### Title
Hedge funds: the case for disclosure regulation

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HEDGE FUNDS: THE CASE FOR DISCLOSURE REGULATION

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Unlike mutual and pension funds, which are heavily regulated in most jurisdictions, hedge funds are largely unregulated. Because they are not required to report to regulators and to the public, data on hedge fund performance are highly biased, overestimating returns and underestimating risk. Recent debate regarding regulation has centred on market integrity and systemic risk issues. This article presents the case for a change in focus towards consumer protection as the most important regulatory issue and recommends that performance reporting should be made mandatory.

INTRODUCTION

The managed funds industry has expanded exponentially during the last 20 years. Hedge funds are a significant and fast-growing sub-sector of this market. Their most important distinguishing feature is that, unlike mutual and pension funds which are heavily regulated in most jurisdictions, they are largely unregulated. While they are marketed as alternative investments that perform well irrespective of market conditions, hedge funds encompass many different investment styles, resulting in a large array of payoffs and risk characteristics. Strategies range from the relatively low-risk bond arbitrage, where managers attempt to profit from inefficiencies in bond pricing while remaining market neutral, to high-risk directional position-taking in emerging market equities and bonds.

During the past decade many commentators have advocated the need for hedge fund regulation. This debate has centred on three grounds: market integrity, systemic risk, and consumer protection. In a paper published in response to the events of the Asian crisis, the International Monetary Fund (IMF) argued that regulation was justified only on the grounds of market integrity. The term market integrity refers to the perceived ability of hedge funds (or any large player) to dominate and thus manipulate markets to such an extent that their actions interfere with economic policy and/or the optimal allocation of resources. After the Long-Term Capital Market (LTCM) debacle and its
Federal Reserve-organised bailout in August-September 1998, attention shifted towards issues surrounding the systemic risks posed by hedge funds.[2]

There is a compelling case for a change in focus toward consumer protection as the most important regulatory issue. Increasingly, hedge funds are soliciting investment from institutions, including mutual and pension funds, thus giving small investors indirect exposure to hedge fund performance. A more recent trend – particularly since the crash in equity markets in 2000/2001 – has seen direct participation by small investors, as the minimum investment figure has fallen to as low as US$10,000.[3] Indeed, the Central Bank and Financial Services Authority of Ireland (CBFSI) has recently introduced a new category of investment scheme allowing promoters to target the retail market. These are “funds of unregulated funds schemes,” for which the minimum subscription is €12,500.

**BRIEF HISTORY OF HEDGE FUNDS**

The Oxford English Dictionary defines the word *hedge* as ‘to minimise or protect against loss by counterbalancing one transaction, such as a bet, against another.’ In finance, the term has essentially the same definition. The term *hedge fund* is rather a misnomer. It is used to describe any pooled investment vehicle with an investment style not used by standard investment funds and is not necessarily indicative of a hedge strategy. Because hedge funds are structured (or alternatively domiciled) such that they are unfettered by the regulations imposed on mutual funds, hedge fund managers have considerable freedom in their choice of investment strategies across a range of markets. They are able to use techniques that are proscribed in mutual fund regulation, such as short selling and the free use of derivative securities.

Two additional features are common to most hedge funds. First, managers charge investors on a fee-for-performance basis, implying a percentage of returns earned in addition to a flat management charge. This is calculated as a percentage of absolute returns, rather than vis-à-vis some performance benchmark. Secondly, it is common for hedge funds to lever their portfolios, usually with borrowings from financial institutions. This approach is designed to amplify earnings in order to offset the small returns inherent in many hedge positions.

The first hedge fund is attributed to Alfred Winslow Jones, who pioneered what is now known as the *long-short equity* investment technique when he established a fund in
1949. He combined long positions in stocks with short-sales and levered the portfolio to offset the reduction in return that results from the relatively low-risk market neutral position. His theory was that, while no investor could predict the future direction of the market, superior stock selection was possible.[4] Two other notable features of Jones’ fund are still in use today: the manager’s incentive fee was a function of profits (he took 20%) and he put his own capital in the fund, thus ensuring that he and his investors’ goals were aligned.[5]

Jones’ investment strategy became widely known in 1966 when Fortune magazine reported that his fund had outperformed the best-performing mutual funds by 87% over 10 years, even after deducting the incentive fee.[6] In a three-year flurry of activity following the publication of this article, several hundred hedge funds were established. But conditions began to change during the bear market of 1969-1970 such that by the time of the 1973-1974 recession only a few had survived. From then until the mid-1980s hedge funds largely faded from public view, although several prospered during the 1970s and early 1980s, notably those managed by well-known hedge fund managers, George Soros and Michael Steinhardt as well as Jones.[7] Under the regulations in place at the time hedge funds were limited to 99 investors and, as such, were only available to the very wealthy. Many funds during this period were established in (or transferred to) offshore tax havens.

In May 1986 Institutional Investor published a story on Julian Robertson’s Tiger Fund. The article reported that returns to Robertson’s fund were 43% compounded annually over six years, net of expenses and incentive fees.[8] Robertson employed the same hedging technique as Jones, but he also used derivative instruments not available in Jones’ time. Once again a magazine article spurred the growth of hedge funds and the sector boomed through the late 1980s and 1990s. The current decade has seen unprecedented growth in hedge fund assets under management. According to estimates by Hennessee Hedge Fund Advisory group, the industry has grown 82% since the beginning of 2000, from US$324 billion to US$592 billion.

CURRENT REGULATION

While most hedge funds are managed in the US and the UK, they tend not to be domiciled in these countries. The vast majority are registered or incorporated in offshore tax havens.[9] This provides tax benefits for investors as well as for

managers, whereby the latter are afforded the opportunity to defer the taxes due on incentive fees and bonuses.\textsuperscript{[10]} Popular locations include Bermuda, the British Virgin Islands, the Bahamas and the Cayman Islands. European offshore centres include Gibraltar, Liechtenstein, Luxembourg, Switzerland and Ireland.

\section*{REGULATION IN THE US \textsuperscript{[11]}}

Mutual and pension funds are subject to the provisions of the Securities Act, 1933, and the Investment Companies Act, 1940 (ICA). These statutes are overseen by the Securities and Exchange Commission (SEC). Explicit in the provisions of this legislation is the notion that, because investors are not sophisticated in legal or financial matters, mutual funds must be regulated to ensure full disclosure and to safeguard their value. The first of these acts -- the Securities Act -- regulates the registration of fund shares, requires prospectus disclosure and strictly controls the content of advertising. Hedge funds are largely exempt from its provisions by claiming 'private placement' status, rather than being offered to the public.

The ICA was written specifically to regulate mutual funds. It imposes detailed requirements and restrictions on their structure and operation and it regulates fees and charges. The Act limits a fund's investments in illiquid securities and restricts techniques that lever the portfolio, such as borrowing and short-selling. It also requires that positions in derivatives must be covered.

US-based hedge funds are structured so that they are not bound by the provisions of the ICA. Until relatively recently the ICA allowed exemption for funds with no more than 100 investors. In 1996 the National Securities Markets Improvement Act was passed, which placed no limit on the number of investors provided that such funds are made available only to “qualified purchasers”. This is defined as any person who holds at least $US5 million in securities, or any person who in aggregate owns and invests not less than US$100 million, or any person whom the SEC deems not to be in need of the protection of mutual fund regulation. Institutions such as pension funds and university endowment funds are also exempt as long as they have a minimum US$25 million in capital.

Hedge funds are not exempt from US regulation that is designed to monitor and safeguard the integrity of markets. Four federal agencies ensure market integrity as follows:

\footnotesize
\textsuperscript{[10]} The Economist, 19th June 1998
\textsuperscript{[11]} The motivation of mutual fund regulation is largely driven by the weight of the Investment Company Institute (www.ici.org), which is a national association for the American investment industry.
• the US Treasury requires reporting of large positions in treasury securities and selected currencies (for currencies, the minimum threshold is $50 billion);
• the Securities and Exchange Commission requires reporting of positions greater than 5% of the firm’s shares;
• the Federal Reserve enforces margin requirements for stock purchases to all market participants; and
• the Commodity Futures Trading Commission requires disclosure and daily reporting of futures and options positions above certain levels.

REGULATION IN THE UK \textsuperscript{12}

The UK’s Financial Services Authority oversees the marketing of hedge funds and regulates UK-based hedge fund managers. Hedge funds are usually classified as “unregulated collective investment schemes” and can be marketed only to “intermediate” customers and “market counterparties”, but not to retail investors. (Financial firms are required to classify clients according to their degree of financial sophistication; the classifications are \textit{private customer, intermediate customer and market counterparty}.) With certain safeguards, private customers can invest in unregulated schemes by “opting up” to intermediate status. An alternative route lies through a listed investment company. While individual hedge funds generally would not meet the criteria for listing, “funds of funds” hedge funds can list in the UK. In fact, in the past two or three years several listed hedge funds have specifically targeted the retail market.

REGULATION IN IRELAND

Irish-domiciled investment funds are regulated by the Central Bank and Financial Services Authority of Ireland (CBFSI). In contrast to the US and UK rules, there is no provision under Irish legislation for unregulated funds. The CBFSI authorises three categories of funds: retail, professional investor funds (PIFs) and qualifying investor funds (QIFs). For QIFs, the usual investment fund rules relating to such factors as leverage and portfolio composition are disapplied, allowing the activities commonly used in hedge fund management. The rules specify a minimum subscription of €250,000 from investors with a minimum net worth of at least €1,250,000, or alternatively institutions that have a minimum of €25 million under management. QIFs are not exempt from other investment fund regulations including trustee eligibility and prospectus and reporting requirements. The prospectus must state that the scheme has been authorised for marketing to qualified investors only and it must carry a prominent risk warning.

\textsuperscript{12} The information in this section is drawn largely from Financial Services Authority (2002).
Like other CBFSI-authorised investment schemes, QIFs must report monthly to the regulator. The information required includes gross and net asset values and net proceeds and payments. However, despite these reporting requirements, information on Irish managed funds provides no help in attempting to accurately assess the risks and returns to hedge fund strategies. Investment schemes are not required to report details about the structure of their portfolios such as investment techniques and leverage. Further, the information that the CBFSI provides to the public draws no distinction between retail, professional or qualifying investor funds.

December 2002 saw the introduction of a new investment scheme category – “funds of unregulated hedge funds” – that allows retail participation.\(^{[13]}\) The minimum investment requirement is only €12,500. These funds can invest in any underlying investment scheme as long as it is independent of the “funds of unregulated funds” manager and is subject to an independent audit. There are diversification requirements whereby not more than 5% can be invested in any one hedge fund, or 10% if the management company of the underlying scheme is authorised in an OECD jurisdiction. The prospectus must include a warning to the effect that the fund could invest in unregulated hedge funds, which may involve special risks. It must also provide information on the underlying hedge funds such as investment policy leverage, the impact of fees and potential liquidity and valuation problems.

INVESTMENT STYLES AND RISK-RETURN CHARACTERISTICS

Several commercial information services provide data on hedge funds and their performance, the best known being Credit Swiss First Boston (CSFB/Tremont), Managed Account Reports (MAR/Hedge) and Van Hedge Fund Advisors. These information providers classify hedge funds by their investment style. Table 1 summarises the CSFB/Tremont classification system.

Approximately half of all hedge funds are long-short equity.\(^{[14]}\) This is the strategy pioneered by Alfred Winslow Jones and involves buying stocks that are considered to be undervalued and short-selling stocks that are overvalued. It is quite different from the strategy known as equity market neutral, which seeks to exploit market inefficiencies in the pricing of stocks that are virtually identical. Two other categories also seek to profit from market efficiencies while remaining market neutral – fixed income arbitrage and convertible arbitrage. Fixed income arbitrage attempts to take advantage of discrepancies in the pricing of fixed-income securities with similar

\(^{[13]}\) Notice No. 25 from the CBFSI (formally the Central Bank of Ireland.)

\(^{[14]}\) The Economist, 25th July 2002
features; convertible arbitrage seeks to profit from errors in pricing between the convertible security and the underlying debt and equity instruments.

The best known of the *global macro* hedge funds are George Soros' Quantum group and Julian Robertson's Tiger fund. (During 2000 the former was dramatically downsized and the latter was closed.) Long-Term Capital Market (LTCM) employed almost all of these strategies at one time or another, although they were best known for their expertise in fixed income arbitrage.

**TABLE 1: HEDGE FUND INVESTMENT STRATEGIES**

<table>
<thead>
<tr>
<th>Category</th>
<th>Strategy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Convertible arbitrage</td>
<td>Invest in the convertible securities of a company, e.g., long in convertible bond and short in stock of the same company.</td>
</tr>
<tr>
<td>Dedicated short-bias</td>
<td>Maintain consistent net short (or pure short) exposures to the underlying market.</td>
</tr>
<tr>
<td>Emerging markets</td>
<td>Equity or fixed income investing in emerging markets around the world.</td>
</tr>
<tr>
<td>Equity market neutral</td>
<td>Exploit equity market inefficiencies by holding both long and short matched equity portfolios within a country.</td>
</tr>
<tr>
<td>Event driven</td>
<td>Equity-oriented designed to capture price movement generated by an anticipated corporate event, for example, mergers and acquisitions, distressed securities.</td>
</tr>
<tr>
<td>Fixed income arbitrage</td>
<td>Profit from price anomalies between related interest rate securities.</td>
</tr>
<tr>
<td>Global macro</td>
<td>Leveraged views on overall market direction as influenced by major economic trends and/or events.</td>
</tr>
<tr>
<td>Long/short equity</td>
<td>Equity-oriented on both the long and short sides of the market with a different objective from market neutral.</td>
</tr>
<tr>
<td>Managed futures</td>
<td>Systematic or discretionary trading in listed financial and commodity futures markets and currency markets globally.</td>
</tr>
</tbody>
</table>

Source: CSFB/Tremont Hedge Index, 2002

**HEDGE FUND PERFORMANCE**

A note of caution must be sounded before discussing hedge fund returns. Because hedge funds are not required to report their performance to regulators, reliable data are not available. The results presented here, calculated from data provided by CSFB/Tremont, are therefore not definitive measures of performance. This issue is discussed in more detail later in the article.
Table 2: Summary Statistics for the CSFB/Tremont Hedge Index, 1993-2001

<table>
<thead>
<tr>
<th></th>
<th>Calculated monthly</th>
<th>Calculated annually</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Compound return %</td>
<td>Standard deviation %</td>
</tr>
<tr>
<td>CSFB/Tremont hedge index</td>
<td>11.05</td>
<td>9.06</td>
</tr>
<tr>
<td>S&amp;P 500 Index</td>
<td>11.31</td>
<td>15.32</td>
</tr>
<tr>
<td>Convertible arbitrage</td>
<td>10.51</td>
<td>4.94</td>
</tr>
<tr>
<td>Dedicated short-bias</td>
<td>-1.19</td>
<td>18.05</td>
</tr>
<tr>
<td>Emerging markets</td>
<td>4.54</td>
<td>19.39</td>
</tr>
<tr>
<td>Equity market neutral</td>
<td>10.96</td>
<td>3.22</td>
</tr>
<tr>
<td>Event driven</td>
<td>11.24</td>
<td>6.32</td>
</tr>
<tr>
<td>Fixed income arbitrage</td>
<td>6.58</td>
<td>4.11</td>
</tr>
<tr>
<td>Global macro</td>
<td>13.20</td>
<td>13.02</td>
</tr>
<tr>
<td>Long/short equity</td>
<td>12.62</td>
<td>11.67</td>
</tr>
<tr>
<td>Managed futures</td>
<td>4.80</td>
<td>11.47</td>
</tr>
<tr>
<td></td>
<td>11.94</td>
<td>11.05</td>
</tr>
<tr>
<td></td>
<td>11.92</td>
<td>17.35</td>
</tr>
<tr>
<td></td>
<td>10.93</td>
<td>10.90</td>
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<tr>
<td></td>
<td>-0.99</td>
<td>10.51</td>
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<td></td>
<td>5.80</td>
<td>27.83</td>
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<td></td>
<td>11.91</td>
<td>5.64</td>
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<td>12.24</td>
<td>9.57</td>
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<tr>
<td></td>
<td>7.50</td>
<td>7.48</td>
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<tr>
<td></td>
<td>14.80</td>
<td>13.83</td>
</tr>
<tr>
<td></td>
<td>13.47</td>
<td>15.28</td>
</tr>
<tr>
<td></td>
<td>4.54</td>
<td>8.72</td>
</tr>
</tbody>
</table>

Notes. This table summarises the risk and return to the CSFB/Tremont hedge index fund for the period 1993-2001. The columns headed 'calculated monthly' summarise the compound return and standard deviations using month-end returns for the period. The monthly standard deviation of returns figures are annualised by multiplying them by the square root of 12. The columns headed 'calculated annually' summarise the compound returns and standard deviations using year-end return data.

Table 2 presents the risk and return characteristics of the CSFB/Tremont hedge fund index for the period 1993-2001 and for the investment style categories described in Table 1. The raw data comprise monthly indices for the period. For the purposes of comparison with previous academic work, return and volatility are estimated by using annual as well as monthly data. Figure 1 presents the risk-return tradeoff in diagrammatic form. The first two rows in Table 2 present the summary statistics on the full CSFB/Tremont hedge fund index and the S&P 500 index. The overall hedge fund index, with a return of 11.05% (calculated monthly), is marginally outperformed by the S&P 500, with 11.31%. However, this lower return is apparently offset by smaller volatility: a standard deviation of 9.06% compared to 15.32% for the S&P 500.

Figure 1 shows that two hedge fund sub-categories – global macro and long-short equity – appear to dominate the S&P 500, having higher return and lower risk. The S&P 500 clearly dominates emerging markets and dedicated short bias. These two strategies not only earn the lowest returns but also experience the highest risk, with standard deviations of 19.39% and 18.05% respectively. Dedicated short bias is
clearly the worst performer with an annual average return of −1.19%, which is not surprising given that the data cover the strongest bull market in history. Three hedge fund strategies appear to perform very strongly relative to risk (appearing in the top left of the Figure): *equity market neutral*, *convertible arbitrage* and *event driven*.

**FIGURE 1: THE RISK-RETURN TRADEOFF**

![Diagram showing risk-return tradeoff with various strategies plotted on a graph.]

**RISK AND RETURN MISMEASUREMENT**

The figures reported above, using data from CSFB/Tremont, are typical of those produced by other hedge fund information providers and those reported in the financial press. On the face of it, hedge funds in general earn excellent returns relative to the risk that they bear. However, there is bias in the data that leads to erroneous inferences about performance. An additional source of mismeasurement stems from the fact that many strategies set up an insurance-like payoff, with the hedge fund as insurer. Standard measures of risk underestimate the actual risk borne by investors.

**Bias in the Data** Commercially available hedge fund performance data suffer from severe survivorship bias. Most hedge funds in the US are not required to report
publicly, nor are they required to report to regulators. Providers of hedge fund information rely on voluntary reporting at year-end. Each year many funds fail to report, so performance data for these cases are omitted from the data series. If closure due to poor performance is the reason for the failure to report, then the larger the reduction in reporting the greater the survivorship bias in the data.

Of the funds disclosing their results to CSFB/Tremont in 2001, 17.8% had failed to report in 2002. This is a very large reduction compared with a drop of 3.6% in 2001 and 1.5% in 2000, implying that 2002 was not a successful year for the hedge fund industry. This failure to report by hedge funds may be explained by reasons other than closure due to poor performance, such as mergers and restructurings. However, it is important to note that the rate of failure is only one factor in explaining the bias in hedge fund returns resulting from survivorship issues. Given the insurance-like payoff of many hedge fund strategies (see below), it is likely that if a hedge fund fails, it fails spectacularly. In market parlance, the managers “blow up”. Therefore, not only are negative returns omitted from the data, but the missing return data are likely to be asymmetrically large.

Brown, Goetzmann and Ibbotson (1999) attempt to control for survivorship bias by examining a data sample that includes defunct hedge funds. Using annual return data for offshore-registered hedge funds during the period 1989-95, the authors found that hedge funds earned an average return of 13.26%, compared with the return to the S&P 500 for the same period of 16.32%. A lower reported standard deviation of 9.07%, compared to 16.32% for the S&P, compensated for this underperformance relative to the stock market index. Despite the inclusion of defunct hedge funds, the data used by Brown, Goetzmann and Ibbotson (1999) still suffer from survivorship bias because returns are not reported for the year in which hedge funds close. The authors acknowledge this and report that the attrition rate for hedge funds during 1989 to 1995 is a staggering 20% annually. To date no academic study has been able to adequately control for this problem for the simple reason that complete data are unavailable.

**Hedge Funds as Insurers** In explaining how the familiar risk-return relation can break down, Fung & Hsieh (1999) suggest that many hedge funds ‘sell economic disaster insurance’ — where the low historical return volatility is consistent with a period over which the gathering of insurance premium has yet to be tested by a disaster payout’. (327). They also suggest that the usual techniques for assessing portfolio risk – standard deviation and variance – are inappropriate for many hedge fund strategies,
in the same way that it would be ridiculous for an actuary to measure the likelihood of large claims from natural disasters using standard statistical techniques.

LTCM provides a good example of a hedge fund as a provider of “economic disaster insurance”. Across all of LTCM’s positions, in a ‘portfolio’ of investments that was on the face of it diversified, there was one common feature: namely, “short volatility”. Many of its largest positions – across swap, bond and equity markets – were highly exposed to a rise in financial market volatility. At the same time, the managers of LTCM were reported to be having difficulty increasing the volatility of their return series (which was very small, consistent with their mostly market-neutral positions) in order to boost returns.\(^{[16]}\) When the Russian debt default triggered uncertainty in financial markets, the persistently high volatility that resulted wiped out most of LTCM’s $5 billion in capital. Its “short volatility” positions were in effect insuring their counterparties against the “economic disaster” of a substantial increase in volatility. (LTCM’s computer models had estimated that such an event was extremely unlikely – a “10 standard deviation event”.\(^{[16]}\)) It is clear that when a particular strategy has an insurance-like payoff, particularly when a “disaster” is omitted from the returns series, the measured return volatility will vastly underestimate risk.

Fung & Hsieh’s (1999) economic disaster insurance argument applies particularly to the “arbitrage” strategies. It is not surprising that these strategies’ returns appear to have the lowest standard deviation of all the hedge fund categories. Table 2 and Figure 1 show that, while earning good returns, convertible arbitrage, fixed income arbitrage and equity market neutral have very small standard deviations; respectively 4.94%, 4.11% and 3.22%. Because they are a completely inappropriate metric for measuring risk, and because “disasters” are not included in the returns series, these standard deviations are misleading as a measure of the risk faced by investors in “arbitrage” hedge fund strategies.

RISKS POSED BY HEDGE FUNDS: GROUNDS FOR REGULATION

MARKET INTEGRITY: IN THE WAKE OF THE ASIAN CRISIS

There is evidence that hedge fund activity played a part in the Exchange Rate Mechanism crisis in 1992. Eichengreen et al (1998) and Fung and Hsieh (2000) found that George Soros and a few other macro fund managers were likely to have been instrumental. Tsatsaronis (2000) presented evidence that George Soros’s Quantum fund played some part in sterling’s demise.
In contrast, the consensus is that hedge funds did not play a significant role in the dramatic devaluations of the east-Asian currencies. The study by IMF economists published as *Hedge Funds and Financial Market Dynamics* (Eichengreen et al. 1998) was commissioned in response to Malaysian Government criticism regarding the role of hedge funds. The authors found that, except possibly for the Thai baht in which many hedge funds had short positions, the devaluation of the Asian currencies was not attributable to hedge fund activity. Two subsequent studies corroborate the IMF’s conclusions. Tsatsaronis (2000) echoed the sentiments of many commentators when he argued that, rather than destabilising markets, hedge funds can improve market efficiency. This is because they often take the opposite position to the “herd”, and also because they improve liquidity.

The evidence on the Asian crisis suggests that hedge funds cannot be blamed for the extent of currency devaluation in the east-Asian region and that their role in the crisis has been vastly exaggerated. Eichengreen et al. (1998) argued that the case for regulation to protect market integrity was ‘not strong,’ but suggested some reforms, should ‘policymakers wish to proceed’ (21). These include requirements to report large currency trades (as required by the US Treasury) and limits to position-taking in currencies.

**SYSTEMIC RISK: IN THE WAKE OF THE LTCM DEBACLE**

Long Term Capital Management (LTCM) started out in 1994 as a fixed income arbitrage fund. Its principals soon branched out into other strategies, including equity and convertible arbitrage, merger arbitrage and, toward its demise, unhedged plays in various foreign bond and equity markets such as Russia and Japan. LTCM was very highly leveraged by hedge fund standards. In July 1998, just before the Russian crisis that precipitated its downfall, LTCM had borrowings of up to $120 billion (not including positions in derivatives) and investors’ funds of approximately $4 billion.

The systemic risk implications of the failure of such a large hedge fund – especially one so highly leveraged – forced the Federal Reserve to organise a bailout. The concern related not just to nervousness about the possible effect on the fund’s creditor banks. Because LTCM’s positions were so large, the authorities were also concerned about the effect the impact of their immediate unwinding on what already were shaky financial markets and the subsequent effect on the real economy.

In the wake of the bailout in September 1998, major reviews of hedge fund regulation and activity were undertaken by the Basle Committee on Banking Supervision (1999),

(117) Tsang and Hsiun (2000), and Brown, Government and Bank (2000).
the President's Working Group on Financial Markets (1999) and the International Organisation of Securities Commissions (1999). The discussion and recommendations of the three resulting reports focused on systemic risk issues; in particular on the conduct and practices of creditor banks and to a lesser extent on counterparty institutions. The President's Working Group also recommended that the public disclosure of hedge funds be enhanced.

A number of reforms have followed the LTCM debacle. Banks have reined in lending to hedge funds. Where they continue to lend, they are demanding better information and are more carefully assessing risks. The Baker Bill, passed in March 2000 by the US Congress, requires unregulated hedge funds with greater than $3 billion in capital to report such information as total assets, derivatives positions, leverage and risk. However, very few hedge funds meet the $3 billion hurdle. This is because the purpose of the Bill was the reduction of systemic risk rather than investor protection.

It is now widely recognised that LTCM was an atypical hedge fund, being unusually large and highly levered. As Figure 2 shows, most hedge funds have less than $100 million to invest, while almost all have less than $500 million. While a careful watch will have to be kept on relations between financial institutions and hedge funds, it is rightly considered by regulators around the world that the systemic risk implications of hedge fund activity are not substantial.

**FIGURE 2: HEDGE FUNDS BY SIZE, US$ MILLION, 1999**

<table>
<thead>
<tr>
<th>Size (US$m)</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;5</td>
<td>20%</td>
</tr>
<tr>
<td>5 to 25</td>
<td>30%</td>
</tr>
<tr>
<td>25 to 100</td>
<td>30%</td>
</tr>
<tr>
<td>100 to 500</td>
<td>10%</td>
</tr>
<tr>
<td>&gt;500</td>
<td>10%</td>
</tr>
</tbody>
</table>

Source: UBS Warburg

**INVESTOR PROTECTION**
The above-mentioned regulatory reviews played down the need for increased investor protection regulation on the grounds that hedge fund investors comprise well-
informed, wealthy individuals. Since their publication in 1999, not only has hedge fund activity increased dramatically, the focus of the industry’s promotion effort has altered.\[^{[19]}\] Hedge funds are increasingly marketed to institutions, pension funds and other professional money managers. During the first six months of 2001 hedge funds worldwide attracted nearly twice as much new investment as in the whole of 2000, taking the institutional holdings in hedge funds to 25% compared to 75% for individuals.\[^{[19]}\]

In August 1999 California Public Employees Retirement Scheme (CalPERS), one of the largest pension fund managers in the US, announced its intention to invest US$12 billion in alternative investment vehicles, including hedge funds, over the next decade. This is a significant 25% of the actively managed portion of the fund.\[^{[20]}\] Well known as a pioneer in investment techniques and strategies, CalPERS’ decision to invest in hedge funds was followed by other fund managers. University endowments in the US are also prominent investors.

There can be no doubt but that hedge funds are beginning to target less well off individual investors. Ireland and the UK are no exception to this global trend, with each now allowing the participation of retail investors in “funds of funds” hedge funds.

CONCLUSIONS AND RECOMMENDATIONS

The hedge fund industry claims for itself better and more consistent performance on a risk-adjusted basis than other investments such as mutual funds. It is argued that this is due to superior management ability and the freedom to trade without regulatory constraints. However, the data used to promote hedge funds overstate risk-adjusted performance for two reasons. First, risk is underestimated. The popular market-neutral strategies are riskier than is implied by the usual measures because they create an insurance-like payoff. The volatility of the return series – especially if it omits the economic “disaster” insured against – does not fully capture risk. Secondly, the data suffer from survivorship bias. Hedge funds report voluntarily to various commercial information providers at year-end. If they fail to report, they are not included in the data series. These could well be hedge funds that failed or were closed due to poor performance.

\[^{[19]}\] In Europe, for example, the amount of money under hedge fund management quadrupled in the three years to mid-2002 (The Economist, 25th July 2002)
\[^{[20]}\] The Economist, 30th August 2001
None of this would really matter if hedge funds were purely the preserve of wealthy, well-informed individual investors, who understood the risks and pitfalls of hedge fund investment. However, this is no longer the case. Retail investors are being faced with burgeoning indirect exposure to hedge funds via investment by mutual and pension funds. The more worrying development has seen hedge funds marketed directly to small investors. The “funds of funds” products available to small investors in Ireland and the UK offer a pure hedge fund product. Although by definition these funds are diversified, hedge funds remain a class of investments whose operations are opaque and whose true performance is not well understood.

Mutual fund activity is highly regulated in order to curtail risky behaviour by fund managers and to protect the value of investors’ holdings. Should hedge funds be regulated in a similar way? This would not be the appropriate approach, not least because of a number of difficulties faced by regulators. Many hedge fund investment strategies require considerable expertise. Even if regulators had a good understanding of the techniques, it is doubtful that they would be able to prevent loss or failure. After all, the Nobel laureates running LTCM (Robert Merton and Myron Scholes) did not see their own crisis coming. In addition, it would be easy for hedge fund managers to play the regulatory arbitrage game; new regulations can often be skirted by moving to a location with a more favourable regulatory environment.

A further argument against a heavy-handed approach to regulation is that hedge funds are a potentially valuable addition to investment portfolios. Because hedge funds’ returns tend to have low correlations with those of standard investments such as equity and bonds, they fill a market niche that is not met by the mutual fund industry. Regulating the activities of hedge funds – to curtail the risks that they take and make them more like mutual funds – may be detrimental to optimal portfolio management and wealth creation.

The preferred approach to regulatory reform is to make regular performance reporting mandatory. Any hedge fund available to investors in a particular jurisdiction – irrespective of legal domicile – should be required to disclose their performance on at least a semi-annual basis. The disclosure requirement should include information on investment strategies used to generate the reported returns and fund leverage. Regulators, in turn, must make this information available to the public. Only then will investors and other interested parties have the necessary information to examine objectively the true risk and return characteristics of hedge fund portfolios.
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