

# Investing like the Harvard and Yale Endowment funds

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## By Frontier Capital Management LLP

At Frontier Capital Management one significant input into the asset allocation of our multi-asset funds is the investment strategy and asset allocations of the large University Endowment Funds (“US Super Endowment Funds”). The University Endowment Funds of Harvard and Yale have been leaders in diversified multi-asset class investing for over two decades, and have consistently achieved high double-digit annual returns with relatively low volatility.

The rationale for investment across multiple asset classes is supported by Modern Portfolio Theory, developed by Nobel Prize winner Professor Harry Markowitz. This theory suggests that the risk-adjusted returns of a portfolio can be improved by diversification across assets with varied correlations. Modern Portfolio Theory is at the heart of the investment philosophy of the Super Endowment Funds and is the foundation upon which their portfolios are constructed.

The Super Endowment Funds are exceptionally well resourced and have access to the best fund managers and private equity schemes, and this adds to their investment success. However, by adopting similar asset allocation principles to the Super Endowments it is possible for smaller investors to also obtain high levels of risk-adjusted returns, superior to traditional equity/bond portfolios and managed funds.

## Overview of US University Endowment Funds

US University Endowment Funds are non-taxable vehicles established to contribute towards the future funding requirements of colleges and universities. Their funding comes from a combination of legacies, gifts and investment returns. In the US there are over 750 endowments with an average of \$520 million in funds; the largest fund has over \$36.6 billion<sup>1</sup>. The endowment funds of UK universities and colleges are smaller in comparison; for example, the principal Cambridge University endowment fund totals around £1.2 billion (\$1.9 billion), with a further £2.9 billion (\$1.7 billion) spread across its 31 autonomous colleges.

Examining the strategies of the US endowment funds is of relevance to investors for a number of reasons. Firstly, US endowment funds have consistently achieved superior investment returns. This is especially the case for the largest endowment funds – those with assets greater than \$10 billion comprising Harvard, Yale, Stanford, Texas System and Princeton. To June 2008, they achieved an average 10 year annualized return of around 13.7%, roughly 10% more than the returns for a traditional 50% equity and 50% bond portfolio, while incurring a lower level of investment risk.

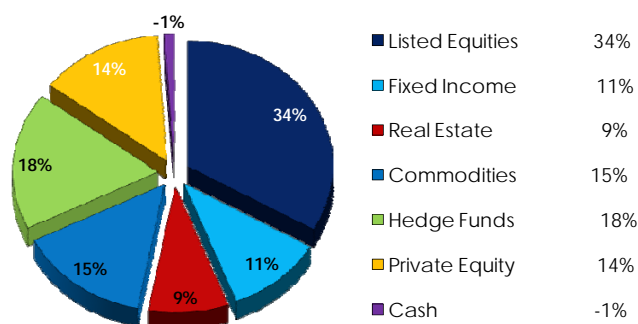
Like most investors, the University Endowments Funds were affected by the 2008/2009 credit crisis. The “Super Endowment Funds” of Harvard and Yale were down c. 25% in the fiscal year ending June 2009 which has caused well publicised funding issues for the universities. Despite this performance however, they remain among the top performing multi-asset investors over both 5 to 10 years and the Endowments have confirmed that this short term downturn in performance will not trigger a change in their investment model. A key message from this is that we should not look at 2008 in isolation – the longer term benefits of multi-asset investing are not affected. Secondly, the Endowment Funds have innovative portfolios with exposure to alternative asset classes that provide additional diversification benefits. In this arena, the largest Endowments tend to be leaders. Those Endowments with assets greater than \$10bn hold less than 50% of their portfolio in traditional assets (listed equities, bonds and cash). In contrast, the average US endowment fund still holds a roughly 80% per cent in traditional assets. The additional diversification in the Super Endowment Fund portfolios is one of the reasons for their superior long-term investment performance: the best performing Endowments have the largest allocations to alternative asset classes.

Finally, the University Endowment Funds typically have long-term investment horizons and stable asset allocations over time: allocations that rely less on market timing for generating returns and therefore have lower trading costs.

### The Super Endowments of Harvard and Yale

Of the US Endowment Funds, Frontier places significant emphasis on the asset allocation methodology of the ‘Super Endowments Funds’ of Harvard and Yale. These Endowments are the largest in the US with \$36.6 billion and \$22.9 billion respectively, and have been two of the best performing with annual returns consistently placing them in the top 10 of all US endowments.

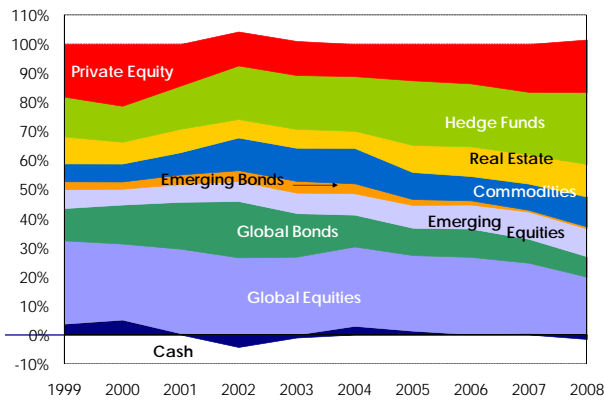
**Super Endowment Funds Asset Allocation, June 2007**



Source: Annual reports

Like Endowment Funds in general, the asset allocations of the Super Endowment Funds have been very stable over time. Since 1999, the Super Endowment Funds have reallocated an average of approximately 8 per cent of their portfolio annually. The stable allocations reflect their long term investment horizons and willingness to invest through economic cycles.

## Super Endowment Asset Allocation Over Time

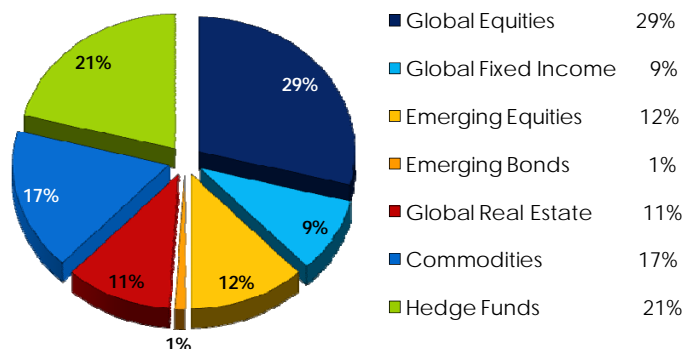


Source: Annual reports (various);  
Frontier Capital Management

## Index Investing Using the Asset Allocations of the Super Endowments

The superior returns, long-term investment horizons, and stable asset allocations of the Super Endowment funds make benchmarking to their asset allocations attractive. However, most individuals are not able to actively invest like the super endowments, particularly in asset classes such as private equity. Nevertheless, significant value can still be created by following the multi-asset investing approach of the Super Endowment Funds using global asset class indices. By using the annual asset allocation weights of the Super Endowment Funds applied to the returns on seven global asset class indices<sup>ii</sup> an estimated index tracking portfolio can be created. Portfolio returns are estimated from January 1999 to October 2009 (note: it is difficult to aggregate earlier Super Endowment Fund data prior to 1999). Private equity was excluded as this asset class is not suitable for an index tracking portfolio (it was pro-rated  $\frac{1}{2}$  into listed equity and  $\frac{1}{2}$  into other alternative asset classes). Cash was also excluded (pro-rated into fixed income) so the portfolio could be directly comparable to traditional portfolios of equities and bonds. Estimated portfolio returns were calculated in USD based on annual rebalancing every 31st of December. The resulting 'adjusted' Super Endowment Fund asset allocation currently places just 50 per cent of funds in traditional assets (Chart 5). This is slightly higher than their actual exposure to traditional assets (when private equity and cash are included).

## Super Endowments Asset Allocation (Adjusted)



Source: Annual reports; Frontier Capital Management

The estimated index tracking portfolio generated annualised returns of 8.3 per cent since 1999, relative to just 4.0 per cent for a US Equity/Bond portfolio and 0.7 per cent for a UK Equity/Bond portfolio hedged into USD. Moreover, the estimated index tracking portfolio has also out-performed many managed macro funds. For example, the endowment index tracking portfolio has out-performed relative to the UK IMA Cautious, Balanced and Active Managed sectors over the last ten years, both in terms of actual and risk adjusted returns. The out-performance and lower volatility over long periods of time illustrates the benefits of index investing and the importance of globally diversified asset allocations.

## **Indexed Performance of Super Endowments (hedged into GBP) Relative to UK Managed Funds**

### **Summary**

The Super Endowment Funds of Harvard and Yale have consistently achieved high investment returns and low volatility due to their multi-asset approach to investing and exposure to alternative asset classes. While most investors cannot invest like the Super Endowment funds, this research note shows that by applying their multi-asset principles to an index based portfolio, returns have historically been superior to those of traditional portfolios and even the average managed funds. Frontier takes inspiration from Super Endowment Funds when determining our asset allocations. The current asset weighting of Frontier's multi-asset funds is designed to contain slightly less risk than the Super Endowments allocations, as the Super Endowments have a longer investment time horizon and lower liquidity requirements. Our small minimum investment requirements and high levels of liquidity means that it is possible for even smaller investors to adopt a multi-asset approach to portfolio management just like the Super Endowments.

Frontier run regular, free, CPD accredited seminars on key investment issues as well as a hedge fund masterclass. For more information, visit [www.FrontierCM.com](http://www.FrontierCM.com).

i. As at June 2008.

ii. Each asset class is represented by a relevant market index: Standard & Poor's 500 Total Return Index (US Equities); Salomon Brothers Broad Investment Grade Index (US Bonds); MSCI World Total Return Net (Global Equities), Barclays Global Aggregate Index (Global Fixed Income), MSCI Emerging Markets (Emerging Equities), JP Morgan Emerging Markets Bond Plus (Emerging Bonds), DJ Wilshire Global (Real Estate), S&P GSCI Index to March 2007 then S&P Light Energy Index thereafter (Commodities), HFR Fund of Funds (Hedge Funds), and CISDM CTA Asset Weighted Index (Managed Futures). Hedge Funds and Managed Futures index data are reduced by 1% per annum to account for the biases believed to be inherent in self-reporting databases.

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