

2011

Quick Study

How Much Should You Allocate to Alternatives?

We surveyed **367** Investment Advisory firms to find out how many are currently using Alternative Mutual Funds.

Only **20%**

of those who responded stated they currently use Alternative Mutual Funds for their clients.



Sample of Endowment 2010 Alternatives Asset Allocations

Many investors question how much of an allocation should be made to alternative investments for individual portfolios. Originating users of these alternative investments, often cited to be university endowments, publicly outline their target allocations in their annual reports. Perhaps the review of a sample of these allocations might help establish a general target range for gaining exposure to these programs. While the investment objectives of institutional investor groups may vary vastly from an individual investor, the usefulness and relevancy of the alternative programs are topics that have been subject to significant academic study, resulting in these target allocations you see below. An investor could benefit from such academic studies by considering the alternative allocations of these institutional investors into consideration when constructing one's own portfolio.

The alternative allocations listed below represent the 'alternatives' category revealed by each institution's 2010 annual report. The 'alternatives' allocation excludes private equity and other real asset holdings.

Yale Endowment 21%	Harvard Endowment 15%	MIT Endowment 28%	U of Cal Endowment 17%	Dartmouth Endowment 23%
Vanderbilt Endowment 21%	U of Mich Endowment 18%	Penn St. Endowment 7%	Lafayette Endowment 34%	Williams C. Endowment 28%

Source: Each figure was taken from the respective endowments' 2010 Annual Report.

As illustrated in the sample group above, alternative investment allocations of endowments may vary significantly. In this particular sample, percentage allocations range from 7% to 34%. Generally speaking, our findings show that 20% of investment advisors we survey utilize alternative products with allocations ranging from the small single digits to over 30%.

On the following pages we review the performance of two model portfolios. First, we include one portfolio with 10% allocation in alternative mutual funds, with the allocation equally representing Long/Short Mutual Funds, Market Neutral and Managed Futures Mutual Funds. Second, we include a model portfolio with a 25% allocation in alternative mutual fund. This equates to a 8.33% allocation into each of the following fund groups: Long/Short Mutual Funds, Market Neutral and Managed Futures Mutual Funds. There is a limitation to this analysis however as many of these mutual funds are new, preventing us from reviewing long-term returns and risk figures. We do believe however that the mutual fund strategies are reliably representative of the hedge fund historical strategies, upon which institutional investors have based their studies for decades.



Table of Categories and Allocation Illustrated

Category	Index Used	Example A	Example B
US Equities	Standard & Poor's 500	35.0%	30.0%
Non-US Equities	MSCI World ex US Gross	15.0%	15.0%
Fixed Income	Barclays Capital Aggregate	25.0%	15.0%
Commodities	Dow Jones UBS Commodity Index	5.0%	5.0%
Real Estate	NAREIT Equity	5.0%	5.0%

Alternatives			
Long/Short	Morningstar Long/Short Mutual Funds	3.3%	8.3%
Market Neutral	Morningstar Market Neutral Mutual Funds	3.3%	8.3%
Managed Futures	Morningstar Managed Futures Mutual Funds	3.3%	8.3%
Cash	90 Day U.S. Treasury Bill	5.0%	5.0%
Total		100.0%	100.0%

Returns and Risk Statistics of Alternative Portfolios

	Returns Statistics		Risk Statistics				
	1-Year	3-Year	Beta	Downside Capture Ratio	Upside Capture Ratio	Sharpe Ratio	Standard Deviation
Example A (10%)	10.59	1.82	0.57	60.51	52.27	0.11	13.36
Example B (25%)	9.77	1.10	0.54	60.16	48.76	0.06	12.91
S&P 500 Index	15.65	2.35	1.00	100.00	100.00	0.08	23.32



Returns and Risk Statistics of Asset Classes

	Returns Statistics		Risk Statistics				
	1-Year	3-Year	Beta	Downside Capture Ratio	Upside Capture Ratio	Sharpe Ratio	Standard Deviation
S&P 500	23.32	15.65	2.35	1.00	100.00	100.00	0.08
MSCI World x US	29.55	12.11	-1.72	1.20	119.35	106.75	-0.07
BC Aggregate	3.74	5.12	5.30	-0.02	-14.01	11.27	1.31
Dow Jones UBS Commodities	29.75	28.49	-5.20	0.97	105.89	68.67	-0.19
NAREIT	40.39	25.00	2.63	1.55	135.81	163.06	0.06
90 Day U.S. T-Bill	0.27	0.15	0.39	0.00	-1.97	0.28	0.00

Correlation Table of Various Asset Classes and Mutual Fund Groups

		a	b	c	d	e	f	g	h	i
a	Morningstar Long/Short Funds	1.00	0.09	0.57	0.97	0.98	-0.14	0.86	0.80	-0.31
b	Morningstar Managed Futures Funds	0.09	1.00	0.62	-0.02	0.10	0.27	0.02	-0.21	-0.21
c	Morningstar Market Neutral Funds	0.57	0.62	1.00	0.44	0.64	0.38	0.47	0.31	-0.36
d	Standard & Poor's 500	0.97	-0.02	0.44	1.00	0.94	-0.16	0.76	0.90	-0.29
e	MSCI World ex US Gross	0.98	0.10	0.64	0.94	1.00	0.03	0.78	0.81	-0.34
f	Barclays Capital Aggregate	-0.14	0.27	0.38	-0.16	0.03	1.00	-0.35	-0.04	-0.48
g	Dow Jones UBS Commodity Index	0.86	0.02	0.47	0.76	0.78	-0.35	1.00	0.55	-0.13
h	NAREIT Equity	0.80	-0.21	0.31	0.90	0.81	-0.04	0.55	1.00	-0.11
i	90 Day U.S. Treasury Bill	-0.31	-0.21	-0.36	-0.29	-0.34	-0.48	-0.13	-0.11	1.00



¹ Actual number of Morningstar Long/Short funds: 206 before adjusting for the additional share classes, 76 funds as of 12/31/2009 after adjusting for additional share classes.

Index Definitions:

The S&P 500: An unmanaged index of 500 large-cap domestic stocks that is commonly used as a proxy for the large-cap stock market. Historically, the index has targeted a composition of 400 industrial companies, 40 financial companies, 40 utility companies, and 20 transportation companies. The index does not contain real estate investment trusts. Changes in the index composition may be made at any time. Performance numbers for the index are a size-weighted average of the performance numbers for each index constituent.

Dow Jones Industrial Average: Price weighted average of 30 actively traded shares of the blue chip US industrial corporations listed on the New York Stock Exchange. The trend in the movement of the market value of these shares is considered to be an indicator of the movement of the entire US stock market. The corporations included in DJIA change from time to time and generally represent about 20 percent of the market value of all shares traded on NYSE.

Nasdaq 100 Index: Consists of the 100 largest and most actively traded non-financial stocks on the Nasdaq. **Dow Jones Industrial Average:** A price-weighted average of 30 significant stocks traded on the New York Stock Exchange and the Nasdaq.

The MSCI EAFE® Index (Europe, Australasia, Far East) is a free float-adjusted market capitalization index that is designed to measure developed market equity performance, excluding the US & Canada. The index consists of the following 21 developed market country indices: Australia, Austria, Belgium, Denmark, Finland, France, Germany, Greece, Hong Kong, Ireland, Italy, Japan, the Netherlands, New Zealand, Norway, Portugal, Singapore, Spain, Sweden, Switzerland and the United Kingdom.

The NAREIT index is an unmanaged index of securities that meet the definition of Real Estate Investment Trust (REIT) and are traded on the NYSE, AMEX, or NASDAQ. REITs are investments in rental properties, and are required to pay out 95% of their earnings each year as dividends. Performance numbers for the index are a size-weighted average of the performance numbers for each index constituent.

Barclays Capital Aggregate Bond Index: Is an unmanaged index made up of the following fixed-income securities: all debt securities issues to the public by the U.S. Government or its agencies, as well as quasi-federal corporations or corporate debt guaranteed by the U.S. Government; all public obligations of the U.S. Treasury except flower bonds and foreign-targeted issues; all 15-year and 30-year fixed-rate securities backed by mortgage pools of GNMA, FHLMC, and FNMA, with the exception of graduated payment mortgages, manufactured home mortgages, and graduated equity mortgages; and all publicly-issued, fixed-rate, non-convertible, investment-grade, dollar-denominated, SEC-registered corporate debt securities with at least one year to maturity and an outstanding par value of at least \$100 million

The Barclay CTA Index: A leading industry benchmark of representative performance of commodity trading advisors. There are currently 488 programs included in the calculation of the Barclay CTA Index for the year 2009, which is un-weighted and re-balanced at the beginning of each year.

The Barclay Currency Traders Index: An equal weighted composite of managed programs that trade currency futures and/or cash forwards in the interbank market. In 2009 there are 124 currency programs included in the index.



Statistics Definitions:

Cumulative Upside Market Capture Ratio –the Cumulative Upside Market Capture Ratio measures the manager’s performance in up markets relative to the performance of the market (index) itself. An up market is defined as any period (month or quarter) where the market’s return is greater than or equal to zero.

Standard Deviation – Standard Deviation measures the central tendency of a probability distribution. The more a product varies from its mean, the higher the standard deviation.

Beta – A measurement indicating the volatility of a manager relative to a chosen market. A beta of 1 means a manager has about the same volatility as the market. Higher betas are associated with higher risk levels, while lower beats are associated with lower risk levels.

Correlation Coefficient – Correlation measures the strength and direction of linear association between two variables. This coefficient allows the user to determine which combination of managers/products will best complement each other. The range of values is from -1 to 1. A value of negative 1 indicates a perfectly negative linear relationship, whereas a value of positive 1 indicates a perfectly positive linear relationship. A value of 0 indicates no linear relationship at all.

Cumulative Downside Market Capture Ratio - measures the manager’s performance in down markets relative to the performance of the market (index) itself. A Cumulative down market is defined as any period (month or quarter) where the market’s return is less than zero.

R-Squared – Squared (sometimes referred to as the coefficient of determination) measures the reliability of the statistical estimates of alpha and beta as a linear function of the market. A product with a high R-Squared can generally have most of its variance explained by the variations in the benchmark index. As a consequence, the estimates of alpha and beta can be used with confidence.

Sharpe Ratio - Population – The Sharpe Ratio - Population is a measure of risk-adjusted return. It divides excess return by risk. Excess return is defined as the annualized return of the manager minus the annualized return of the risk free rate. Risk is defined by standard deviation. A high value for the Sharpe Ratio is generally considered to be positive since either the excess return is rather large or the level of risk is low.

Batting Average – is defined as the number of periods that the product outperforms the benchmark divided by the total number of periods for the entire period. It is a percentage indicating the probability of outperforming the index in a given date range.

Calmar Ratio - is a risk/return ratio that shows the annualized rate of return relative to the absolute value of the maximum drawdown, the higher the Calmar ratio, the better. Some funds have high annual returns, but they also have extremely high drawdown risk. Most people use data from the past 3 years in assessing results of this ratio

Kurtosis - is a measure of “peakedness” of a probability distribution. Higher kurtosis values indicate that more of the variance comes from infrequent extreme deviations. Lower kurtosis values indicate that the smaller and more frequent deviations are responsible for more of the variance.

Skewness - Skewness measures the asymmetry of a probability distribution. A negative value indicates that the left tail of the distribution is longer, where a positive value indicates that the right tail is longer. The skewness of a standard normal distribution is zero.

Sterling Ratio - The Sterling Ratio is another version of a risk-adjusted return. The return of the manager is divided by the average of the maximum yearly drawdowns.

T Statistic - The T-Statistic is used to measure a hypothesis test. In the case of PSN, it is used to see if the mean return is different from 0.