

The Effect of Voluntary Adviser Registration on Hedge Fund Performance

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Abstract

We examine the value of hedge fund adviser registration, and its accompanying disclosure and regulatory provisions, to investors during times of financial crisis. We compare the performance of two groups of hedge funds during the 2008 financial crisis; one group consists of funds with advisers registered with the SEC during the financial crisis, while the advisers of funds in the other group remained unregistered during the same period. Comparing the compound holding-period returns from December 2007 through June 2009 and controlling for investment style, we find no significant difference between the mean returns of hedge funds that have registered advisers to the mean returns of the funds with unregistered advisers.

Keywords Hedge Fund Performance, Financial Regulation, Voluntary Disclosure

Introduction

The financial crisis of 2008 included the failure of several large financial institutions, the collapse of the housing market, and a downturn in the stock market. These calamities led to widespread calls for changes in the regulatory system. Congress' response to these calls was the passage of the Dodd-Frank Wall Street Reform and Consumer Protection Act (Dodd-Frank). Title IV of Dodd-Frank, now known as the "Private Fund Investment Advisers Registration Act of 2010," introduced significant new hedge fund regulations and reporting requirements.

Prior to Dodd-Frank, hedge funds were less regulated than the majority of mutual funds, and many were exempt from registration with the Security and Exchange Commission (SEC) based on advising fifteen or fewer funds, each of which constituted a single client under the Investment Advisers Act of 1940 (Advisers Act). However, on December of 2004, a change in the Advisers Act required advisers to count each individual investor in each fund as a client, effectively forcing registration prior to February 2006. This would have dramatically increased the number of registered hedge funds, but in the now famous case of Phillip Goldstein et al. versus the SEC, the Court of Appeals for the District of Columbia overturned the SEC ruling and allowed a number of advisers to avoid registration (Sjostrom, 2011).

The 2004 SEC ruling followed by the Goldstein case decision set up a unique situation where we can study the effect of voluntary registration and disclosure on the performance of hedge funds. Because these events occurred shortly before the onset of the financial crisis, we are able to focus on voluntary registration during a period when we would expect the effect of

regulation to be the strongest, a period of financial downturn. We compare the compound holding-period returns of 1,011 registered hedge funds over a nineteen-month period during the financial crisis, December 2007 through June 2009, against a control group of 3,291 unregistered hedge funds. Using two different statistical methods and controlling for investment style as classified by Morningstar, we do not find support for the hypothesis that voluntary registration by hedge fund advisers increases the performance of the hedge fund.

We organize the remainder of the paper as follows: The next section summarizes the laws that govern the regulation of hedge funds, provides a literature review of the area, and states our hypothesis. The following two sections describe the data and present our results. The final two sections discuss managerial implications and our conclusion.

Background, Literature Review, and Hypothesis

The History of Adviser Registration

On December 2, 2004, the SEC adopted a new rule and rule amendments under the Advisers Act that would require hedge fund managers to register as investment advisers by February 1, 2006. Prior to this date, if an investment adviser had fewer than fifteen clients during the previous 12 months and did not hold itself out to the public as an investment adviser, they were exempt from registration (private adviser exemption). Many hedge fund and private equity fund sponsors qualified for this exemption because they counted each fund as a single client. If an adviser was not exempt from registration, they were required to file form ADV with the SEC and to comply with a variety of additional regulatory requirements. Form ADV includes information about the adviser's business, ownership, clients, employees, business practices, and disciplinary events of the adviser or its employees (SEC, 2011a).

The 2004 amendment to the Advisers Act required the counting of each individual investor as a single client in determining required filing with the SEC, which dramatically increased the number of hedge fund advisers that had to register by February 2006. However, on June 23, 2006, in *Goldstein versus the SEC*, the U.S. Court of Appeals for the District of Columbia circuit vacated this new interpretation of the term "client". Consequently, far fewer hedge fund managers were required to remain registered as investment advisers.

Motivation and Consequence of SEC Registration

The passage of the Dodd-Frank in June 2010 has once again changed the filing requirements of hedge funds. Dodd-Frank has eliminated the fifteen or fewer client exemption, thereby rendering numerous additional investment advisers, hedge funds, and private equity firms subject to registration. Advisers registered pursuant to Dodd-Frank are subject to a fiduciary duty of utmost good faith to act solely in the best interests of their clients, as well as reporting and bookkeeping requirements and SEC audits. Specifically, the SEC may require registered advisers to maintain records and file reports regarding private funds.

Registration with the SEC thus increases the fiduciary, reporting, and compliance obligations of the investment adviser. However, there are several exemptions for registration and reporting, such as managing venture capital (Dodd-Frank, 2010, H.R. 4173 section 407), having assets under management under \$150 million, or managing family wealth (H.R. 4173 section 408). Dodd-Frank also changes the definition of accredited investor. An accredited investor is a natural person with personal (or joint with spouse) net worth that averages more than \$1 million over a four-year period. The calculation excludes the value of the natural person's residence from the calculation (H.R. 4173 section 413).

The stated purposes of Dodd-Frank were “To promote the financial stability of the United States by improving accountability and transparency in the financial systems ...to protect consumers from abusive financial services practices, and for other purposes.” (Dodd-Frank, 2010). Proponents argue that this type of regulation is necessary because, left to their own devices, market forces would lead to an uneven possession of information among investors (Beaver et al., 1989).

On the other hand, Gonedes (1980) suggests that mandatory regulation is merely a reallocation of wealth and may not lead to desirable outcomes. In the absence of regulation, investors can pay to obtain information and will do so until, at the margin, they are indifferent between being more informed or less informed. With mandatory regulation, entities absorb the direct and indirect costs of compliance, and the quantity of information an investor is willing to acquire on personal account will likely diminish. One possible result is a decrease of total information produced about the firms.

There are many arguments for regulating disclosure by hedge fund investment advisers. Leto & DiMeglio (2008) point out that 12% of total enforcement cases brought by the SEC in fiscal 2007 involved complaints against investment advisers. Heed (2010) argues that the private equity model presents distinctive features that justify regulatory actions in order to prevent systematic instability, in part, due to the use of excessive amounts of leverage provided by commercial and investment banks. Hail & Leuz (2006) find that countries with extensive securities regulation and strong enforcement mechanisms exhibit lower levels of cost of capital even after controlling for various risk and country factors.

However, there is ample evidence to suggest that regulation does little to improve risk-adjusted returns to investors. Cummings & Dai (2010) study the correlation between hedge fund restrictions and fund performance. The restrictions are of the type that accompanies hedge fund regulation around the world, such as minimum capitalization and restrictions on location of key service providers and marketing channels. Cummings & Dai (2010) admit that the lack of registration and regulatory oversight could lead to disguised investment schemes that primarily benefit fund managers through captured fees, and result in lowered fund performance. However, their empirical findings conclude otherwise. Overall, they find a negative correlation between these regulatory restrictions and performance, and attribute their results to the loss of ability of fund managers to act with a free hand.

Similarly, Agarwal et al. (2013) find that the ‘confidential holdings’ of hedge funds exhibit superior performance. Extrapolating these results, one can assume that additional regulation and the associated required disclosures would hurt performance. Cumming et al. (2012) examine the relationship between regulation and hedge fund performance persistence. They conclude that regulation does, in fact, affect persistence. However, whether performance persistence is increased or mitigated depends on which aspect of the hedge fund is regulated.

Brown et al. (2008) find that hedge fund market participants are already aware of operational risk subsequently demanded through mandatory regulation and Simon (1989) finds that mean returns are unchanged by regulation in markets with low information costs. Jarrell (1981) finds that mandatory registration of new equity issues does not improve the net-of-market returns to investors over a five-year period and Stigler (1964) finds little difference between the returns of unregistered and registered securities. However, Dimmock & Gerken (2013) find that regulation reduces return misreporting by hedge funds and that investors value regulation.

Despite the evidence that there is no benefit to mandatory disclosure, firms do have incentive to disclose information voluntarily when the benefits of that disclosure outweigh costs

of its production. Higher quality firms will disclose information that signals their higher quality. Healy et al. (1999) find that increases in disclosure ratings accompanies increases in sample firms' stock returns, institutional ownership, analyst following, and stock liquidity. These findings persist after controlling for contemporaneous earnings performance and other potentially influential variables, such as risk, growth, and firm size. This persistence is important as it mitigates some of the effect of self-selection bias; firms that are performing well have more incentive to signal that performance to the market and thus increase disclosure.

Further, Botosan (1997) finds that for firms with a low analyst following, and thus greater information asymmetries, greater disclosure is associated with a lower cost of capital. Conversely, she finds no association between disclosure level and the cost of capital for firms with a high analyst following suggesting that the market rewards for disclosure where other sources for information are limited. Welker (1995) finds a significant negative relation between disclosure policy and bid-ask spreads, even after controlling for the effects of return volatility, trading volume, and share price.

Given this apparent upside of increased disclosure, why is voluntary disclosure limited? Dye (2001) suggests that voluntary disclosure can be viewed as a special case of game theory where one will disclose information that is favorable to the entity making the disclosure decision, and will not disclose information unfavorable to the entity. Skinner (1994) finds that there are reputational costs for managers that fail to disclose bad news and provides evidence to suggest that managers face an asymmetric loss function in choosing their voluntary disclosure policies. They have incentives to preempt large negative, but not large positive, earnings surprises by voluntarily disclosing that information. These results may be due, in part, to U.S. securities laws that provide the threat of litigation if adverse earnings news is withheld.

Baginski et al. (2002) finds that disclosure increases in less litigious environments. Proprietary costs may also discourage managers from disclosing private information. Clinch & Verrecchia (1997) find that the probability of disclosure decreases as the intensity of competition between firms increases. This result is intuitive given that proprietary information revealed to investors through disclosure is also available to competitors thus making trading strategies public. It becomes obvious that the benefits that accrue with increased disclosure must provide sufficient capital market benefits to outweigh the costs associated with disclosure. Absent sufficient disclosure, investors will discount the investment's value to the point where it is in the firm's best interests to reveal the information, however unfavorable it may be.

Hypothesis

In this paper, we examine the economic benefit for the investors of the hedge fund that registration could provide. In particular, we look for evidence in the previous attempt to regulate the hedge fund industry through the investment advisers, when the amended Advisers Act seemed to mandate registration. Although the Goldstein case vacated that decision and made registration unnecessary for the majority of advisers, a fair number remained registered.

Relying on signaling theory, we posit that investment advisers, who subjected themselves to the stringent reporting requirements of the SEC after Goldstein made it unnecessary, remained registered in order to signal the higher quality of their firms to investors. Therefore, ex-ante, we expect this "higher quality" to manifest itself through superior performance when compared to firms with investment advisers that chose not to register.

Further, we examine the value of regulation and disclosure during times of financial crisis. We parse out the performance of registered and unregistered investment advisers during the

financial crisis to determine if advisers that signal quality through registration perform better during economic crisis. Again, relying on signaling theory, ex-ante, we expect statistically significant superior performance from those hedge fund investment advisers who chose to subject themselves to the SEC disclosure rules during the December 2007 through June 2009 financial crisis despite the absence of regulation that compelled them to do so. Mitton (2002), who finds significantly better stock performance during financial crisis associated with firms that indicate higher disclosure quality, supports this hypothesis. Barton & Waymire (2004) also find the availability of higher quality financial information decreases investor losses during a period seen as a stock market crash.

Data

We start with a data set derived from ADV forms that lists all registered investment adviser as of February 2006. The ADV form includes the following questions [SEC (2011b)]:

Item 5, Question E, Part 6: Are you compensated for your investment advisory services by performance-based fees?

Item 7, Question B: Are you or any related person a general partner in an investment-related limited partnership or manager of an investment-related limited liability company, or do you advise any other "private fund" as defined under SEC rule 203 (b) (3) – 1?

If the answer to both these questions is yes, we classify the adviser as a hedge fund adviser. This step yields 2,606 investment advisers that manage hedge funds. Subsequently, we match these advisers to hedge fund information obtained from Morningstar. For each hedge fund record in the Morningstar data, we have the hedge fund name, the name of the adviser, a Morningstar classification for the investment style of the fund, and a set of monthly returns. Since we restrict our sample to the financial crisis as defined by the National Bureau of Economic Research, we eliminate all hedge funds that have missing returns data for any of the months during the period December 2007 through June 2009.

Since the SEC continuously updates the ADVs, a second pass through these forms in June 2011 shows the date of the last action related to registration. If the adviser's last action was the initial registration, we record the date and assume that they remain registered through June 2011. If the last action indicates a termination of SEC registration, we also record that date. We then eliminate hedge funds from our sample where the adviser initially registers after December 2007 or terminates their registration before June 2009.

This final step leaves us with two subsamples of hedge funds: a sample of hedge funds with registered advisers for the full nineteen-month duration of the financial crisis, and a control sample of hedge funds with advisers that are unregistered during the same nineteen-month period.

Statistical Analysis

Our final data set includes 4,302 hedge funds, consisting of 1,011 funds with advisers that have registered before December 1, 2007 and remained registered for the next nineteen months until June 30, 2009, and 3,291 funds with advisers that have never registered. For each fund, we have nineteen monthly returns for the period between December 1, 2007 and June 30, 2009. In

addition, the style of each fund, as categorized by Morningstar is also available. We calculate for this period a nineteen-month holding-period return measure for each hedge fund:

$$R_i = \prod_{t=1}^{t=19} (1 + r_{it}) - 1 \quad (1)$$

where R_i is the holding-period return for hedge fund i and r_{it} is the monthly return for hedge fund i in month t . Table 1 shows the mean, standard deviation, and 95% confidence interval for the nineteen-month holding-period returns for hedge funds with registered advisers, unregistered advisers, and the two groups combined.

Table 1: Summary statistics for the nineteen-month holding-period returns for the registered and unregistered hedge funds during the financial crisis

Group	Observations	Mean	Std. Dev.	95% Conf. Interval	
Registered	1011	-6.38	23.45	7.83	4.94
Unregistered	3291	-7.18	24.82	-8.03	-6.33
Combined	4302	-6.99	24.50	7.73	6.26

Both the F test, in an analysis of variance, and the equivalent two-group t test fail to reject the equality of the means for the two groups. However, the Bartlett's test for equal variance also rejects equal variance for the two groups. Accordingly, we repeat the t test for two groups with unequal variances using Welch's degree of freedom. The Welch statistic of -.9315 fails to reject the equality of the means; the two means are not statistically different from each other at any conventional significance levels.

Because the investment style of a hedge fund is critical in determining the risk-expected return characteristics of the fund returns, we want to control for style in our comparison of the registered funds with the unregistered. Table 2 shows the distribution of the hedge funds by Morningstar categories for the total sample and by SEC registration.

Table 2: Distribution of hedge funds by Morningstar style categories for the total sample and by SEC registration

Morningstar Category	All Hedge Funds	Registered	Unregistered
1 Missing Morningstar Category	9	3	6
2 Asia/Pacific Long/Short Equity	106	20	86
3 Bear Market Equity	5	2	3
4 China Long/Short Equity	43	7	36
5 Convertible Arbitrage	36	4	32
6 Currency	32	4	28
7 Debt Arbitrage	79	23	56
8 Distressed Securities	60	6	54
9 Diversified Arbitrage	28	7	21
10 Emerging Markets Long/Short Equity	204	44	160
11 Equity Market Neutral	105	33	72
12 Europe Long/Short Equity	269	66	203

13	Event Driven	92	18	74
14	Fund of Funds - Debt	59	8	51
15	Fund of Funds - Equity	462	128	334
16	Fund of Funds - Event	83	16	67
17	Fund of Funds - Macro/Systematic	175	49	126
18	Fund of Funds - Multistrategy	853	219	634
19	Fund of Funds - Relative Value	77	9	68
20	Global Long/Short Equity	230	60	170
21	Global Macro	145	32	113
22	Long/Short Debt	129	24	105
23	Merger Arbitrage	25	7	18
24	Multistrategy	175	44	131
25	Systematic Futures	309	75	234
26	U.S. Long/Short Equity	386	83	303
27	U.S. Small Cap Long/Short Equity	99	18	81
28	Volatility	27	2	25
All Morningstar Categories		4,302	1,011	3,291

We test for statistical significance between the groups controlling for investment style two different ways. First, we perform t tests per style subsamples, and see how many of these subsamples have significant differences between the subgroups by SEC registration. To avoid problems associated with departures from normality, particularly for the Welsh t test when there is a violation of the equal variance assumption, we test the style-specific subsamples only when both the registered and unregistered group sample size exceeds thirty.]

Eleven Morningstar style categories have sufficient sample size for both the registered and unregistered funds. For each of these we test for the difference between the mean returns. We initially test for unequal variance between the registered and unregistered groups using Bartlett's test, and if there is a violation, we substitute the Welsh t test for the classic t test. Table 3 shows the results of the means test for the nineteen-month holding-period returns between the registered and the unregistered hedge funds by Morningstar style categories.

Table 3: Mean nineteen-month holding-period returns during the financial crisis for the registered and the unregistered hedge funds by Morningstar style categories

Morningstar Categories	Registered Funds		Unregistered Funds		t statistic
	Obs	Mean	Obs	Mean	
Emerging Markets Long/Short Equity	44	-18.38	160	-23.78	-1.22
Equity Market Neutral	33	7.72	72	5.89	-0.50
Europe Long/Short Equity	66	2.76	203	-0.40	-1.02
Fund of Funds – Equity	128	-16.07	334	-20.50	-3.16***
Fund of Funds – Macro/Systematic	49	3.23	126	-2.27	-2.05**
Fund of Funds – Multistrategy	219	-14.78	634	-14.57	0.25
Global Long/Short Equity	60	-13.64	170	-8.97	1.36
Global Macro	32	2.00	113	17.36	3.30***(Welch)

Multistrategy	44	-1.55	131	0.92	0.59
Systematic Futures	75	20.41	234	19.45	-0.26
U.S. Long/Short Equity	83	9.07	303	-10.51	-0.40 ^(Welch)

a. *** Significant at the 1% level, ** Significant at the 5% level.

b. (Welch) indicates that we substitute the Welch t test for the classical t test

The first column is the Morningstar style category, while column two and three show the number of hedge funds in each style category and the mean nineteen-month holding-period return for the style category for the registered hedge funds. Column four and five show the number of funds and the mean holding-period return for the unregistered funds. The final column shows the t statistic for the means comparison test.

The results in Table 3 indicate that out of eleven Morningstar categories, eight show no significant difference between the mean holding-period return of funds that have registered managers to the funds with unregistered managers. For two out of the three categories with significant differences, two show greater returns to the registered funds, while one, the Global Macro hedge fund, has the unregistered funds outperforming the registered funds.

Our second test runs a regression of the nineteen-month holding-period return on the indicator variable “registered” and a set of eleven other indicator variables, one per Morningstar category:

$$R_i = \beta_0 + \beta_1 I_i^{\text{registered}} + \sum_{j=1}^{j=11} \beta_{j+1} I_i^{\text{style}(j)} + \varepsilon_i \quad (2)$$

R_i is the nineteen-month holding-period return, $I_i^{\text{registered}}$ is an indicator variable that is set to one when the hedge fund adviser has registered with the SEC during the duration of the financial crisis, and $I_i^{\text{style}(j)}$ is an indicator variable set to one if the hedge fund has the (j)th Morningstar investment style category for the eleven style subsamples with more than thirty observations for both the registered and the unregistered groups.

Table 4 shows the regression results. The first row shows the t statistic and the p value for the independent variable “registered”. The t statistic indicates that after controlling for style, the coefficient for “registered” is insignificant, which means there is no significant difference between the two samples. We also repeated this regression test using all the style categories listed in Table 2, not just the style categories that are present in Table 3, with similar results. The regression results support the conclusion of the t test on each individual style subsample. Registration by the hedge manager does not seem to affect holding-period returns.

Table 4: Regression test of SEC registration

Independent Variable	Coef.	Std. Error	t statistic	$P > t$
Registered	0.94	0.79	1.19	0.236
Emerging Markets Long/Short Equity	-15.95	1.69	-9.44	0.000
Equity Market Neutral	13.03	2.26	5.77	0.000
Europe Long/Short Equity	7.00	1.51	4.63	0.000
Fund of Funds – Equity	-12.67	1.24	-10.21	0.000
Fund of Funds – Macro/Systematic	5.87	1.80	3.25	0.001
Fund of Funds – Multistrategy	-8.01	1.03	-7.78	0.000

Global Long/Short Equity	-3.57	1.61	-2.22	0.027
Global Macro	20.62	1.96	10.55	0.000
Multistrategy	6.93	1.80	3.84	0.000
Systematic Futures	26.32	1.43	18.36	0.000
U.S. Long/Short Equity	-3.54	1.32	-2.68	0.007
Constant	-6.86	0.71	-9.62	0.000

^a. The dependent variable is the nineteen-month holding-period return while the independent variables are an indicator variable “registered” set to 1 if the fund adviser has SEC registration and a set of indicator variables to control for the Morningstar style category.

Our empirical tests indicate that hedge-fund adviser registration does not have a significant statistical effect on the holding-period returns of the funds managed by the adviser during the period of the latest financial crisis, when we would expect to see the greatest differences between a regulated and an unregulated hedge fund. Our tests for these differences take investment style into account, which is important because the risk-return characteristics of hedge funds are highly influenced by their investment strategies, although our direct test of the effects of registration irrespective of investment style also shows the same result.

Managerial Implications

Despite the passage of the Advisers Act of 1940, hedge funds avoided registration and regulatory oversight during the remainder of the twentieth century by invoking the private adviser exemption. However, a rapid increase in the numbers of hedge funds in the 1990s, followed by increased periods of global financial instability accompanied by examples of hedge fund bankruptcy, such as the failure of Long-Term Capital Management, caused the SEC in 2004 to amend the Adviser Act and disallow the private adviser exemption for hedge funds. Subsequently, the Goldstein decision overturned the SEC amendment and set up the opportunity for us to test the effect of voluntary registration on hedge fund returns.

Ironically, the financial crisis in the late 2000s resulted in an even stronger adviser registration provision, since the 2004 amendment continued to allow private equity funds to invoke the private adviser exemption, while Title IV of Dodd-Frank requires all hedge funds and private equity funds to register (Sjostrom, 2011). Although the Advisers Act prohibited outright fraud on all advisers, registration does seek to add additional investor protection through increased transparency. Lu & Baojin (2012) show that U.S. hedge-fund regulation has a global influence; they focus on the fledgling hedge-fund industry in China.

As suggested in Cummings & Dai (2010), an unregistered hedge fund can set up an investment strategy that primarily benefits the fund managers and therefore result in lower performance. On the other hand, they also posit a scenario where registration and the accompanying restrictions constrain the fund to the point that performance suffers. Our findings show that voluntary registration neither improves nor diminishes performance. One implication of our finding is that investors need not fear investing in unregistered funds. On the other hand, advisers that have remained registered have not experienced lower returns, although we would not expect advisers to remain voluntarily registered if they perceived the additional constraints to be harmful to their investment scheme.

Conclusion

In this paper, we have shown that for hedge funds voluntary disclosure through registration with the SEC does not improve the performance. This is contrary to the evidence shown in Barton & Waymire (2004) who show that firms with higher quality financial reporting experienced smaller declines after the stock market crash of 1929, or the findings of Milton (2002) who shows that better stock market performance is associated with firms with indicators of higher disclosure quality. On the other hand, our evidence for hedge funds during the recent financial downturn does support the findings of Stigler (1964), Jarrell (1981), Simon (1989), Brown et al. (2008), and Cummings & Dai (2010), all of which provides evidence that mean returns are not enhanced by increases in regulation.

Of course, this result will not stop the inevitable ‘politically correct’ regulatory response to the financial crisis. The impact on financial markets will depend on the ultimate form that regulation takes. While Hail & Leuz (2006) find that firms from countries with more securities regulation have a lower cost of equity than those that do not, if future regulation places restrictions on minimum capital requirements or distribution channels, return persistence may be affected.

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