

The Characteristics of Alternative Mutual Funds

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Abstract

This study investigated the portfolio characteristics and investment performance of alternative mutual funds from April 1993 to March 2013, focusing on Bear Market mutual funds, Market Neutral mutual funds, and a sampling of traditional stock mutual funds. The results indicate that alternative mutual funds are, on average, younger and smaller in size than the average traditional fund. Alternative funds, however, have significantly larger expense ratios, larger portfolio turnover, and fewer portfolio holdings. Bear Market fund returns generally move in the opposite direction of the stock market, whereas Market Neutral funds and the average traditional fund returns rise and fall with the stock market. The two categories of alternative funds underperformed the traditional funds, with substantially greater variability of returns and larger tracking errors. Furthermore, Bear Market funds had a negative beta and were more volatile than the stock market, whereas Market Neutral funds had a near-zero beta, making them less volatile than the stock market. The performance of the average traditional fund was not significantly different from zero, and its beta did not differ significantly from unity.

JEL Classifications: G11, G12, G23

Keywords: alternative mutual funds, hedge funds, bear market funds, market neutral funds, investment performance

1. Introduction

Burned by the performance of hedge funds during the financial crisis of 2008 and 2009, investors are searching for alternatives to hedge funds (Goodman, 2012). According to Goodman (2012), investors view hedge funds as a way to deliver additional, or even outsize, returns over conventional investment strategies, but given the losses suffered in the wake of the financial crisis and a 10-year stretch of zero returns for the S&P 500 stocks, investors are increasingly interested in anything not correlated with the stock and bond markets; meanwhile, they are concerned about the lack of transparency and the “lock-up” periods that are typical of hedge fund investments. To address these concerns, financial advisors and institutions are increasingly turning to alternative strategies to manage portfolio risk. According to the Financial Industry Regulatory Authority [FINRA] (2013), an “alternative mutual fund” is a type of mutual fund that typically holds more nontraditional investments while employing more complex trading strategies.

The purpose of the present study is to investigate the portfolio characteristics of alternative mutual funds, rather than the traditional mutual funds. It seeks to measure their investment

performance over a period of 20 years ending on March 31, 2013. The majority of alternative mutual funds were, of course, created after the 2008 financial crisis.” Before discussing the emerging role of alternative mutual funds, however, this paper provides an overview of traditional mutual funds and hedge funds.

Managed by a fund manager, mutual funds and hedge funds represent two categories of investment companies that pool investor funds. Mutual fund investors are generally retail investors, and they invest their funds in stocks, bonds, and other assets depending on the investment objective of the mutual fund. For example, a stock mutual fund holds heavy investments in shares of stock, a bond mutual fund has investments in bonds, and a money market mutual fund invests in money market securities. Mutual funds are strictly regulated under the Investment Company Act (1940) and the Securities Act (1933), both of which require transparency and predictability in the fund’s investment strategy and portfolio composition (Bodie, Marcus, & Kane, 2014). These two acts also stipulate standards governing the operation of mutual funds in terms of disclosure, liquidity risk, credit risk, and interest rate risk. Mutual fund investors tend to be individuals, and the typical minimum investment is generally fairly small.

Hedge funds, on the other hand, are generally set up as limited partnerships and are subjected to minimal SEC regulation. Restricted to accredited investors, hedge funds involve wealthy individuals and institutions with long-term funding commitments, such as endowments, foundations, and other sophisticated investors.¹ Unlike mutual funds, the number of investors for a particular hedge fund is often less than a hundred, and the minimum investment in a hedge fund is typically \$200,000 to \$1,000,000. Furthermore, hedge funds are less restricted in how and where they can make investments. According to Reilly and Brown (2009), this flexibility is perhaps the biggest reason why investors believe that hedge funds have the consistent ability to deliver abnormally large returns. Moreover, hedge fund investments are less liquid than mutual fund shares because, unlike mutual fund shares that can be redeemed daily, hedge fund investors agree to initial “lock ups,” sometimes extending several years, in which investments cannot be withdrawn (Bodie *et al.*, 2014). Because hedge funds are not as strictly regulated as mutual funds, hedge fund managers typically pursue more diverse and riskier strategies, such as leverage, derivatives, and commodities. These strategies include market-neutral strategies, strategies based on arbitrage, and opportunism.

Annual fees for a typical hedge fund are high, including 1% of assets under management and a performance fee of 20% of investment gains. Hedge funds tend to be less correlated with traditional asset class investments, thus providing investors with additional portfolio diversification (Reilly & Brown, 2009).² Ackermann, McEnally, and Ravenscraft (1999) note that hedge funds consistently outperform mutual funds, but not standard market indices. Nonetheless, hedge funds are more volatile than both mutual funds and market indices; as Nicholas (2005) noted in his study from 1990 to 2004, returns on hedge fund strategies show a high degree of variability from year to year. Contradicting Ackermann *et al.* (1999), Aragon (2007) finds that the typical “alpha” exhibited by hedge funds may be better interpreted as a liquidity premium than as a sign of stock picking ability. According to Aragon, hedge funds’ illiquidity of assets is much worse than that of mutual funds. Agarwal, Daniel, and Naik (2011) argues that returns can be more difficult to interpret if a hedge fund takes advantage of illiquid markets to manipulate returns by purposely misvaluing illiquid

¹ “Accredited individual” is defined as an individual whose annual income tops \$200,000, or whose net worth exceeds \$1,000,000, excluding primary residence (Wall Street Journal [WSJ], Saturday/Sunday, March 22-23, 2014, page B7).

² Hedge funds provide additional portfolio diversification because they tend to be less correlated with the stock, bond, and other assets markets.

assets. Their results suggest that hedge funds manage their returns upwards in an opportunistic fashion in order to earn higher fees, and that funds inflate December returns by under-reporting returns earlier in the year.

When the manager's bets result in investment gains, the manager receives substantial payment, a fee structure that is likely to encourage excessive risk taking. Meanwhile, there is no downside risk for the manager when his or her bets result in investment losses. Thus, the fund manager benefits from excessive risk taking and poor investment decisions that pay off, while receiving a 1% annual fee even if the decisions result in a loss. The hedge fund manager gets paid regardless of the outcome of his or her decisions, while fund investors bear all investment losses. These difficult ethical issues differ, however, from those associated with the insurance industry: while the insured can avoid the consequences of excessive risk taking simply because they are insured, a hedge fund manager might experience an outflow of funds or even a financial meltdown as a result of investment losses. Thus, the fund manager does not necessarily avoid all of the consequences of poor investment decisions.

Due to these issues, alternative hedge funds have become increasingly attractive to investors. As mentioned in the introduction, an alternative mutual fund is a type of mutual fund that typically holds more nontraditional investments while employing more complex trading strategies. FINRA (2013) states that the strategies employed by alternative mutual funds tend to fall on the complex end of the spectrum, such as hedging and leveraging through derivatives, short-selling, and opportunism that changes with market conditions. Similar to hedge funds, alternative mutual funds have a primary objective of generating above-market returns, or better managing risk through greater diversification. Unlike hedge funds, however, alternative mutual funds are regulated under the Investment Company Act (1940) and the Securities Act (1933), limiting their operations in ways that do not apply to hedge funds, including disclosure requirements, daily redeemability of shares, and limits on illiquid investments, portfolio diversification, and leveraging.

Therefore, alternative mutual funds, also referred to as "hedge mutual funds" or "liquid alternatives," are retail mutual funds that mimic hedge fund strategies within the confines of the Investment Company Act and the Securities Act. Alternative mutual funds have lower minimum investments and lower annual fees than hedge funds. They offer the transparency and liquidity of mutual funds, but, according to FINRA (2013), alternative mutual funds carry additional portfolio turnover and credit risks (due to their strategies) and higher costs compared to traditional mutual funds. Like traditional mutual funds, they offer greater liquidity, lower minimum investment, and transparency in their investment strategy and portfolio composition while providing greater portfolio diversification. According to Weil (2014), alternative mutual funds have attracted a great deal of money since the financial crisis of 2008 (faster than any other fund category), but the funds' performance has lagged behind that of stocks. As reported by Forward Management, LLC. (2014), the move toward alternatives has been one of the biggest investment trends of the past half century; the rise of "liquid alternatives" that combine the sophisticated and goal-driven strategies of hedge funds with the daily liquidity, regulatory oversight, and accessibility of the mutual fund structure has made hedge fund strategies available to retail investors.

Researchers have investigated the investment performance of traditional mutual funds extensively, beginning with Jensen (1968) who measured the performance of 115 mutual funds from 1945 to 1964. Jensen found that, on average, mutual funds were not able to outperform "a buy-the-market-and-hold policy," and that "there was very little evidence that any individual mutual fund was able to do significantly better than that which we expected from mere random chance." Subsequent studies have generally supported these findings. Past studies have found that equity mutual funds, bond mutual funds, and international equity mutual funds underperform their benchmark indices on a risk adjusted basis.

Furthermore, past studies have found that the risk and return on a mutual fund portfolio are positively correlated, and that the fund's stated investment objective and its portfolio risk are also positively correlated (Martin, Keown, & Farrell, 1982). Studies have also indicated that mutual funds outperform their benchmark indices on a gross return basis, that is, before fund's fees and expenses; however, when fees and expenses are factored in, mutual funds underperform their benchmark indices. These findings hold true for domestic equity funds, domestic bond funds, and international mutual funds (Lehmann & Modest, 1987; Cumby & Glenn, 1990; Bailey & Lim, 1992; Blake, Elton, & Gruber, 1993; Daniel, Grinblatt, Titman, & Wermers, 1997; Wermers, 2000; and Shukla, 2004). Studies have also confirmed that equity funds and bond funds with lower expense ratios have higher returns, and that funds with lower portfolio turnover have higher returns (Carpenter, 1991; Hooks, 1996; Carhart, 1997; Bogle, 1998; Reichenstein, 1999; and Shukla, 2004). These findings do not support the value of active portfolio management, suggesting that investors interested primarily in risk-adjusted-investment performance should select index funds. Carpenter (1991) found that, after adjusting for expenses, the investment performance of a mutual fund does not make up for its higher costs, and that high expenses hurt performance—with few exceptions. Carpenter argued that it is wise to avoid funds with high expenses and a high portfolio turnover. Haslem, Baker, and Smith (2008), on the other hand, found that superior investment performance occurs among large funds with low expense ratios, low portfolio turnover, and no load or low load.

2. The Data

The sample consists of two major categories of alternative mutual funds, including Bear Market mutual funds and Market Neutral mutual funds, as well as a sample of traditional stock mutual funds from five investment objective categories: Aggressive Growth, Growth, Growth and Income, Equity Income, and Small Company. I restricted the sample to mutual funds with net assets greater than \$500 million, and mutual funds with inception dates prior to January 2000. For each mutual fund, I obtained several measures of portfolio characteristics from the Morningstar Principia Database, including net assets value, portfolio holdings, expense ratio, and portfolio turnover. I also obtained monthly rates of return from April 1993 to March 2013. I then obtained the corresponding rates of return on the Standard and Poor's 500 index, which I used as the benchmark index, and monthly Treasury bill yields, which I used as measures of risk-free rates of returns. Because I focused on domestic equity funds, I excluded mutual funds with more than 15% of their portfolio invested in bonds or foreign stocks.

The final sample consisted of 66 Bear Market mutual funds, 106 Market Neutral mutual funds, and a control sample of 544 traditional stock mutual funds. Table 1 shows the characteristics of the sample. As shown in the table, the two groups of alternative mutual funds were, on average, substantially smaller (in the size of their net assets) than the average stock mutual fund (represented by the random sample). Most alternative mutual funds were established after the financial crisis of 2008 and were, therefore, expected to be small on average. The alternative mutual funds, however, had substantially larger portfolio turnover than the average (randomly selected) mutual fund. They had larger expense ratios and a smaller number of securities held (holdings). Moreover, the two categories of alternative mutual funds held a substantially larger percentage of their portfolios in cash than the average stock mutual fund.

According to Morningstar, Bear Market mutual funds invest in short positions and derivatives in order to profit from stocks that drop in price, and their returns generally move in the opposite direction of their benchmark index. This assertion appears to be supported by the downside capture ratio (Downside5) of -131.10 shown in Table 1. However, the upside capture ratio (Upside5) of -191.21 also suggests that Bear Market portfolios tend to move in the opposite direction of their benchmark index. The average (randomly drawn) mutual fund and, to a lesser degree, the average

Market Neutral mutual fund tends to move up and down with their benchmark index, as indicated by their positive upside and downside capture ratios.³

In summary, the two categories of alternative mutual funds are, on average, younger and smaller (in net assets size) than the average mutual fund. The alternative mutual funds, however, have greater portfolio turnover, hold a smaller number of securities in their portfolios (with a greater percentage of the portfolio invested in cash and near-cash items), and have a much larger expense ratio.

Table 1. Sample Profile of Alternative Mutual Funds (April 1993 – March 2013)

Variable	Bear Market Funds			Market Neutral Funds			Traditional Funds		
	N	Mean	STD	N	Mean	STD	N	Mean	STD
Upside5	62	-191.21	66.98	39	4.45	11.34	544	110.10	15.17
Downside5	62	-131.10	40.05	39	6.65	9.33	544	107.99	15.46
Turnover	42	555.36	599.83	89	311.09	296.90	544	47.10	41.10
N-Assets (\$mm)	57	15.96	36.41	91	187.94	667.50	544	3633.21	9408.92
Holdings	66	98.80	10.99	97	202.03	309.79	544	246.80	450.83
X-Ratio	66	2.09	0.44	106	4.16	2.63	543	0.93	0.42
Cash %	66	100.13	18.61	97	65.81	34.72	544	2.75	4.68
Bonds %	66	0.54	1.89	97	0.29	1.53	544	0.14	0.85

Note:

“N” is the number of mutual funds in the subsample; “STD” refers to the standard deviation of the estimate; “Turnover” is short for portfolio turnover; “N-Assets” signifies the average net assets size of the subsample; “Holdings” is the number of securities held by the average fund in the subsample; “X-Ratio” is the average (gross) expense ratio of the mutual fund; “Cash” and “Bonds” is the percentage of the mutual fund’s portfolio represented by cash and bonds, respectively.

The Upside Capture Ratio (Upside5) represents the fund manager’s performance in up markets relative to the benchmark index over the past 5 years. Morningstar, Inc. calculates this figure as the upside capture return of the mutual fund divided by the upside capture return of the benchmark index. The Downside Capture Ratio (Downside5) represents the fund manager’s performance in down markets during the past 5 years. Morningstar calculates this figure as the downside capture return of a mutual fund divided by the downside capture return of its benchmark index.

3. The Empirical Methodology

I measured the investment performance of each mutual fund, from April 1993 to March 2013, using two alternative performance measures, including the Sharpe Information Ratio and the Jensen’s Alpha. I estimated the Jensen’s Alpha as follows:

³ Because Morningstar calculates a capture ratio as the return on the fund divided by the return on the index multiplied by 100, a negative capture ratio suggests that a fund had a positive return when the benchmark index declined and vice versa. A positive capture ratio, on the other hand, suggests that the fund had a positive return when the index moved up, and a negative return when the index declined.

$$r_{pt} = \hat{\alpha}_p + \hat{\beta} r_{mt} + e_{pt}, \quad [1]$$

where r_{pt} is the excess return on mutual fund portfolio p, in month t (i.e., the portfolio's monthly return in excess of the corresponding monthly yield on 91-day-Treasury bills); r_{mt} is the excess return on Standard and Poor's (S&P) 500 index in month t; and e_{pt} is the residual return on a mutual fund's portfolio p, in month t. Portfolio p's risk-adjusted performance is measured by the alpha, $\hat{\alpha}_p$. Reilly and Norton (2006) and Goodwin (1998) suggest the alternative performance measure, the Sharpe Information Ratio. If "D_t" is the differential return between the mutual fund portfolio and the S&P 500 index ($r_{pt} - r_{mt}$) in month t, then:

$$S_p = \frac{\bar{D}}{\sigma_D}, \quad [2]$$

where \bar{D} is the arithmetic average of the monthly differential returns, i.e. $\bar{D} = \frac{1}{n} \sum_{t=1}^n D_t$; σ_D is the standard deviation of the differential returns; and "n" is the number of monthly returns from April 1993 to March 2013. To test the null hypothesis that the differential returns are zero on average, the t-statistic is as follows:

$$t = \frac{\bar{D}}{\sigma_D \sqrt{n}}. \quad [3]$$

The t-statistic has a t distribution with n-1 degrees of freedom.

As with Jensen's Alpha, the Sharpe Information Ratio indicates portfolio performance relative to the S&P 500 index and lends itself to statistical testing of significance. However, unlike the Alpha, the Sharpe Information Ratio adjusts for both total risk and systematic risk. This distinction is crucial for performance measurement because previous studies show that mutual fund portfolios contain significant idiosyncratic risks (see Bello, 2005). Reilly and Norton (2006) and Goodwin (1998) argue that the Sharpe Information Ratio is a more general measure of portfolio performance than the traditional Sharpe measure.

Tracking error in the fund's portfolio is calculated as follows:

$$\text{Tracking Error} = \sigma_D \sqrt{12}, \quad [4]$$

where "12" signifies that the number of return periods in a year is 12 (for monthly returns).⁴

4. The Results

Table 2 contains estimated performance measures for the two categories of alternative mutual funds and for the sample of traditional funds. The Bear Market funds and the Market Neutral funds underperformed the stock market during the study period, as judged by their negative and statistically significant information ratios of -0.185 and -0.298, respectively. The traditional funds sample matched the market index, as indicated by the insignificant ratio of 0.017. The alternative funds also have greater variability of returns, as shown by the standard deviation of the estimate (0.284 and 0.287, respectively). Furthermore, the alternative categories have larger tracking errors

⁴ See Reilly and Brown (2009) concerning the measurement of tracking error.

than the sample of traditional stock mutual funds. Of the two categories of alternative mutual funds, the Bear Market category has the largest tracking error of 42.164, suggesting that Bear Market funds tend to capitalize on perceived opportunities as they arise, and thus fail to track the stock market closely.

Table 2. The Investment Performance of Alternative Mutual Funds (April 1993 – March 2013)

Variable	N	Mean	STD	t-stat
Bear Market Mutual Funds:				
S_p	84	-0.185	0.284	-2.859*
Tracking Error	84	42.164	13.425	---
$\hat{\alpha}_p$	84	-0.742	0.927	---
$\hat{\beta}_p$	84	-1.524	0.575	---
Market Neutral Mutual Funds:				
S_p	135	-0.298	0.287	-4.606*
Tracking Error	135	13.816	3.549	---
$\hat{\alpha}_p$	135	0.020	0.345	---
$\hat{\beta}_p$	135	0.064	0.152	---
Traditional Mutual Funds:				
S_p	636	0.017	0.168	0.262
Tracking Error	636	8.426	4.101	---
$\hat{\alpha}_p$	636	0.156	0.198	---
$\hat{\beta}_p$	636	0.959	0.172	---

Note:

“N” is the number of mutual funds in the sample. The performance measures were estimated using 240 monthly returns for each fund. The Sharpe Information Ratios (S_p), the associated t statistics, and the tracking errors (TE) were calculated using equations [2], [3], and [4], as given in the Methodology section. Jensen’s alphas and portfolio betas were computed using equation (1).

*Significant at the 5% level. All variables are defined in the “Methodology” section.

The investment performance of the mutual funds, as measured by Jensen’s alpha supports thew3 findings. The Bear Market category and the Market Neutral category have a Jensen’s alpha of -0.742 and 0.20, respectively, compared with that of the random sample, 0.156. Volatility in relation

to the stock market is indicated by the estimated portfolio betas. The Bear Market category has an average beta of -1.524, indicating that Bear Market funds tend to move opposite the stock market. Because their average beta is greater than unity, Bear Market funds also tend to be more volatile than the stock market. The Market Neutral funds, however, have an insignificant beta of 0.064, indicating that they generally did not move closely with the stock market—which is what is expected of a market neutral fund. An average traditional stock mutual fund has a beta that is close to unity. Thus, it tends to have similar volatility to the overall market. The traditional fund sample has the lowest tracking error of 8.426, lower than that of the Bear Market category and the Market Neutral category.

In summary, alternative mutual funds underperformed both the stock market and a sample of traditional stock mutual funds during the 1993 to 2013 study period; the sample also had larger tracking errors than the random sample. The Bear Market mutual fund category had greater volatility, as measured by its average portfolio beta, than the average stock mutual fund. The Market Neutral fund category had an average beta that was close to zero, and therefore, did not move closely with the stock market. It also had a lower degree of volatility than the stock market (as represented by the S&P 500 index).

5. Summary and Conclusions

This study aimed to investigate the portfolio characteristics and investment performance of alternative mutual funds. These are retail mutual funds that mimic hedge fund strategies, but require lower minimum investment and lower annual fees than traditional mutual funds. They combine the sophisticated, goal-driven strategies of hedge funds with the daily liquidity, regulatory oversight, and accessibility of mutual funds. Most alternative mutual funds were established after the financial crisis of 2008 during which hedge funds and traditional mutual funds suffered severe losses. An alternative mutual fund typically holds more non-traditional investments and employs more complex trading strategies, such as hedging and leveraging using derivatives and short selling, and it pursues opportunistic strategies that change with market conditions.

Like hedge funds, a primary objective of an alternative mutual fund might be to generate above-market returns or better manage risk through greater diversification. However, unlike hedge funds, alternative mutual funds are strictly regulated under the Investment Company Act (1940) and Securities Act (1933) limiting their operations, including disclosure requirements, daily redeemability of shares, and limits on illiquid investments, portfolio diversification, and leveraging.

I focused on Bear Market mutual funds, Market Neutral mutual funds, and a sample of traditional stock mutual funds. In terms of the size of net assets, the two categories of alternative mutual funds are, on average, younger and smaller than the average traditional mutual fund. The alternative mutual funds, however, have greater portfolio turnover and hold a smaller number of securities (with a greater percentage of their portfolio invested in cash and near cash items). They also have a much higher expense ratio. My data indicate that Bear Market fund returns generally move in the opposite direction of the stock market, whereas the Market Neutral funds and the average traditional stock mutual fund returns rise and fall with the stock market. Moreover, the Bear Market mutual fund category and Market Neutral fund category both underperformed the stock market and the random sample of stock funds during the study period, with substantial variability in returns among individual alternative funds.

Furthermore, the Bear Market sample had a negative beta with an absolute value greater than unity, indicating more volatile movements than the stock market, as well as opposite movement to the stock market. The Market Neutral sample, however, had an average beta that was not

significantly different from zero, indicating that it did not move closely with the stock market. Alternative mutual funds had a greater tracking error than the average mutual fund.

The investment performance of the average traditional stock mutual fund, as measured by the Sharpe information ratio, was not significantly different from zero, suggesting that its performance was similar to the overall stock market. Its beta was not significantly different from unity, indicating that it was just as volatile as the overall stock market.

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