

Benefits of Hybrid Mutual Funds: 2006 Update

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Original Update: May, 2002

Current Update: May, 2006

Abstract

The results of this study provide two key pieces of information to the investment community about the benefits of hybrid mutual funds:

First, hybrid mutual funds provide small investors unique risk-return opportunity not usually provided by most of the traditional investment vehicles. Thus, hybrid mutual funds provide affordable hedge fund-like mutual funds to small investors.

Second, as a part of a larger portfolio, hybrid mutual funds can provide efficient diversification. They provide the investors with exposure to investment products with risk and return opportunities that most traditional mutual funds fail to offer.

Lastly, results show that hybrid mutual funds are affected by market factors similar to comparison hedge fund indices. As a result some hybrid funds illustrate high sensitivity to equity market factors while other hybrid mutual funds show little equity market sensitivity. Thus, various hybrid funds may be combined with traditional stock and bond portfolios to offer either risk reduction or enhanced return opportunities.

The Benefits of Hybrid Mutual Funds

Introduction

Hybrid mutual funds (HMF) are mutual funds that follow “hedge fund like” investment strategies, which include short-selling, market timing, and security selection with a limited use of leverage. In contrast to traditional stock and bond mutual funds, these funds, in many cases, provide risk and return opportunities closer to that provided by well-known hedge fund strategies. Because these investment vehicles are not pure traditional mutual funds and are restricted from trading similar to pure hedge funds, they have been classified by some mutual fund data firms (e.g., Morningstar) as hybrid mutual funds.

Hybrid mutual funds meet the increasing demand of investors who do not meet the standard of accredited or qualified investors and yet want access to risk and return opportunities similar to those provided by hedge funds. Historically, mutual funds and hedge funds differ in their investment structure and in the risk and return opportunities that they offer. While both mutual funds and hedge funds are restricted by regulations in their choice of investment structure, operations and potential investors, mutual funds are primarily subject to regulations under four federal laws: the Securities Act of 1933, the Securities Exchange Act of 1934, the Investment Company Act of 1940, and the Investment Advisers Act of 1940. These regulatory guidelines have often limited mutual funds capacity to transact specific types of market strategies involving the use of derivative instruments, short-selling or extensive leverage. In contrast, hedge funds have opted to operate primarily as private pools consisted mainly of accredited or qualified investors, thus avoiding the complicated and time-consuming regulations set forth by the above laws and having more freedom in using different strategies and investment vehicles. Hedge funds can use a wide range of investment vehicles, including futures and options, and techniques ranging from shorting securities to leveraging asset positions.

Hybrid mutual funds follow investment strategies similar to some popular trading styles employed by many hedge funds (e.g., equity market neutral, merger arbitrage, equity long/short). Despite the similarities, the hybrid mutual funds still differ from hedge funds in that they have to abide to the rules and regulations governing mutual funds. They are restricted in using leverage against the value of securities in its portfolio. Mutual fund portfolio managers are limited to use leverage up to one-third the value of their assets and to short sales to only as high as 50% of assets under management. However, investors in hybrid mutual funds can enjoy a range of benefits that are not otherwise offered by hedge funds. They do not have lock up period, redemption notice and can have daily liquidity, lower cost structure, and regulatory and custodial protections similar to those offered by traditional mutual funds. Therefore, hybrid mutual funds are more appropriate for retail investors than hedge funds.

Hybrid/Hedge Fund Strategies

Hybrid mutual funds follow investment strategies similar to some popular trading styles employed by many hedge funds. Many hybrid mutual funds are “bear funds”, which means that they are mutual funds that go short, buy put options, use leverage or employ other strategies to

increase in value as stocks decrease in value. Other categories of hybrid mutual funds include market neutral, which try to maintain low correlation with traditional asset classes and seek capital appreciation in both bull and bear market; convertible arbitrage that engages in short sale of convertible securities' underlying stocks; merger and acquisition that invests in companies that are subjects of a merger, takeover or a buyout; long/short hedge equity which uses short sale to hedge against market risk.

Since hybrid mutual funds follow investment strategies similar to some popular hedge fund strategies, they are able to provide risk and return opportunities similar to existing hedge funds. In this analysis, various hybrid mutual funds are classified into different hedge fund strategy groups to provide a benchmark returns series similar to traditional hedge fund strategy benchmarks. The performance of the following strategies is compared for both hybrid funds and hedge funds.

Equity Market Neutral

This strategy is designed to exploit equity market inefficiencies and usually involves being simultaneously long and short in integrated equity portfolios. These portfolios consist of stocks within the same sector, industry, market capitalization, in order to neutralize market and industry risks.

Convertible Arbitrage

This strategy take long positions in convertible securities of a company (usually convertible bonds), and uses short-selling of the underlying stocks to hedge against the equity component of the bonds.

Merger Arbitrage

Merger Arbitrage strategies concentrate on companies that are the subject of a merger, tender offer or exchange offer. Merger Arbitrage strategies take a long position in the acquired company and a short position in the acquiring company.

Equity Long/short

This strategy involves equity-oriented investing on both the long and short side of the market. The net market exposure tends to be long. However, hedge fund managers may also decrease their market exposure when the market turns into a bear market.

Short Selling

Short selling strategy invests mostly in short positions in equities and equity-derivative products.

Actively managed mutual funds and hedge funds have been described as skill-based investment strategies. Skill-based strategies obtain returns from the unique skill or strategy of the trader. Because mutual funds and hedge funds are actively managed, manager skill is certainly important. However, academic research [Fung and Hsieh, 2002; Schneeweis et. al., 2003] demonstrates that hedge fund returns are also driven systematically by market factors such as changes in credit spreads or market volatility, rather than exclusively by individual manager's alpha. Therefore, one can think of hedge fund returns as a combination of manager skill and an underlying return to the hedge fund strategy or investment style itself. Exhibit 1 is a summary of

market return exposures of the corresponding strategy based on the economic relationships between market factors and returns to different strategies. The exhibit indicates both the sign and the magnitude of the exposure, as well as other key features of the exposure.

Exhibit 1



Summary of Expected Risk, Returns and Exposure for Different Hedge Fund Styles				
	Exposure To:			
	Equity Index Return	Government/Credit Bond Return	High Yield Bond Return	Changes in Volatility
Equity Market Neutral	●	●	●	●
Convertible Arb	+	+	+	-
Merger Arbitrage	+	●	+	-
Equity Long/Short	▲	●	+	-
Short Selling	-	-	-	-

Empirical Results

Risk and Return performance

In this paper, hybrid mutual funds are examined in the period of 2001 – 2005, and only those funds with more than four years of historical returns are included. These funds are grouped into different categories based on their styles and the corresponding hedge fund styles: market neutral, convertible arbitrage, merger arbitrage, long/short, and short selling. The Morningstar mutual fund database is used for hybrid mutual fund returns and the CISDM hedge fund indices are used for hedge fund strategy returns. A list of actual mutual funds used in comprising the comparison hybrid fund and hedge fund classified return series is given in Appendix B.

Descriptive statistics for hybrid mutual funds, mutual funds and hedge fund indices are presented in Exhibit 2. This exhibit shows the performance of some of these hybrid mutual funds as well as hedge fund indices over the past five years (Jan. 2001 to Dec. 2005). The return and risk performance of the Hybrid mutual funds are similar to that of the CISDM Hedge Fund indices. For example, Hybrid Equity Long/Short has higher standard deviation than the other Hybrid

mutual funds. Similarly, CISDM Equity long/short has reported standard deviations higher than other hedge fund strategies (e.g., equity market neutral, convertible arbitrage, and merger arbitrage).

Exhibit 2

Comparative Performance of Hybrid Mutual Fund and Hedge Fund Indices (2001 - 2005)

	Annual Return	Annual STD	Sharpe Ratio	Max DD	Skewness	Kurtosis
Hybrid Mutual Funds						
Market Neutral	5.12%	3.27%	0.91	-4.05%	-0.05	1.61
Convertible Arbitrage	5.39%	3.84%	0.85	-5.76%	-0.12	0.95
Merger Arbitrage/Event	4.91%	6.36%	0.44	-5.41%	1.71	12.19
Equity long/short	5.31%	11.91%	0.27	-22.21%	-0.28	0.41
Short selling	-1.25%	17.27%	-0.20	-41.44%	0.60	0.43
Hedge Fund Indices						
CISDM Equity Market Neutral Index	6.02%	1.73%	2.24	-1.46%	-0.83	2.06
CISDM Convertible Arbitrage Index	6.49%	3.06%	1.42	-5.42%	-0.65	1.40
CISDM Merger Arbitrage Index	4.91%	2.67%	1.04	-2.34%	-0.41	1.20
CISDM Equity Long / Short Index	5.94%	5.35%	0.71	-6.96%	-0.45	-0.29
CISDM Short Selling Index	-2.54%	14.99%	-0.31	-36.86%	0.20	-0.63
S&P500	0.54%	14.94%	-0.11	-38.87%	-0.37	0.15
Lehman U.S. Government/Credit	6.11%	4.86%	0.82	-4.58%	-0.81	1.38
Lehman U.S. Corporate High Yield	8.85%	8.82%	0.76	-12.04%	-0.60	2.48

Hybrid Mutual Fund and Hedge Fund performance

Hybrid mutual funds were shown in the previous exhibit to offer returns opportunities usually associated with hedge funds. Exhibit 3 offers a closer look at how hybrid mutual funds compare to hedge funds pursuing a comparison investment strategy. The correlation between hybrid mutual funds and comparison hedge fund investment strategies is high, all over 0.70. Market neutral funds report lowest correlation, 0.20.

Factor Analysis

The difference and similarity in investment strategies of hybrid mutual funds with those of traditional hedge funds, correspondingly, are also reflected in the correlation data given in Exhibit 4A. One reason for the common correlation between hybrid mutual funds and their associated hedge fund strategy is that (with the exception of equity market neutral) both investments (hybrid fund and hedge fund index) show similar correlation with common market factors.

Exhibit 3: Hybrid Mutual Funds as a Proxy for Hedge Funds (2001 – 2005)

	Annual Return	Annual STD	Sharpe ratio	Max DD	Skewness	Kurtosis	Correlations with Hybrid Mutual Funds of Similar Strategy
Strategy: Market Neutral							
Hybrid Mutual Funds	5.12%	3.27%	0.91	-4.05%	-0.05	1.61	0.20
CISDM Equity Market Neutral Index	6.02%	1.73%	2.24	-1.46%	-0.83	2.06	
Strategy: Convertible Arbitrage							
Hybrid Mutual Funds	5.39%	3.84%	0.85	-5.76%	-0.12	0.95	0.75
CISDM Convertible Arbitrage Index	6.49%	3.06%	1.42	-5.42%	-0.65	1.40	
Strategy: Merger Arbitrage							
Hybrid Mutual Funds	4.91%	6.36%	0.44	-5.41%	1.71	12.19	0.74
CISDM Merger Arbitrage Index	4.91%	2.67%	1.04	-2.34%	-0.41	1.20	
Strategy: Equity Long/Short							
Hybrid Mutual Funds	5.31%	11.91%	0.27	-22.21%	-0.28	0.41	0.84
CISDM Equity Long / Short Index	5.94%	5.35%	0.71	-6.96%	-0.45	-0.29	
Strategy: Short Selling							
Hybrid Mutual Funds	-1.25%	17.27%	-0.20	-41.44%	0.60	0.43	0.89
CISDM Short Selling Index*	-2.54%	14.99%	-0.31	-36.86%	0.20	-0.63	

(*): CISDM short selling index was stopped from posting from Aug. 2005. The data used has been recreated up to Dec. 2005 using the same method.

For instance, equity long/short hedge funds have high positive correlation with the stock market, high negative correlation with stock volatility. The opposite is true for short selling funds. Other strategies that attempt to reduce or eliminate stock and bond market risks (Convertible Arbitrage) and the strategy with limited equity exposure (Merger Arbitrage) report moderate correlation with both factors. Of the various hybrid funds, equity market neutral is the only hybrid fund whose correlations with market factors differs from the corresponding CISDM equity market neutral hedge fund index. Of the various hedge fund strategies, ex post measures of market sensitivity often have the greatest degree of heterogeneity among equity market neutral managers since they do not have a common market source of return.

We also present summary results of the beta coefficients in Exhibit 4B. The beta coefficient in the slope in the simple regression of the hybrid fund returns on the market factor returns. It is interpreted as a measure of the funds' relative return movement to the corresponding market factor. It is worth noting that those hedge fund strategies that attempt to reduce or eliminate stock and bond market risk (Equity Market Neutral, Convertible Arbitrage) have low exposure to equity and debt factors, while hedge fund strategies with the greatest equity exposure (Equity Long/Short) have relatively higher exposure. Highly negatively correlated to the stock markets, short selling hedge funds have negative relative exposure to the equity factor.

Exhibit 4A

Correlation of HMF and Hedge funds with Stock and Bond Markets (2001 - 2005)

	Correlation with S&P 500	Correlation with Lehman US Gov/Credit	Correlation with S&P/Lehman Bond portfolio	Correlation Change in VIX End-of-Month
HMF Market Neutral	-0.58	0.25	-0.52	0.39
CISDM Equity Market Neutral Index	0.40	0.02	0.43	-0.29
HMF Convertible Arbitrage	0.46	0.19	0.55	-0.35
CISDM Convertible Arbitrage Index	0.10	0.15	0.16	-0.14
HMF Merger Arbitrage/Event	0.62	0.01	0.66	-0.49
CISDM Merger Arbitrage Index	0.59	-0.04	0.62	-0.43
HMF Equity Long/Short	0.89	-0.21	0.87	-0.74
CISDM Equity Long / Short Index	0.75	-0.23	0.72	-0.62
HMF Short Selling	-0.98	0.34	-0.92	0.81
CISDM Short Selling Index	-0.90	0.32	-0.84	0.74

Exhibit 4B: Factor exposure (Beta) of Hybrid Mutual Fund (2001 - 2005)

Hybrid Mutual Fund	S&P 500	Russell 3000	Lehman US	
			Lehman US Gov/Credit	Corporate High Yield
Market Neutral	-0.13	-0.11	0.17	-0.01
Convertible Arbitrage	0.12	0.13	0.15	0.26
Merger Arbitrage/Event	0.26	0.27	0.01	0.47
Equity Long/Short	0.71	0.72	-0.51	0.86
Short Selling	-1.13	-1.12	1.22	-1.03

Diversification Benefits

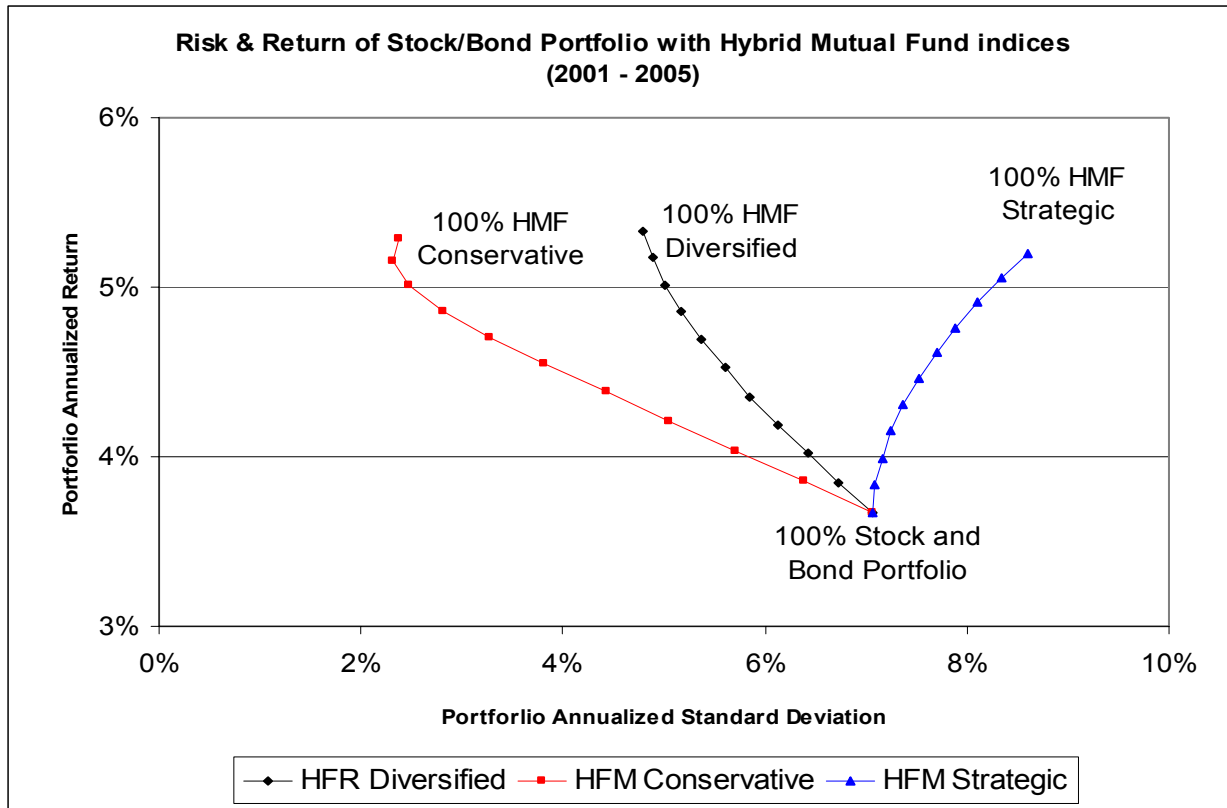
Most hedge fund strategies are held in a portfolio of other hedge funds or in combination with traditional stocks and bonds. As a constituent of a larger portfolio, a hybrid mutual fund can act as a portfolio diversifier because these funds do not necessarily move in lockstep with broad equity market or fixed income indices. Thus these funds could expand the investment opportunities for the traditional investors and provided them with diversification benefits for their stock/bond portfolio.

In this section hybrid mutual funds (HMF) are classified as 1) conservative if they are within the range of hedge funds deemed conservative under the HFR fund of fund classification (e.g., equity market neutral, convertible arbitrage, merger arbitrage), 2) strategic (event driven, distressed, equity long/short, global macro) and 3) diversified (multiple hedge fund strategies).

In Exhibit 5, using the efficient frontier we show the diversification effects when a stock/bond portfolio is combined with a portfolio of conservative HMF, strategic HMF, and diversified HMF. We observe that the inclusion of the strategic hybrid mutual funds in a stock/bond

portfolio substantially enhances the return of those portfolios. Including a conservative hybrid mutual fund would successfully lower the risk of a stock/bond portfolio. Similarly, the benefits of the diversified HFM fall between the conservative and the strategic. These observations prove that hybrid mutual funds may provide efficient diversification benefits to stock/bond portfolios.

Exhibit 5



Hybrid Mutual Funds/Hedge Alternatives

Since traditional hedge fund indices are not investable, they do not represent actual returns to investors. In fact, most investors invest in fund of funds as a means to access hedge fund returns. Even these returns may not represent investable returns to the degree that several Fund of Funds may not be investable or that a portfolio of Fund of Funds may be too difficult to implement. In recent years there has evolved a set of investable hedge fund indices. In Exhibit 6A we provide evidence of the relative performance of HFR Conservative, Diversified, and Strategic FOF indices (e.g. a portfolio of FOF), a composite of investable hedge fund indices, and a composite of hybrid mutual funds¹ segmented into risk classes similar to that provided by HFR.

¹ Composite of HFR, Dow Jones, CFSB/Tremont and FTSE investable indices for each of the hedge fund strategies.

Exhibit 6A**Descriptive Statistics of Hybrid Mutual Fund and Hedge Fund Indices (2001 - 2005)**

	Annual Return	Annual STD	Sharpe Ratio	Max DD	Skewness	Kurtosis
HMF Diversified	5.33%	4.79%	0.67	-5.25%	0.39	2.52
HFR FOF Diversified Index	5.95%	3.32%	1.15	-2.62%	-0.39	0.11
Composite Investible Diversified	4.21%	2.36%	0.88	-2.22%	-0.23	0.56
HMF Conservative	5.29%	2.38%	1.33	-2.03%	-0.30	-0.13
HFR FOF Conservative Index	5.31%	2.24%	1.42	-1.39%	-0.24	-0.55
Composite Investible Conservative	5.34%	2.69%	1.19	-3.45%	0.60	2.66
HMF Strategic	5.20%	8.60%	0.36	-13.38%	0.22	1.81
HFR FOF Strategic Index	6.09%	5.18%	0.76	-6.13%	-0.49	-0.62
Composite Investible Strategic	3.04%	3.49%	0.26	-4.49%	-0.83	1.03

Exhibit 6B**Correlation of Hybrid Mutual Fund and Hedge Fund Indices with Stock and Bond markets (2001 - 2005)**

	S&P500	Lehman U.S. Government/ Credit	Lehman U.S. Corporate High Yield	Change in VIX End-of-Month	HMF Index
HMF Diversified	0.75	-0.04	0.73	-0.63	1.00
HFR FOF Diversified Index	0.54	0.01	0.58	-0.44	0.77
Composite Investible Diversified	0.46	0.14	0.63	-0.43	0.81
HMF Conservative	-0.02	0.33	0.46	-0.02	1.00
HFR FOF Conservative Index	0.55	0.09	0.60	-0.42	0.50
Composite Investible Conservative	0.00	0.23	0.36	-0.11	0.59
HMF Strategic	0.84	-0.14	0.68	-0.69	1.00
HFR FOF Strategic Index	0.74	-0.14	0.59	-0.59	0.83
Composite Investible Strategic	0.62	0.01	0.56	-0.50	0.75

Results show that for each of the risk groupings, hybrid mutual funds have similar correlation to the comparison HFR FOFs indices (Exhibit 6B). In all cases the correlations are above 0.80. It is important to point out, however, that in each case, the correlation of the hybrid mutual funds to the HFR FOF is similar to that of the investable composite, they differ from the investable composites in that their correlation to the S&P 500 is generally higher than that of the comparison investable composite indices. This higher exposure to market movements is also shown in the relative standard deviations of HMF strategic (equity long/short) which reports more than twice the standard deviation (8.60%) of the investable hedge fund index composite (3.49%). This is as expected given the restrictions on hybrid mutual funds in shorting their underlying equity exposure. Similarly, hybrid mutual funds have relatively greater exposure to changes in VIX than comparison investable hedge fund indices.

Summary and Conclusion

The results of this study provide two key pieces of information to the investment community about the benefits of hybrid mutual funds:

First, hybrid mutual funds provide small investors a unique risk-return opportunity not usually provided by most of the traditional investment vehicles. Thus, hybrid mutual funds provide affordable hedge fund-like mutual funds to small investors.

Second, as a part of a larger portfolio, hybrid mutual funds can provide efficient diversification. They provide the investors with exposure to investment products with risk and return opportunities that most traditional mutual funds fail to offer.

Selected References

Comer, G. "Hybrid Mutual Funds and Market Timing Performance." *Journal of Business*, Vol. 79, No. 2, (2006), pp. 771-797.

Fung, W., and D. Hsieh. "Asset-Based Hedge Fund Styles and Portfolio Diversification." *Financial Analysts Journal*, Vol. 58, No. 5, (September-October 2002), pp. 16-27.

Jaeger, L., and C. Wagner. "Factor Modeling and Benchmarking of Hedge Funds: Can Passive Investments in Hedge Fund Strategies Deliver?" *The Journal of Alternative Investments*, (Winter 2005), pp. 9-36.

Schneeweis, T., and R. Spurgin. "A Comparison of Return Patterns in Traditional and Alternative Investments." *Alternative Investment Strategies*, Euromoney, 1998.

Schneeweis, T., H. Kazemi, and G. Martin, "Understanding Hedge Fund Performance: Research Issues Revisited Part II," *The Journal of Alternative Investments*, 7(Spring 2003), pp.8-30.

Schneeweis, T., H. Kazemi, and G. Martin. "Understanding Hedge Fund Performance: Research Issues Revisited Part I." *The journal of Alternative Investment*, (Winter 2002), pp. 6-22.

Appendix A: Comparison of performance by hybrid mutual funds and corresponding investable hedge fund and non-investable hedge fund composite indices.

Exhibits A.1 shows the comparison of the performance of hybrid mutual funds and their corresponding investable and non-investable hedge fund indices. It can be seen that hybrid mutual funds are underperformed by non-investable indices, but outperformed investable indices. However, graphic description of their performance in exhibit A.2 to A.6 shows that these funds do move closely together. As discussed earlier in the text only Market Neutral funds seem to not follow this pattern. Due to lack of a common market factor driving returns among equity market neutral managers a common pattern of return movement is less likely.

Exhibit A.1 Hybrid Mutual Funds as a Proxy for Hedge Funds (2001 - 2005)

	Annual return	Annual STD	Sharpe ratio	Max DD	Skew-ness	Kurtosis	Correlations with Hybrid Mutual Funds of Similar Strategy
Strategy: Market Neutral							
Hybrid Mutual Funds	5.12%	3.27%	0.91	-4.05%	-0.05	1.61	
Composite EMN (Non Investible)	5.80%	1.34%	2.73	-0.94%	-0.50	2.02	0.41
Composite EMN (Investible)	3.69%	2.06%	0.75	-1.24%	1.01	1.59	0.07
Strategy: Convertible Arbitrage							
Hybrid Mutual Funds	5.39%	3.84%	0.85	-5.76%	-0.12	0.95	
Composite CA (Non Investible)	6.23%	3.50%	1.17	-6.74%	-0.62	0.84	0.69
Composite CA (Investible)	6.97%	4.51%	1.07	-7.46%	0.04	1.08	0.66
Strategy: Merger Arbitrage							
Hybrid Mutual Funds	4.91%	6.36%	0.44	-5.41%	1.71	12.19	
Composite MA (Non Investible)	4.23%	2.90%	0.72	-3.55%	-1.03	1.80	0.69
Composite MA (Investible)	1.54%	2.73%	-0.22	-4.83%	-0.99	0.95	0.67
Strategy: Equity Long/Short							
Hybrid Mutual Funds	5.31%	11.91%	0.27	-22.21%	-0.28	0.41	
Composite ELS (Non Investible)	6.31%	5.41%	0.77	-6.80%	-0.42	-0.29	0.85
Composite ELS (Investible)	4.53%	4.83%	0.50	-6.95%	-0.67	0.79	0.70
Strategy: Short Selling							
Hybrid Mutual Funds	-1.25%	17.27%	-0.20	-41.44%	0.60	0.43	
Composite SS (Non Investible)	-0.52%	14.38%	-0.18	-34.01%	0.10	-0.44	0.89
CSFB/Tremont INVX Ded Short Bias	-3.99%	14.28%	-0.43	-41.28%	0.14	0.31	0.85

Exhibit A.2

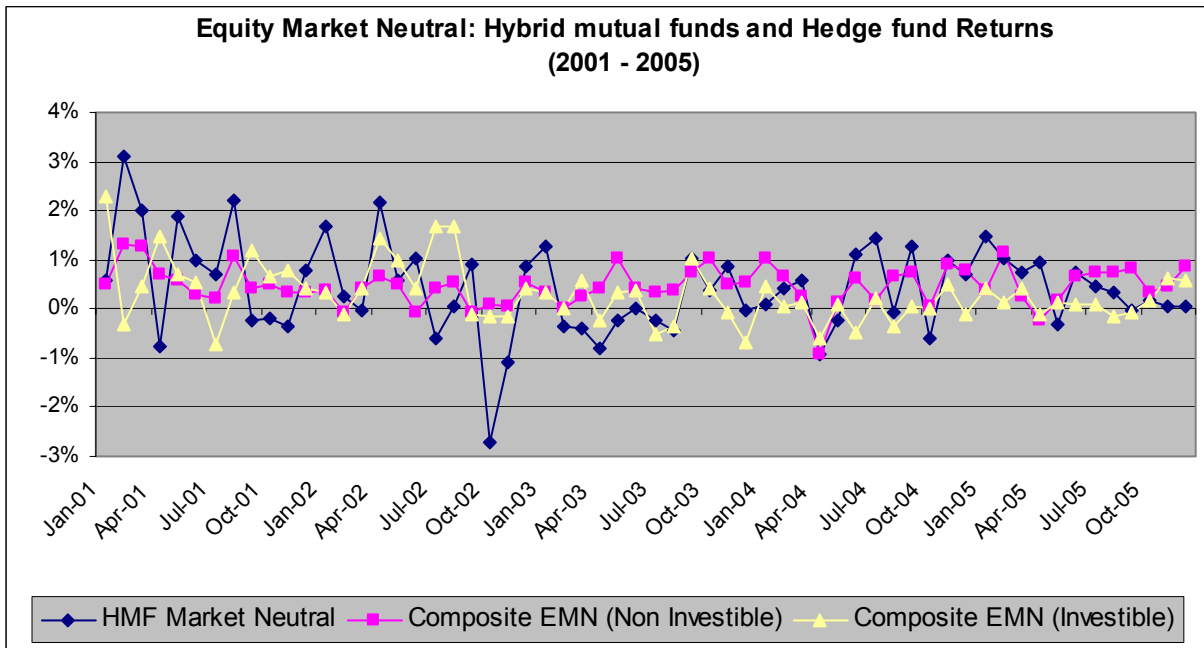


Exhibit A.3

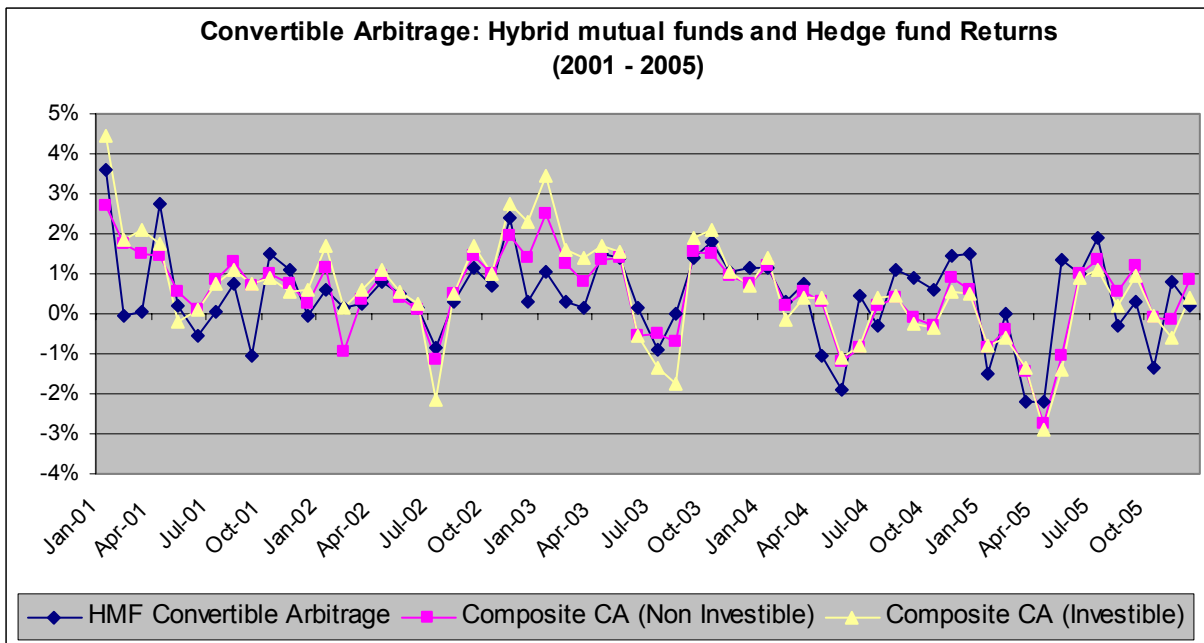


Exhibit A.4

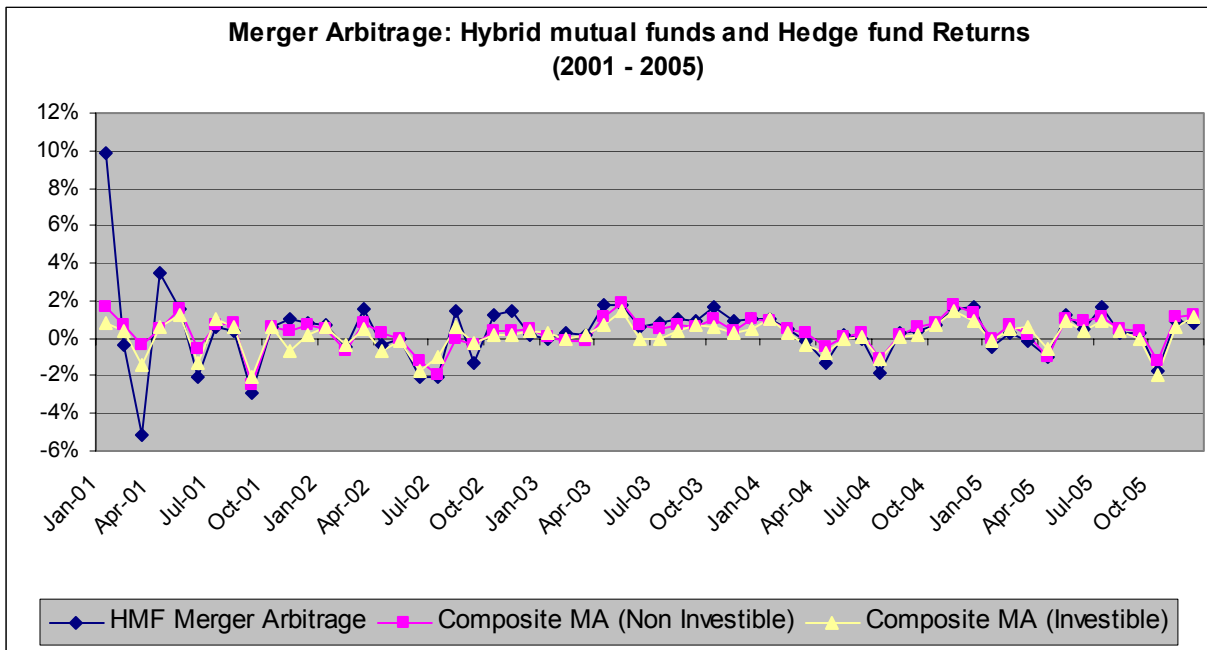


Exhibit A.5

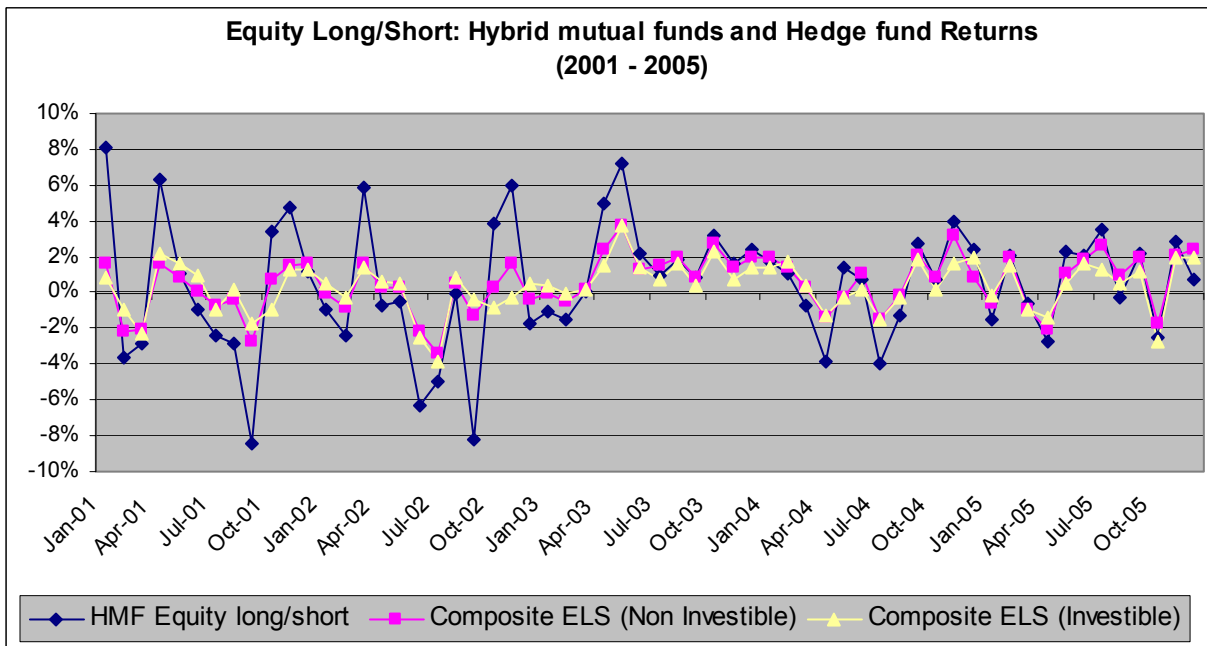
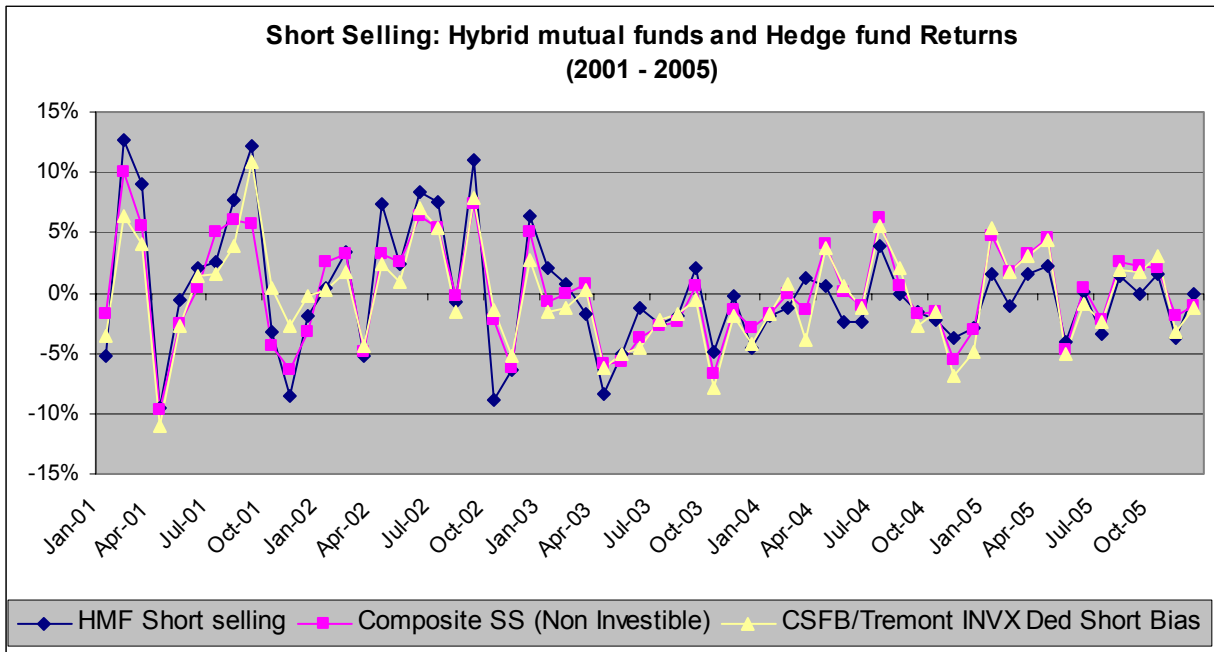


Exhibit A.6



Appendix B: Hybrid Mutual Fund Groupings

Convertible Arbitrage

Calamos Mrkt Ntrl Inc A

Equity long/short

Alytic Global L/S Instl
Choice Long-Short C
Diamond Hill Focus L/S A
Franklin U.S. Long-Short
Hussman Strategic Growth
Legg Mason Opp Instl
Needham Growth
Templeton Global Lg Sh A

Merger Arbitrage/Event

Arbitrage R
AXA Enterprise Merg&Acq A
Gabelli ABC
Merger Fund

Market Neutral

GMO Alpha Only Fund III
James Market Neutral
JPMorgan Mkt Ntr Inst
Phoenix Mkt Neu A
Robeco BostPtn Lg/ShEqInv

Short selling

Comstock Capital Value A
Comstock Strategy A
Grizzly Short Fund
Potomac U.S./Short
ProFunds Bear Inv
Prudent Bear
Rydex Ursa A