WHITEPAPER

The Endowment Model of Investing: Still Worth Pursuing?*

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HighVista Strategies

HighVista Strategies was founded in 2004 by an experienced team with diverse backgrounds in endowment management, hedge fund and principal investing, wealth management and academia.

We focus singularly on achieving attractive risk-adjusted portfolio returns through investing across public and private markets. We utilize the time-tested principles of endowment investing and a forward-thinking application of risk management to manage globally diversified investment strategies and solutions tailored for our clients' varying needs. The priority placed on capital preservation and avoiding major drawdowns fosters the patient and rigorous pursuit of excess returns, and is itself a critical driver of long-term performance.

Executive Summary

The investment environment of the last few years has been an unusually difficult one for large as well as small endowments. Virtually every principle of investing has come into question, including commonly-held beliefs relating to asset allocation, diversification, manager selection, liquidity management, and investment horizon. This paper discusses these issues and summarizes the implications for sound investing in today’s market conditions.

Some of the key takeaways are:

The way an endowment is managed should depend on the institution’s investment resources and governance processes. Smaller institutions in particular need to recognize their limited advantages and they need to be wary of the pitfalls of trying to emulate the large university endowments—entities that possess significant sophistication and a far greater risk tolerance.

Endowments need to focus their investment policies and processes on more measured risk taking and risk control. The risk environment changes over time, and recent events vividly demonstrate how attention to changing risk can help protect capital.

The events of 2008 and beyond have only underscored the importance of the disciplined application of sound tenets of investing.

The Endowment Model of Investing: Still Worth Pursuing?

Is the Endowment Model of Investing still worth pursuing? Judging by recent experience, one might well wonder. The large university endowments experienced significant losses in fiscal 2009, and despite healthy returns in 2010 and 2011, all today are below their June 2008 “high-water marks” after taking into account spending and inflation.

Exposures to emerging equities, European equities, commodities, and real estate have been particularly costly, and many endowments now find themselves overly invested in illiquid assets. Smaller endowments have not fared much better, and the financial pressures on colleges and foundations have increased considerably. The situation is obviously challenging, but not necessarily a black mark against the Endowment Model of Investing. Rather, the events of the last few years provide cautionary lessons in risk taking, manager selection, and liquidity management.

The years leading up to 2008 were gratifying times for the large endowments. The investment performance of the likes of Harvard and Yale were nothing short of extraordinary. Between 1990 and 2008 (June fiscal years), the return on the Harvard endowment was 13.8% per annum, while that of Yale was 16.3% per annum. The median endowment, by contrast, returned only 6.1% per annum. Most notable was the period 2000 to 2008: As shown below in Figure 1, during the 2000-2002 market collapse Harvard barely declined and Yale rose slightly, and they continued to outperform the median endowment each year thereafter. By fiscal year-end 2008, the value of a dollar invested in 1990 in the large endowments was well over twice that of a dollar invested in the median endowment over the same period.

Figure 1: Endowment Performance (fiscal years 1990-2011)

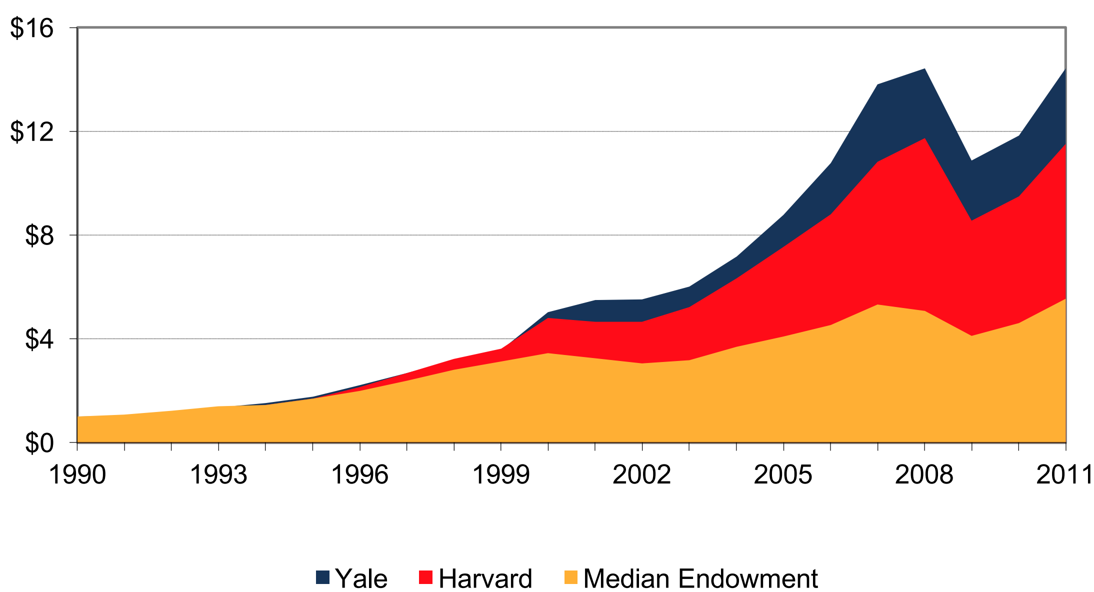


Figure 1: Average Annual Return by Size of Institution, 2003- 2011

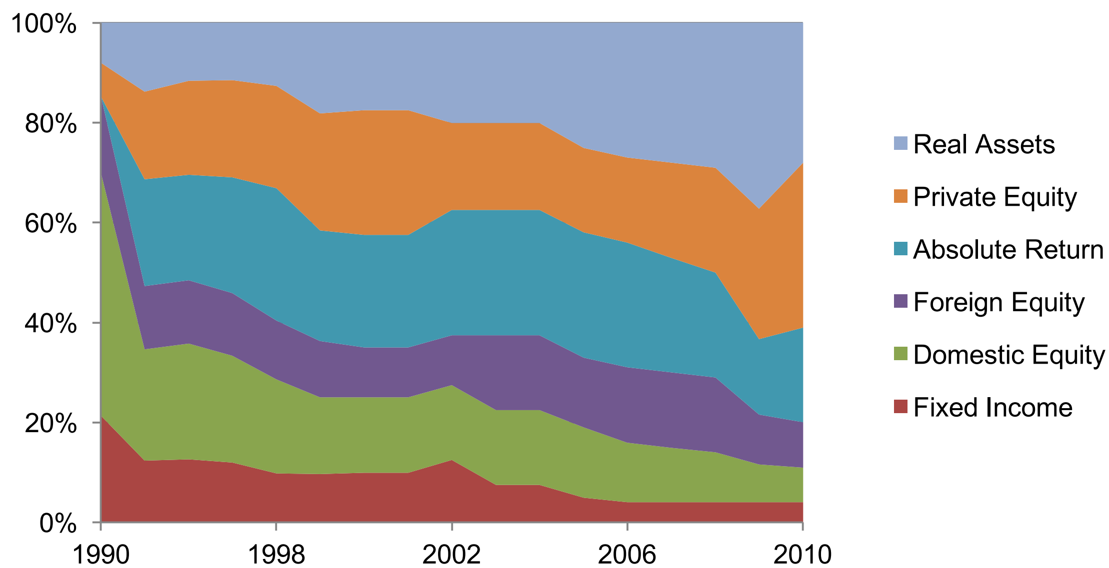
During this period, Yale (**Figure 2**, below) and other large endowments allocated substantial sums to absolute return investments (mostly hedge funds) and other private fund managers. The large endowments also held large exposures to real assets, emerging markets, and other economic sectors that were beneficiaries of globalization and worldwide economic growth. By 2008, Yale had only 15% invested in Domestic Equity and Fixed Income, and no Cash.

As the large endowments continued to outperform, smaller institutions and family offices sought to mimic these investment strategies. But most institutions did not possess equivalent capabilities and access to the best managers. They did not perform as well as the large endowments during the good years, and they performed at best similarly during 2007-2011. As a result, many have come to reevaluate their investment approaches as well as their governance and committee processes.

The Endowment Model of Investing

Just what is the Endowment Model of Investing? As popularized, it is to hold portfolios that look like those of Harvard and Yale, meaning substantial allocations to hedge funds, private investments, real estate, commodities, and emerging markets; and minimal holdings of fixed income investments and cash. By this definition, the Endowment Model of Investing is a paint-by-number checklist of the types of investments and exposures that the large endowments hold in their portfolios.

Figure 2: Historical Asset Allocation of the Yale Endowment



Source: Annual Reports of the Yale University Endowment

Holding portfolios optically similar to others is a questionable way to invest, however. For starters, a portfolio that looks like Harvard's and Yale's will not necessarily perform in the same way. The details matter greatly. Which particular managers? Which particular strategies? Which specific risk exposures to emphasize? Which to minimize? Portfolios that mechanistically mimic the large endowments can perform quite differently, and the outcomes can be risky and costly.

Second, not all investors have the same risk appetite. The Harvards and Yales of the world have reserves, deep donor pools, real estate, brand, and other valuable assets that give them the luxury of a longer time horizon, and a greater tolerance for risk and illiquidity. Many institutions have a greater reliance on endowment spending, which inherently limits their ability to suffer portfolio losses. Even if one could closely approximate the specific portfolio allocations of the large endowments, the resulting risk exposures may be quite inappropriate for a smaller institution or family.

Third, the large endowments have the talent in place to adjust their portfolios over time to reflect changing opportunities—in terms of managers as well as broad asset class exposures. As forward-looking investors, they continually adapt their strategies to reflect changing market and economic circumstances. Yale, for example, has adjusted its portfolio allocations every year (**Figure 2**), and will surely do so again in the future. Harvard invested in timber before others followed suit, and sold timber while other endowments were still buying. Copycats usually will be late to the party, seldom a recipe for investment success.

The Endowment Model of Investing, therefore, is not a generic itemization of what the large endowments appear to be holding in their portfolios at any one time, but rather an evolving investment framework and a process that reflects the particular institution's resources, investment opportunities, and skills. The large endowments are of sufficient scale to be able to afford fully staffed investment offices. They can attract, compensate, and retain professionals capable of evaluating managers and strategies, and performing portfolio risk analysis. Through their alumni, faculty, and other relationships, they moreover possess valuable networks for ideas, manager due diligence, and manager access. The large endowments independently evaluate opportunities and risks. They invest first and foremost on the basis of their own analysis, and not because they are following the actions of other investors.

Is the Endowment Model Broken?

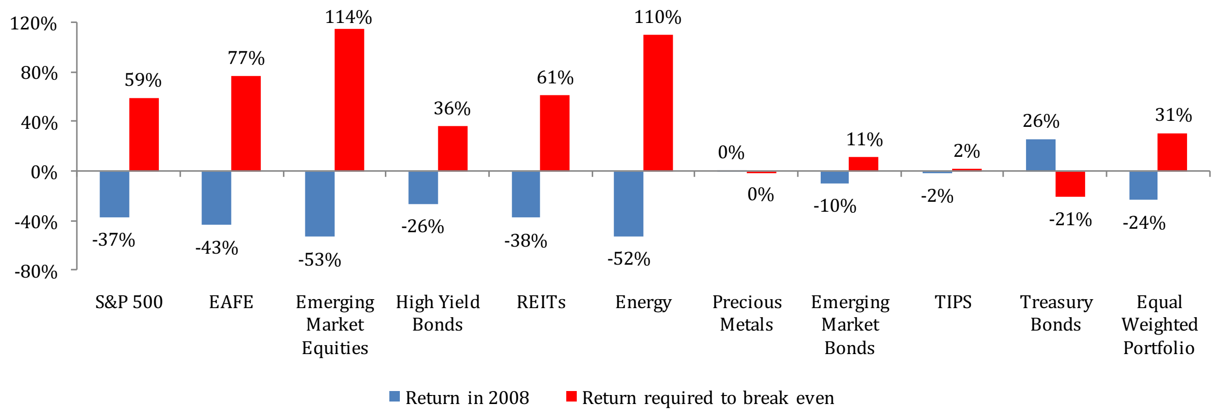
Some endowments may well have taken excessive risks and/or were overly invested in illiquid assets. But that does not in and of itself invalidate the Endowment Model of Investing. The question is whether the core principles that underlie the Endowment Model remain sound post 2008. These include:

<u>Diversification:</u> Any endowment portfolio should be extremely well diversified. Diversification is the first line of defense in risk control, and endowments should be extremely cautious in sizing the exposure to any one market, manager, or strategy. At the same time, endowments should be careful not to incur illiquidity and other costs in order to obtain diversification for its own sake. Broad-based exposures can be obtained through low-cost and liquid index-like vehicles.

The benefits of diversification were well tested in 2008 when just about everything seemed to be in free fall. Many claim this proves that diversification fails when it is most needed. True, diversification cannot protect against loss during a broad-based systemic event. However, there usually is great dispersion of returns in times of crisis, and in 2008, a broadly diversified portfolio absolutely protected against the worst outcomes.

As shown below in **Figure 3**, investors who in 2008 were concentrated in areas such as emerging markets (down 53%) and energy (down 52%) had to earn back 114% and 110%, respectively, just to break even. On the other hand, investors in the S&P 500 (down 37%) had to earn back "only" 59% to break even, while investors who avoided long-term Treasury bonds missed out on their 26% gain. An equally weighted portfolio of the asset classes in **Figure 3** was down 24%, with a breakeven recovery of 31%.

Figure 3: Asset Class Performance in 2008 and Returns Required to Break Even



<u>Active versus passive management:</u> There should be a bright line between active and passive management. Active management involves delegation of investment decision-making to external managers, which is often a costly, illiquid, and risky proposition. The primary reason to invest with an active manager should be because that manager possesses unusual talent in generating excess returns for investors. There is, however, only a small subset of great managers, and it takes resources, skill, access, and the development of trusting relationships to invest successfully with such firms. The importance of being in the right networks cannot be overstated. Top managers are in limited supply, so investing with external firms must be opportunistic. Blindly filling predetermined allocations to style categories such as Small Cap, Growth, or Emerging inevitably will lead to investments in second-tier managers. Most investors would be better off investing only passively.

Successfully selecting external fund managers requires the ability to assess their skills not only as investors but also as business managers and organizational leaders. There is significant potential business risk associated with running a hedge fund—including uncertainty of client redemptions; inability to gain financing or effect short sales; and organizational dysfunction. Managers should be vetted not just for their investment talent, but also for their integrity and the stability of their businesses and organizations. Talented investors are not always able managers and leaders. If one can minimize the risk operational disruptions in times of stress, then the primary risk of investing with a manager is focused on their investment acumen—which is what matters in the first place.

In 2008, the financing and business risk aspect of investing with alternatives managers was greatly heightened. Hedge funds that went under in many cases were run by managers who may have been talented in security selection but made poor structural and organizational decisions. In many cases, limited partners further suffered because they had weak governance and control rights. In certain instances, failure was the result of scanty due diligence on the part of investors and outright manager fraud. (The carnage was by no means limited to alternatives investing. Many "traditional" strategies also performed disastrously. Notable examples include short-term fixed income funds and securities lending collateral funds that reached for yield.)

These failures underscore how the risk of investing with a manager can extend well beyond their investment portfolio. Disciplined and rigorous manager selection, including attention to legal and organizational structure and a thorough understanding of control rights, is a prerequisite for any delegation of investment authority. The risks can be minimized but not eliminated. An essential aspect of the Endowment Model is performing this task with great care.

Risk management and capital protection: The primary goal of any endowment investment strategy should be to protect long-term capital—not an easy task if the goal is also to earn an adequate return. Conventional approaches to wealth and endowment management employ a "policy portfolio" (such as 60/40 stocks/bonds) in guiding the asset allocation. In fact, adherence to a stable policy allocation has resulted in poor outcomes for many investors. As the risk environment changes, a given policy portfolio may prove riskier when macroeconomic risk is high. Investors who adhered to an inflexible, stable allocation in the last four years found themselves taking risk far beyond what they would have considered prudent for their institutions.

The basic fact is that endowments can be better managed from a risk perspective. It is not a blind guess as to whether one is in a high or low risk environment. Market volatility is an indicator of risk, as is the volatility priced into put and call options ("implied volatility"). Implied volatility correlates highly with the market's assessment of future risk, and investors can use such volatility assessments to better adapt their asset allocations to changing risk environments and in so doing better protect capital.

Implied equity market volatility was high going into 2008. Measured by this statistic alone, the risk environment had worsened and range of likely outcomes in 2008 had widened. In particular, the chances of a large market decline had increased. The same has occurred at various times since—most notably in July 2011 as a harbinger of the tumultuous capital market conditions that would follow. Even at present (December 2011), the implied volatility of longer-dated equity index options is near extreme levels, meaning that market participants are continuing to pay very high prices for protection against equity market declines. We remain in an era of great uncertainty, and today's heightened risk environment should factor into the asset allocation decisions of endowments.

Beyond basing asset allocation policies on dynamic assessments of risk, endowments can also seek to contain losses by favoring managers who themselves place great importance on investing with a view to protecting capital. Although far from a sure thing, security selection based on bottom-up fundamental value is anchored in the notion of a margin of safety. By contrast, there is no downside protection inherent in a stock selection strategy based on past statistical relationships. And any strategy involving significant leverage is prone to distressed selling and involuntary exit caused by mark-to-market losses. Manager selection is not only about seeking excess returns; it can also be strategically important for controlling risk in a portfolio.

Risk control is perhaps the singular issue that endowments need to address in their investment policies and processes. The events of the last four years showed vividly that portfolio risk evolves dynamically and requires constant attention.

Illiquidity and the denominator problem: Illiquidity is a double edged sword. Illiquid investments often promise higher returns, but they tie up capital which can preclude one from taking advantage of future opportunities that arise over time. Similarly, as already discussed, mandates with lockups provide firms with the time horizon and staying power to endure interim fluctuations. However, the investment acumen and business health of a manager is not necessarily lasting, and the flexibility to terminate a manager is valuable. Illiquid investments and manager lockups therefore can lead to significant opportunity costs.

At no time were the costs and risks of illiquidity more apparent than in 2008. Not only did asset values decline, but many normally liquid instruments became illiquid, redemption requests often became restricted, and the prospects for private equity distributions dimmed as exit opportunities diminished. The proportion of illiquid assets and unfunded commitments in endowment portfolios rose dramatically.

In the face of excessive levels of illiquid assets and unfunded commitments (the "denominator problem"), endowments sought liquidity at great cost. They redeemed from those managers who were able to provide liquidity—even though those funds were often their better performing investments. Some endowments also engaged in secondary market sales of private equity investments and commitments, as well as of locked-up/gated hedge fund positions—but at steep discounts. Those with denominator problems also had diminished flexibility to control their risk exposures, and they therefore had limited capacity to take advantage of investment bargains that arose from the market collapse.

Hopefully, the double-edged sword nature of illiquidity will be better understood going forward. Illiquid investments can be beneficial, but they are very costly. Maintaining adequate and significant liquidity is an essential aspect of any sound investment strategy.

Summary and Main Conclusions

The last few years have been an extraordinarily difficult period for investors, including large as well as small endowments. Policies and decisions relating to asset allocation, manager selection, liquidity management, and investment horizon proved critical. The lessons to be learned are many, and include:

Benefits of diversification: Diversification does not prevent loss of principal, but absolutely protects against being in the worst performing asset classes. The gains required to recover losses are far lower for a diversified portfolio than for the worse-performing asset classes. Diversification is perhaps at its most valuable during periods of severe market declines.

Active versus passive management: Disciplined and rigorous manager selection is a prerequisite for any delegation of investment authority. The events of 2008 particularly underscored how the risk of investing with a manager can extend well beyond the risk of their investment portfolio. The business, organizational, and structural risks of investing with a manager can be minimized but not eliminated.

Risk control and capital protection: Risk control is the singular issue that endowments need to address in their investment policies and processes. The risk environment changes over time, and recent events vividly demonstrate how attention to changing risk can help protect capital.

Endowments can also seek to contain losses by favoring managers who themselves place great importance on investing with a view to protecting capital. Manager selection is not only about seeking excess returns, it can be strategically important for portfolio risk control.

Illiquidity and the denominator problem: Illiquid investments and manager lockups offer the potential for higher returns but can lead to significant opportunity costs. In 2008, the proportion of illiquid assets and unfunded commitments in endowment portfolios rose dramatically and caused endowments to become forced sellers of illiquid assets and/or to redeem managers who represented their better performing investments. These endowments also had diminished flexibility to control their risk exposures, and they had limited capacity to take advantage of investment bargains. The value of liquidity was underappreciated.

The most important takeaways are perhaps that endowments with the requisite resources and capabilities need above all to improve their processes for adapting to changing risk environments. And others need to recognize that they are at a disadvantage to the sophisticated endowments and should understand the pitfalls of trying to emulate them. There are many lessons to be learned, but the events of the last few years have only underscored the importance of disciplined application of sound tenets of investing. And that, ultimately, is what the Endowment Model of Investing is about.

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Figure 3 - Index Information	
Asset Class	Index
S&P 500	S&P 500 Index
EAFE	MSCI EAFE Index
Emerging Markets Equity	MSCI Emerging Markets Index
High Yield Bonds	Goldman Sachs CDX High Yield TR Index
REITS	FTSE/NAREIT All REITS
Energy	S&P GSCI Energy Total Return
Precious Metals	S&P GSCI Precious Metals Total Return
Emerging Market Bonds	JP Morgan EMBI+ Emerging Market Bond Index
TIPS	Barclays U.S. Inflation Protected Securities Index
Treasury Bonds	Bloomberg U.S. Government 10+ year Total Return Index

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