/October 2004).
- "Hedge Funds: Performance, Risk and Capital Formation," by William Fung, David A. Hsieh, Narayan Y. Naik, and Tarun Ramadorai. AFA 2007 Chicago meetings paper, 2006.
- "Hedge Funds: Risk and Return," by Burton G. Malkiel and Antanu Saha. *Financial Analysts Journal*, Vol. 61 (2005).
- "Is There Hedge Fund Contagion?" by Nicole M. Boyson, Christof W. Stahel, and Rene M. Stulz. National Bureau of Economic Research working paper, 2006.
- "Market Volatility, Investor Flows, and the Structure of Hedge Fund Markets," by Bing Liang, Russ Wermers, Bill Ding, and Mila Getmansky. Working paper, 2006.
- "Role of Managerial Incentives and Discretion in Hedge Fund Performance," by Vikas Agarwal, N. Daniel, and N.Y. Naik. London Business School working paper, 2005.
- "Systemic Risk and Hedge Funds," by Nicholas Chan, Mila Getmansky, Shane M. Haas, and Andrew W. Lo. National Bureau of Economic Research working paper, 2005.
- "The A, B, Cs of Hedge Funds: Alphas, Betas, and Costs," by Roger G. Ibbotson and Peng Chen. Yale ICF working paper, 2006.
- "Time-Varying Exposures and Leverage in Hedge Funds," by Patrick McGuire, Eli Remolona, and Kostas Tsatsaronis. *BIS Quarterly Review*, March 2005.
- "Understanding and Mitigating Operational Risk in Hedge Fund Investments," by Stuart Feffer and Christopher Kundro. Capco, 2003.