

Is the SEC Registration Status of Hedge Fund Advisers Associated with Superior Performance?

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The decade of the 1990s saw tremendous growth in the hedge fund industry. As the number of hedge funds has grown, they have played a significant role in the daily trading volume of many types of assets. The increasing appeal of hedge funds to institutional and retail investors, coupled with the growing concern that fraud or failure within the industry could disrupt the U.S. financial system, have led regulatory agencies to consider additional oversight of the operations of individual hedge funds.

On September 29, 2003, the Securities and Exchange Commission (SEC) released a report making a case for the registration of large hedge fund advisers. The report ignited a strong debate among SEC commissioners and lively comments by investors and other interested parties. On July 14, 2004, the SEC voted 3–2 to adopt a proposed hedge fund registration requirement, and on December 2, 2004, the final rule was released. Rule 203(b)(3)–2 requires certain hedge fund advisers to register under the Investment Advisers Act of 1940, beginning February 1, 2006.

Prior to the implementation of the new rule, hedge funds are not required to register with the SEC. Still, in recent years, some hedge fund advisers have registered on a voluntary basis. These advisers all manage aggregate assets in excess of \$25 million. The fact that some hedge fund advisers have registered voluntarily,

while other eligible advisers have opted out of registration raises questions about other differences between the two groups.

In this study, we examine the return performance of funds whose advisers have voluntarily registered with the SEC versus their unregistered counterparts. We document that individual hedge fund performance, whether it is measured as strategy-adjusted excess returns or as information ratios, does not improve subsequent to adviser registration. In the cases of distressed securities, equity, and fixed income hedge funds, performance clearly deteriorated after the registration month. Registered funds in the global, funds of funds, and equity categories outperform never-registered funds. However, registered funds specializing in distressed securities underperform never-registered distressed-securities funds.

HEDGE FUND REGISTRATION: THE PROS AND CONS

Throughout the official comment period and even since the final adoption of Rule 203(b)(3)–2, industry participants debated the likely effects of a registration requirement on hedge fund performance. Edwards [2004] and the SEC's presentation and discussion of the rule in the *Federal Register* [2004] provide good summaries of each side's arguments.

Supporters of hedge fund registration argue the point on both a macro and micro

EXHIBIT 1

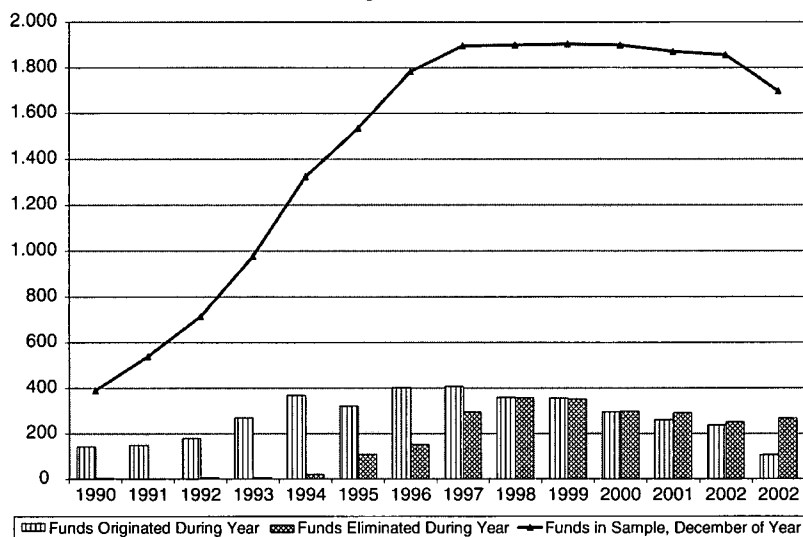
Frequencies of Hedge Funds in Sample: Advisers with \$25 million or More Under Management

| Year | Funds Originated During Year | Funds Eliminated During Year | Funds in Sample in December of Year |
|------|------------------------------|------------------------------|-------------------------------------|
| 1989 | | | 250 |
| 1990 | 144 | 3 | 391 |
| 1991 | 149 | 1 | 539 |
| 1992 | 179 | 5 | 713 |
| 1993 | 270 | 6 | 977 |
| 1994 | 367 | 21 | 1,323 |
| 1995 | 321 | 110 | 1,534 |
| 1996 | 402 | 152 | 1,784 |
| 1997 | 408 | 295 | 1,897 |
| 1998 | 359 | 356 | 1,900 |
| 1999 | 355 | 351 | 1,904 |
| 2000 | 295 | 298 | 1,901 |
| 2001 | 260 | 290 | 1,871 |
| 2002 | 236 | 250 | 1,857 |
| 2003 | 108 | 267 | 1,698 |

Hedge fund sample extracted from the CISDM database in categories Fund of Funds (Diversified), Distressed Securities, Convertible Arbitrage, Emerging Markets, Global (Macro), Equity Hedge, Event-driven Multi-strategy, Fixed income, and Merger Arbitrage/Risk Arbitrage. Data prior to 1994 have been back-filled by the data provider.

EXHIBIT 2

Frequencies of Hedge Funds in Sample: Advisers with \$25 million or More Under Management



Hedge fund sample extracted from the CISDM database in categories Fund of Funds (Diversified), Distressed Securities, Convertible Arbitrage, Emerging Markets, Global (Macro), Equity Hedge, Event-driven Multi-strategy, Fixed income, and Merger Arbitrage/Risk Arbitrage. Data prior to 1994 have been back-filled by the data provider.

level. On the macro level, the SEC contends that it has become exceedingly difficult to monitor all hedge funds doing business in the United States. The SEC has come to rely on private organizations that compile data on hedge funds to supply any necessary information, and the SEC argues that the quality and accuracy of this information is suspect. Registration would decrease the systemic risk by alerting regulators to potential problems such as the 1998 Long Term Capital Management crisis, while they are nascent. At the micro level, registration would provide investors with an extra layer of protection in a product becoming subject to "retailization," as it is increasingly available to individual investors directly. Hedge funds are also owned by individuals indirectly through institutional investors.

The SEC observes that the registration is needed in response to the hedge fund fraud cases that have arisen in recent years. The SEC's position is that the relatively low reported number of fraud cases is due to the SEC's inability to measure any wrongdoing by fund managers unless a complaint is brought to its attention. Complaints are usually made only after the investor has suffered significant losses. The current lack of investigative and monitoring authority makes the SEC's role reactive instead of proactive.

Opponents of the SEC's new rule maintain that registration would impose a layer of deadweight costs on an industry whose chief attraction is its dynamism and flexibility. They argue that institutional investors through whom retail investors own hedge funds are highly sophisticated and capable of representing the interests of individual clients. Moreover, as of the end of 2004, the SEC had initiated action against 38 unregistered hedge funds, a number that opponents point out represents a low percentage of total hedge fund assets. Additionally, some predict that hedge funds would circumvent the new rule by extending the minimum redemption ("lock-up") period to longer than two years, thus making the funds not subject to the registration requirement. This may have the unintended effect of making the funds even riskier for investors.¹

EXHIBIT 3

Frequency Distribution for Year of SEC Registration, by Hedge Fund Category

| Strategy | Year of Registration | | | | | | | | | | Totals |
|-----------------------------|----------------------|------|------|------|------|------|------|------|------|------|--------|
| | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | |
| Fund of Funds (Diversified) | 0 | 0 | 3 | 0 | 0 | 2 | 1 | 2 | 36 | 36 | 80 |
| Distressed | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 10 | 10 | 21 |
| Convertible | 0 | 0 | 0 | 1 | 0 | 2 | 3 | 1 | 20 | 5 | 32 |
| Emerging | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 7 | 8 | 19 |
| Global Macro | 0 | 0 | 2 | 0 | 0 | 1 | 0 | 0 | 2 | 3 | 8 |
| Equity | 1 | 1 | 6 | 8 | 5 | 4 | 2 | 4 | 63 | 30 | 124 |
| Event-driven | 0 | 1 | 1 | 2 | 0 | 3 | 0 | 1 | 5 | 7 | 20 |
| Fixed Income | 0 | 0 | 0 | 0 | 0 | 4 | 2 | 0 | 23 | 3 | 32 |
| Merger Arbitrage | 0 | 0 | 3 | 0 | 0 | 0 | 1 | 0 | 11 | 7 | 22 |
| Totals | 1 | 2 | 15 | 13 | 7 | 17 | 9 | 8 | 177 | 109 | 358 |

Time frequencies of voluntary registration with the SEC by hedge fund advisors listed by hedge fund category. The period examined is January 1, 1990–December 31, 2003. The exhibit includes both live and dead funds, as of December 31, 2003.

EXHIBIT 4

Monthly Category-Adjusted Hedge Fund Returns from SEC-Registered, Not Yet Registered, and Never Registered Advisers, All Amounts under Management

| Strategy | | Registered | Not Yet Registered or Never Registered | Not Yet Registered | Never Registered |
|-----------------------------|--------|------------|--|--------------------|------------------|
| Fund of Funds (Diversified) | Return | 0.12% | -0.03% | 0.10% | -0.06% |
| | t | | 1.96* | 0.20 | 2.27** |
| | z | | 1.05 | -0.33 | 1.34 |
| | n | 80 | 565 | 99 | 466 |
| Distressed | Return | -0.51% | 0.15% | 0.05% | 0.19% |
| | t | | -3.14*** | -2.35 | -3.22 |
| | z | | -3.07*** | -2.39** | -3.00*** |
| | n | 21 | 89 | 24 | 65 |
| Convertible | Return | -0.05% | 0.05% | 0.20% | 0.00% |
| | t | | -0.78 | -1.63 | -0.36 |
| | z | | -0.61 | 1.29 | -0.26 |
| | n | 32 | 117 | 29 | 88 |
| Emerging | Return | -0.13% | -0.13% | 0.32% | -0.20% |
| | t | | 0.00 | -0.99 | 0.20 |
| | z | | 0.46 | -0.73 | 0.67 |
| | n | 19 | 206 | 27 | 179 |
| Global Macro | Return | 1.33% | -0.01% | 1.00% | -0.10% |
| | t | | 1.98* | 0.44 | 2.11* |
| | z | | 2.69*** | 0.58 | 2.87*** |
| | n | 8 | 156 | 13 | 143 |
| Equity | Return | 0.39% | 0.07% | 0.56% | -0.03% |
| | t | | 2.19** | -0.97 | 2.78*** |
| | z | | 2.59*** | -1.90* | 3.50*** |
| | n | 124 | 958 | 153 | 805 |
| Event-driven | Return | 0.29% | 0.04% | -0.09% | 0.29% |
| | t | | 1.14 | 1.71 | 0.01 |
| | z | | 0.05 | 0.46 | -0.65 |
| | n | 20 | 62 | 41 | 21 |
| Fixed Income | Return | 0.04% | 0.02% | 0.36% | -0.08% |
| | t | | 0.17 | -2.11** | 0.83 |
| | z | | 0.18 | -2.12** | 0.95 |
| | n | 32 | 148 | 32 | 116 |
| Merger Arbitrage | Return | -0.05% | -0.05% | -0.10% | -0.04% |
| | t | | -0.02 | 0.17 | -0.11 |
| | z | | -0.98 | -1.37 | -0.78 |
| | n | 22 | 132 | 27 | 105 |

For January 1, 1990–December 31, 2003, monthly means of hedge fund return minus strategy mean return. No restriction is imposed on the sample based on each adviser's funds under management. Differences of means tests are conducted between SEC-registered funds and each of the three categories of unregistered funds. Results from *t*-tests and Wilcoxon rank-sum tests (*z*) are shown, with statistical significance indicated by ***, **, and * for the 1%, 5%, and 10% levels, respectively.

DATA AND DESCRIPTIVE STATISTICS

Data sources

The hedge fund data used are obtained from the Center for International Securities and Derivatives Markets (CISDM) at the University of Massachusetts at Amherst. The database covers 4,693 hedge funds from March 1972–December 2003.² Of the hedge funds in the database, 2,397 are live as of December 2003, and 2,296 are defunct. The database reports variables such as fund name, strategy, management company name, returns, and assets under management.³ The CISDM hedge fund data is generally survivor-bias free in the sense that it includes both live and dead funds. However, it may be subject to reporting bias as some funds may at times deliberately choose not to disclose information publicly.⁴

We choose the January 1990–December 2003 sample period for two reasons. First, this period was characterized by rapid growth and expansion of the hedge fund industry. Second, the 14-year time period is long enough to cover more than one business cycle. Thus, we are able to examine the behavior and characteristics of hedge funds during both a rising market and a declining market.

The CISDM database has three category variables for the funds covered.⁵ We combine the information provided in the three category variables to classify the funds into the following nine asset classes: Fund of Funds (Diversified), Distressed Securities, Convertibles, Emerging Markets, Global, Equity, Event-driven, Fixed Income and Merger Arbitrage. Equity hedge funds include funds with the strategies of merger arbitrage/risk arbitrage, equity market neutral, long-only, short selling, distressed securities, and sector funds. Fixed income hedge funds have strategies such as convertible arbitrage, mortgage backed, high yield, arbitrage, and diversified. Global funds invest in global established markets as well as global emerging markets (Asia, Latin America, Eastern Europe) using strategies like global macro

EXHIBIT 5

Monthly Category-Adjusted Hedge Fund Returns from SEC-Registered, Not Yet Registered, and Never Registered Advisers, \$25 m or More under Management

| Strategy | | Registered | Not Yet Registered or Never Registered | Not Yet Registered | Never Registered |
|-----------------------------|--------|------------|--|--------------------|------------------|
| Fund of Funds (Diversified) | Return | 0.12% | -0.05% | 0.13% | -0.10% |
| | t | | 2.12** | -0.09 | 2.55** |
| | z | | 0.97 | 0.58 | 1.37 |
| | n | 80 | 361 | 71 | 290 |
| Distressed | Return | -0.51% | 0.06% | 0.00% | 0.08% |
| | t | | -2.56** | -2.02* | -2.50** |
| | z | | -2.67*** | 1.92* | -2.56** |
| | n | 21 | 47 | 14 | 33 |
| Convertible | Return | -0.05% | 0.07% | 0.11% | 0.06% |
| | t | | -0.86 | -1.08 | 0.24 |
| | z | | -0.69 | 0.84 | -0.51 |
| | n | 32 | 77 | 19 | 58 |
| Emerging | Return | -0.13% | -0.22% | 0.53% | -0.36% |
| | t | | 0.25 | -1.29 | 0.62 |
| | z | | 0.39 | 1.15 | 0.74 |
| | n | 19 | 115 | 18 | 97 |
| Global Macro | Return | 1.33% | -0.21% | 1.04% | -0.30% |
| | t | | 2.20* | 0.33 | 2.33** |
| | z | | 2.84*** | -0.26 | 3.02*** |
| | n | 8 | 84 | 6 | 78 |
| Equity | Return | 0.39% | 0.07% | 0.57% | -0.03% |
| | t | | 1.97** | -0.65 | 2.53** |
| | z | | 2.18** | 0.90 | 2.81*** |
| | n | 124 | 540 | 89 | 451 |
| Event-driven | Return | 0.29% | -0.04% | 0.28% | -0.15% |
| | t | | 1.39 | 0.02 | 1.97* |
| | z | | 0.92 | 0.13 | 1.25 |
| | n | 20 | 37 | 10 | 27 |
| Fixed Income | Return | 0.04% | -0.08% | 0.11% | -0.13% |
| | t | | 0.78 | -0.47 | 0.99 |
| | z | | 0.19 | 0.50 | 0.41 |
| | n | 32 | 78 | 16 | 62 |
| Merger Arbitrage | Return | -0.05% | -0.13% | 0.24% | -0.18% |
| | t | | 0.51 | -1.36 | 0.80 |
| | z | | -0.58 | 1.63 | -0.27 |
| | n | 22 | 59 | 7 | 52 |

Monthly means of fund raw return minus strategy mean return. The sample is limited to funds of advisers with at least \$25 million under management. Differences of means tests are conducted between SEC-registered funds and each of the three categories of unregistered funds. Results from *t*-tests and Wilcoxon rank-sum tests (*z*) are shown, with statistical significance indicated by ***, **, and * for the 1%, 5%, and 10% levels, respectively.

analysis and global market timing. Futures hedge funds are not included in our study.⁶ Our sample include both U.S. domiciled funds and offshore funds.

Exhibit 1 shows the evolution of nine sectors of the hedge fund industry over a 15-year horizon. As of December 1989, there were 250 hedge funds listed under the nine categories we examine. The first column in the exhibit reports the number of funds originated in each year. The number of funds originated in 1990 was 144. This number rises every year until it reaches 408 in 1997, and then declines every subsequent year to reach 108 in

2003. Equally important is the number of hedge funds disappearing each year, as shown in Exhibit 1. The highest attrition rate for hedge funds occurred in the years 1998 and 1999. The rightmost column reports the funds existing in the sample each year. We note the dramatic rise in the number of funds in the early years, and the gradual decline after the year 2000. Exhibit 2 is a pictorial depiction of the funds in the CISDM database over the same period.

Of the total live funds sample in this database of 2,397, only 422 have been registered with the SEC as of December 31, 2003. Exhibit 3 shows the yearly time distribution of fund registration across the nine strategies that we examine.⁷ For most categories, registration is most prevalent in 2002, followed by 2003. Hedge fund managers generally are not required to publicize performance information, asset allocations, or earnings; however, larger fund managers do regularly report information on equity holdings as part of quarterly 13F filings.⁸ They are exempt from most disclosure requirements as they normally would manage assets for fewer than 100 *accredited investors*, and they are not allowed to engage in solicitation of new clients.⁹ Off-shore funds outnumber domestically domiciled funds.

Testing method

Our testing procedure is designed to examine whether there are significant differences in the returns of registered and non-registered funds. We conduct these tests using strategy-adjusted returns as well as information ratios.

To minimize survivorship bias, our sample includes both live and dead funds. Each category is divided into registered and non-registered funds. While we examine the differences between registered and non-registered funds, we also examine the returns of registered funds before and after the registration event.

To establish if and when a fund has been registered, we use the EDGAR web site to determine which funds have submitted registration documents. These funds have been separated from the others in their respective categories. The date of filing has also been noted so as to

EXHIBIT 6

Monthly Hedge Fund Information Ratios from SEC-Registered, Not Yet Registered, and Never Registered Advisers, All Amounts under Management

| Strategy | | Registered | Not Yet Registered or Never Registered | Not Yet Registered | Never Registered |
|--------------------------------|----|------------|---|-----------------------|---------------------|
| Fund of Funds (Diversified) | IR | 0.02 | 0.01 | 0.05 | 0.00 |
| | t | | 0.42 | -0.31 | 0.29 |
| | z | | 0.84 | -0.12 | 1.04 |
| | n | 80 | 565 | 99 | 466 |
| Distressed | IR | -1.23 | 0.04 | 0.00 | 0.06 |
| | t | | -3.18*** | -3.05*** | -3.22*** |
| | z | | -3.69*** | -2.83*** | -3.64*** |
| | n | 20 | 89 | 24 | 65 |
| Convertible | IR | 0.01 | -0.03 | 0.13 | -0.09 |
| | t | | 0.28 | -0.83 | 0.64 |
| | z | | -0.76 | 1.46 | -0.27 |
| | n | 32 | 117 | 29 | 88 |
| Emerging | IR | -0.15 | -0.04 | 0.05 | -0.05 |
| | t | | -0.54 | -0.92 | -0.47 |
| | z | | 0.52 | -0.48 | 0.69 |
| | n | 19 | 204 | 27 | 177 |
| Global Macro | IR | 0.30 | -0.05 | 0.26 | -0.07 |
| | t | | 1.99* | 0.19 | 2.16* |
| | z | | 2.73*** | 1.09 | 2.85*** |
| | n | 8 | 156 | 13 | 143 |
| Equity | IR | -0.04 | -0.02 | 0.15 | -0.05 |
| | t | | -0.21 | -2.25** | 0.22 |
| | z | | 2.27** | -1.79* | 3.11*** |
| | n | 117 | 954 | 153 | 801 |
| Event-driven | IR | 0.02 | -0.02 | 0.04 | -0.04 |
| | t | | 0.35 | -0.23 | 0.66 |
| | z | | -0.31 | -0.76 | 0.00 |
| | n | 18 | 62 | 21 | 41 |
| Fixed Income | IR | 0.05 | 0.02 | 0.20 | -0.03 |
| | t | | 0.39 | -1.45 | 0.79 |
| | z | | 0.11 | -2.20** | 0.90 |
| | n | 32 | 148 | 32 | 116 |
| Merger Arbitrage | IR | -0.29 | -0.03 | -0.05 | -0.02 |
| | t | | -2.33** | -1.81* | -2.38** |
| | z | | -1.78* | -1.61 | -1.68* |
| | n | 22 | 132 | 27 | 105 |

compare fund returns before and after the filings. Funds that indicate they have been planning to register, but have not completed the process, are included with the registered funds based on the assumption that the registering process would take a number of months to complete.

An important implication of implementing Rule 203(b)(3)-2 would be to effectively amend the existing private adviser exemption by changing the definition of "client" in a way that would require most hedge fund advisers to register. Specifically, it would require that each individual investor be counted as a single "client". A mutual fund invested in a hedge fund would not be counted as one client but would have to list each investor in the mutual fund as a client of the hedge fund adviser. Under the proposed Rule an adviser to a single hedge fund with 15 or more investors would now be viewed as having more than 14 clients, and would be required to

register under the Investment Advisers Act, if it had more than \$30 million under management. Voluntary registration is permitted for advisers with aggregate assets between \$25 and 30 million. Registration is not permitted if assets are below \$25 million.

The direct implication of this Rule is that SEC registration may not be immediately relevant to advisers having less than \$30 million under management. In order to incorporate this size distinction imposed by the SEC, we first conduct our study by examining the differences in the returns between registered and non-registered funds for the entire hedge fund sample, and again repeat the analysis for only advisers that have combined assets under management exceeding \$25 million.

EMPIRICAL FINDINGS

Tests for mean equality

In this section, we test whether there are statistically significant differences in the strategy-adjusted returns and the Information Ratio between registered and non-registered hedge funds. For funds whose advisers never registered, we calculate the monthly strategy-adjusted returns and the Information Ratio from, the later of fund inception or January

1990, to, the earlier of fund termination or December 2003. For registered funds, we calculate "pre-registration" returns through the registration month, then, post-registration returns thereafter. Strategy-adjusted returns (SR) are calculated for each fund i in each month t as follows:

$$SR_{it} = R_{it} - R_{st} \quad (1)$$

where R_{it} is the raw return for the fund i in the month t , and R_{st} is the average return for funds that follow the strategy s in the month t . This approach of using strategy-adjusted returns helps to adjust for differences in the timing of registration across funds as well as the length of the return series of funds. We calculate information ratios (IR) as follows:

$$IR_i = \frac{\overline{SR}_i}{\sigma_{SR_i}} \quad (2)$$

EXHIBIT 7

Monthly Hedge Fund Information Ratios from SEC-Registered, Not Yet Registered, and Never Registered Advisers, \$25 m or More under Management

| Strategy | | Registered | Not Yet Registered or Never Registered | Not Yet Registered | Never Registered |
|-----------------------------|----|------------|--|--------------------|------------------|
| Fund of Funds (Diversified) | IR | 0.02 | 0.00 | 0.04 | -0.01 |
| | t | | 0.22 | -0.26 | 0.35 |
| | z | | 0.76 | 0.30 | 1.03 |
| | n | 80 | 360 | 71 | 289 |
| Distressed | IR | -1.23 | 0.03 | -0.04 | 0.06 |
| | t | | -3.14*** | -2.86*** | -3.22*** |
| | z | | -3.30*** | -2.34** | -3.19*** |
| | n | 20 | 47 | 14 | 33 |
| Convertible | IR | 0.01 | -0.02 | 0.10 | -0.06 |
| | t | | 0.19 | -0.59 | 0.44 |
| | z | | -0.81 | 1.03 | -0.58 |
| | n | 32 | 77 | 19 | 58 |
| Emerging | IR | -0.15 | -0.04 | 0.10 | -0.07 |
| | t | | -0.52 | -1.18 | -0.39 |
| | z | | 0.37 | 0.91 | 0.66 |
| | n | 19 | 114 | 18 | 96 |
| Global Macro | IR | 0.30 | -0.06 | 0.34 | -0.09 |
| | t | | 2.06* | -0.14 | 2.25* |
| | z | | 2.63*** | -0.38 | 2.78*** |
| | n | 8 | 84 | 6 | 78 |
| Equity | IR | -0.04 | -0.02 | 0.17 | -0.06 |
| | t | | 0.42 | -2.12** | 0.30 |
| | z | | 1.91* | 1.21 | 2.58*** |
| | n | 117 | 534 | 89 | 445 |
| Event-driven | IR | 0.02 | -0.07 | 0.04 | -0.11 |
| | t | | 0.91 | -0.16 | 1.33 |
| | z | | 0.54 | 0.33 | 0.86 |
| | n | 18 | 37 | 10 | 27 |
| Fixed Income | IR | 0.05 | 0.02 | 0.10 | -0.01 |
| | t | | 0.35 | -0.41 | 0.57 |
| | z | | -0.08 | 0.96 | 0.26 |
| | n | 32 | 78 | 16 | 62 |
| Merger Arbitrage | IR | -0.29 | -0.03 | 0.09 | -0.04 |
| | t | | -2.29** | -2.81*** | -2.14** |
| | z | | -1.53 | 1.58 | -1.34 |
| | n | 22 | 59 | 7 | 52 |

Information ratios (IR) for January 1, 1990–December 31, 2003. IR is the monthly mean of hedge fund return net of the strategy's mean return, divided by the standard deviation of the hedge fund return net of the strategy's mean return. No restriction is imposed on the sample due based on the adviser's funds under management. Differences of means tests are conducted between SEC-registered funds and each of the three categories of unregistered funds. Results from *t*-tests and Wilcoxon rank-sum tests (*z*) are shown, with statistical significance indicated by ***, **, and * for the 1%, 5%, and 10% levels, respectively.

where \overline{SR}_i is the mean strategy-adjusted return for fund *i*, and σ_{SR_i} is the standard deviation of monthly strategy-adjusted returns for fund *i*.

Within each hedge fund category, we aggregate the mean returns across funds, and then conduct standard parametric *t*-tests and Wilcoxon non-parametric tests to examine whether there are significant differences between the means for registered funds versus non-registered funds.

We run these tests separately for each category.

Exhibit 4 presents the results of the strategy-adjusted returns for the entire hedge fund sample, while Exhibit 5 presents the same tests for fund advisers with more than \$25 million under management. The differences in the strategy-adjusted returns for registered and "not yet registered" funds are statistically insignificant. Registration status appears to have no bearing on the performance of funds that eventually register. This indicates that there is no significant economic effect or market signal attached to the event of voluntary registration. This result also holds true in Exhibit 5 that examines only fund advisers with at least \$25 million under management. It is particularly important to consider this sub-sample, because only these advisers have a choice to make about whether to register.

Comparing the strategy-adjusted returns of registered versus "never registered" funds, we find that in three of the nine hedge fund categories, registered fund advisers outperform non-registered advisers. These three categories are Fund of Funds, Global and Equity. Only in the Distressed securities category of hedge funds do non-registered fund advisers significantly outperform registered fund advisers. The remaining five categories showed no statistically significant differences in the strategy-adjusted returns of registered versus non-registered fund advisers. Once again, the results do not change in any significant way when we limit our sample to advisers with over \$25 million under management, as shown in Exhibit 5.

While three of the nine categories being significant may appear as weak evidence in favor of registered versus unregistered fund advisers, it is important to remember that

these three categories constitute well over half the entire hedge fund sample. As shown in Exhibit 4, Funds of Funds, Global, and Equity comprise approximately 70% of the total funds in the sample. Consequently, we interpret our findings as important evidence in favor of registered fund advisers.

Exhibits 6 and 7 present the corresponding results for the Information Ratio. While in general the findings

are along the same lines, the results in this case are not significant for the Fund of Funds category. Only in the case of Global and Equity categories do we find that the Information Ratio is significantly higher for registered than non-registered fund advisers. Clearly, the results in this case, when we use the Information Ratio, a risk adjusted performance measure, are not as strong as before. Nevertheless, the Global and Equity categories, combined, still constitute about 50% of the number of funds in the sample.

SUMMARY AND CONCLUSIONS

On September 29, 2003, the Securities and Exchange Commission issued a report recommending that it should require most hedge fund managers to register as investment advisers under the Investment Advisers Act of 1940. On July 14, 2004, the SEC adopted Rule 203(b)(3)-2 that implements this registration recommendation. Registration is required beginning February 1, 2006 for advisers with over \$30 million of capitalization. Voluntary registration continues to be permitted for fund advisers with between \$25 and 30 million in assets under management. In this study, we examine the differences between the return performance of the funds whose advisors have voluntarily registered with the SEC versus those that are unregistered.

We use a hedge fund database obtained from the CISDM at the University of Massachusetts, covering 2,397 live funds and 2,296 defunct funds from March 1972 to December 2003. We choose January 1990 to December 2003 as the sample interval for this study because this time period has been characterized by rapid growth and expansion of the hedge fund industry, and it has been long enough to cover more than one business cycle.

The results show that individual hedge fund performance, whether measured as strategy mean adjusted returns or by the information ratios, generally does not improve subsequent to adviser registration. Registered funds in the global, funds of funds, and equity categories outperform the never-registered funds. However, registered funds specializing in distressed securities significantly underperformed their never-registered counterparts.

While we find evidence that shows that registered funds in several important categories outperform their unregistered counterparts, this phenomenon does not appear to be due to the registration event. Registered funds outperformed never-registered funds even prior to the registration month. Indeed, for all categories, registered fund performance does not improve subsequent to the registration month.

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ENDNOTES

¹This form of avoiding the registration requirement is discussed by Emily Thornton in *BusinessWeek Online*, December 27, 2004. It was also brought up by several commentators to the SEC during the public comment period.

²We use hedge funds to refer to all funds reported in the CISDM, although the CISDM does not use "hedge funds" for CTA/futures funds.

³Fund manager name, instead of the management company name, is reported for CTA/Futures funds.

⁴Unlike mutual funds that are heavily regulated under the Investment Company Act of 1940, hedge funds are not required to file fund information with the SEC.

⁵They are CLASSNAME, SUBTYPE, and CATEGORY.

⁶Futures-related hedge funds have traditionally registered with the Commodity Futures Trading Commission.

⁷While our dataset contains the exact dates of registration, for brevity we show the distribution only by year.

⁸Hedge fund managers typically keep between 15% and 25% of any profit they make for investors, on top of a management fee of 1-2% of assets. However, a targeted rate of return must commonly be achieved (or any previous losses recouped) before the performance fee is paid.

⁹Hedge funds are generally less liquid than traditional investment vehicles. Most allow redemptions on a quarterly basis. Some hedge funds have much longer (e.g. one year) lock up periods.

REFERENCES

Edwards, Franklin R. "New Proposals to Regulate Hedge Funds: SEC Rule 203(b)(3)-2." Working paper, Columbia University, 2004.

Securities and Exchange Commission. "Registration Under the Advisers Act of Certain Hedge Fund Advisers." *Federal Register*, Vol. 69, No. 237 (December 2004), pp. 72055-72098.

Thornton, Emily. "Hedge Funds Find An Escape Hatch." *Business Week Online*, December 27, 2004. Available at http://www.businessweek.com/magazine/content/04_52/b3914039_mz011.htm.

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