
Alternative Investment Exposures at Endowments & Foundations: Will Pension Plans Follow?

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Traditional vs. Alternative Assets

- Traditional Assets
 - Stocks > \$15 Trillion worldwide
 - Bonds > \$10 Trillion worldwide
- Alternative Asset Investment has increased by over 70% since 2004
 - Hedge Funds ~ \$1.9 Trillion
 - Venture Capital and Private Equity > \$900 billion
 - Real Estate – US Commercial > \$5.3 Trillion
 - Commodities > \$240 billion

Why invest in alternatives?

- Prefer portfolios with lower volatility
- Prefer assets with lower correlation
- Ideally, find investments that rise in value when stock and bond markets fall

Returns and Correlations

- Return and Risk, 1994 to 2007

	Annual Return	Standard Deviation	Corr Stocks	Corr Bonds
- US Stocks	10.4%	16.2%	1.00	-0.22
- US Bonds	6.2%	4.0%	-0.22	1.00
- Private Equity	18.6%	13.8%	0.70	-0.22
- Real Estate	11.9%	2.2%	0.11	-0.02
- Nat. Resources	10.0%	12.7%	-0.17	-0.16
- Hedge Funds	7.9%	6.8%	0.65	-0.20

The Efficient Frontier

- Investors always want to improve return without increasing risk
- Assets with low and negative correlation dramatically reduce portfolio risk

	Average Annual Return, 1994-2007	Standard Deviation
100% Stock	10.4%	16.2%
60% Stock, 40% Bonds	9.1%	9.5%
50% Stock, 20% Bonds, 30% Alternatives	10.5%	9.0%

Following Harvard and Yale

- There are 76 university endowments with assets greater than \$1 billion
- Trailing 5 year returns of the largest endowments is 13.9%, far above the median endowment return of 11.3% and the S&P 500 return of 10.7%
- The largest endowments earn higher returns than the median endowment in most asset classes
 - Hedge Funds 16.8% vs. 14.8%
 - Private Equity 25.7% vs. 19.8%
 - Natural Resources 19.4% vs. 14.2%
 - Private Real Estate 24.5% vs. 16.8%

University Endowment Asset Allocation

	Average Allocation 2003	Average Allocation 2007	Dollar weighted Average Allocation 2007
Equity	57.1%	57.6%	47.4%
Fixed Income and Cash	29.9%	22.1%	14.1%
Real Estate	2.7%	3.5%	5.4%
Hedge Funds	6.1%	10.6%	18.2%
Private Equity and Venture Capital	2.1%	3.2%	9.0%
Commodities and Natural Resources	0.4%	1.6%	4.8%

Source: 2007 NACUBO Endowment Study

Public Defined Benefit Fund Asset Allocation

	Dollar weighted Average Allocation 2003	Dollar weighted Average Allocation 2007
US Stock	45.4%	38.2%
International and Global Stock	14.5%	21.4%
Fixed Income	29.5%	21.4%
Real Estate	5.2%	5.6%
Private Equity	3.8%	4.4%
Hedge Funds	0.2%	1.1%

Source: 2007 Greenwich Associates Study

Pensions vs. Endowments: Future Plans

	% of Public Plans Expecting to Change Asset Allocation	% of Endowment Funds Expecting to Change Asset Allocation
Significantly Decrease Active US Stock Exposure	15%	33%
Increase International or Global Stock	12%	14%
Decrease Fixed Income	11%	20%
Increase Real Estate	25%	38%
Increase Private Equity	47%	53%
Increase Hedge Funds	42%	34%

Source: 2007 Greenwich Associates Study

Returns or Diversification?

- Alternative investments can be chosen as return enhancers or portfolio diversifiers
- Few investments can both improve returns and reduce risks
- Venture capital is a return enhancer
 - High beta, correlated to tech and IPO markets
- Commodities and managed futures funds are portfolio diversifiers
 - Best returns when stock and bond markets are falling

Issues with Alternatives

- Are alternative investments magic or perfect?
- No, there are several issues to be aware of. Each of these issues make mean-variance analysis a bit troublesome
- Illiquidity
 - Illiquid assets
 - Lockup and redemption periods
- Fee structures
- Correlations
- Lack of transparency
- Non-normality of returns

Illiquidity

- Invest in illiquid assets
 - Assets are hard to value
 - Assets are hard to sell
 - May invest in private companies or securities that are not legal to sell
- Lockup and redemption periods

Fee Structures

- Alternative investment returns are reported net of fees
- Management Fee
- Incentive Fee
- Surrender Fee
- Hurdle Rate
- High-Water Mark

Correlations

- Alternative investment correlations change
 - Over time
 - Over market conditions
 - Up market vs. down market correlation

Lack of Transparency

- Many of these investments are “private placements”, which are exempt from SEC registration.
- Many funds do not disclose positions, even on an annual basis.
- Funds and their performance may be difficult to find
- Funds frequently close to new investors

Non-normality of returns

- Report returns and prices monthly
 - Annualized monthly volatility is lower than daily volatility
- Stale prices: Many assets are not revalued monthly, or are revalued relative to models or appraisals
- Most investors focus on mean and variance of returns
 - Sharpe ratios and efficient frontiers require normally distributed returns, where skewness and excess kurtosis are zero
- Investors prefer large, positive skewness
- Investors prefer small kurtosis

What does the future hold?

- The investment world is becoming more global and more alternative
- Plans continue to reduce allocations to US equity and fixed income securities
- As these allocations decline, we anticipate further increases in allocations to international equity and all alternative investment categories
- The big questions:
 - Who will own the US stocks and bonds sold by institutions?
 - Will asset inflows reduce returns to hedge funds, real estate, commodities, venture capital and private equity investments?