



Setting The Stage

Prior to the financial turmoil of 2008 and 2009, investors had become intrigued with the attractive risk-adjusted returns that were being achieved by many large university endowment programs such as Harvard and Yale. The investment approach utilized by these programs became known colloquially as the “Yale Model,” not surprisingly named after the tremendously successful Yale University Endowment program. The Yale investment philosophy is based on identifying asset classes that have low correlation with domestic marketable securities but still offer attractive returns, versus the normal convention of using fixed income as the main diversifier of domestic equity risk. Implementing this philosophy involves significant investment in illiquid asset classes such as venture capital, leveraged buyouts, real estate, timber, oil and gas, and absolute return strategies.

As a practitioner of this philosophy, Yale achieved tremendous returns on both an absolute and relative basis. For the ten-year period ending June 2008, Yale achieved an annualized net return of 16.3%. Over this same period, the Yale endowment grew from \$6.6 billion to \$22.9 billion. During the fiscal 1999/2000 bull market Yale’s endowment returned 41.0%—more than three times the average endowment return of 13.0% for the same time period. In more challenging environments the investment process also proved successful. During the fiscal 2001/2002 technology bubble burst, the endowment posted positive gains of 9.2% and 0.7% while other endowments were significantly negative. The “Yale Model” appeared to be infallible, outperforming peers in both bull and bear markets and all the while exhibiting lower volatility of returns—that is until 2009. During the fiscal year ending June 2009, Yale had a return of -24.6% which was significantly worse than the average endowment return of -18.7%. Surprisingly,

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the largest contributors to this underperformance were the illiquid strategies the investment philosophy advocated most. The endowment's largest asset class allocation, real assets, was the greatest contributor to the underperformance, down more than 33%. This in turn posed the question, "*Is the Yale model good for Yale?*"

Before we answer that question let's look at what was happening outside the ivy-covered walls of Yale. By about 2004 as Yale's performance soared, many investors, both institutional and individual, believed that if they constructed their investment portfolios to mimic the Yale fund and other large university endowment programs, they would in turn have similar success. Thus for the four years preceding 2008, high net worth investors, institutional board members, and pension fund managers began to naively allocate large portions of their investment portfolios to illiquid asset classes including private equity, real assets and hedge funds. Unfortunately this sentiment caught on at the worst possible time—on the eve of the largest equity market decline in the United States since the Great Depression. The rapidly declining values of liquid securities left investors over-committed to illiquid asset classes with valuations that could not adjust as quickly. As the equity markets began their decent, investors found themselves in a tough situation struggling to make prudent investment decisions while balancing the need for liquidity to meet spending and income requirements. This posed a second question, "*Is the Yale model good for other investors?*"

Investor Differences and Non-Disruptive Liquidity

So is the Yale model good for other investors? The truth is, like most questions in finance or economics—it *depends*. First, the notion that Yale's approach to investing is the optimal solution for every investor regardless of their particular situation is certainly incorrect. The endowment funds of large universities have a very unique set of investment objectives; most distinguishing is the infinite investment horizon. While part of the operational budget used to run a college or university

comes from the endowment fund, the primary goal of the endowment fund is to preserve its purchasing power in perpetuity. This investment objective is unique to the circumstances surrounding a large, established college endowment and is rarely shared by even similar smaller endowment funds, let alone wealthy individuals.

Further, large university endowments have broader access to liquidity, *non-disruptive liquidity*, than do most investors.

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Non-disruptive liquidity is defined as liquidity that is generated but does not interrupt or change the endowment's asset class exposure. Conversely, disruptive liquidity would indeed change the asset class exposure in a portfolio. Many investment holdings can generate

liquidity—stocks pay dividends, bonds pay interest, real estate produces rents, and private equity partnerships can produce proceeds from realizations. Marketable securities can also be used as collateral for short-term loans. Granted most investors have access to these liquidity features, but in addition, an endowment like Yale has access to significant external borrowing at favorable rates through lending facilities or commercial paper issuance. There is also alumni gifting, and the ability to transfer funds internally from other

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Due Diligence Premium: the difference between the return achieved by the managers ranking in the 25 th percentile and those in the 75 th percentile.					
	Private Equity	Large Cap Domestic Equity	Small Cap Domestic Equity	International Equity	Core Fixed Income
1999	10.9%	22.2%	46.8%	27.8%	2.1%
2000	15.7%	17.8%	25.7%	11.2%	2.6%
2001	29.6%	12.0%	24.2%	8.1%	1.4%
2002	17.2%	7.6%	13.7%	6.4%	2.2%
2003	14.2%	6.4%	11.0%	10.5%	3.1%
2004	11.7%	4.7%	8.7%	5.8%	1.4%
2005	17.5%	4.7%	5.2%	5.6%	0.8%
2006	20.2%	7.2%	6.6%	4.8%	0.9%
2007	19.3%	8.5%	12.7%	7.7%	2.2%
2008	38.7%	5.8%	9.6%	5.6%	12.0%
Average Due Diligence Premium	19.5%	9.7%	16.4%	9.4%	2.9%

Source: eVestment Alliance and Cambridge Associates

University budgets. These lending and borrowing sources tend not to be available to the broad universe of investors.

The Due Diligence Premium

In order to understand why the Yale program may not have been successful for other investors, let's first look at resources. Large university endowments have dedicated, experienced professional investment staffs that conduct extensive due diligence on investment managers before they are considered for a mandate. Most investors do not have the resources or the experience to conduct this level of due diligence. As an example, Yale Endowment's investment office has 24 full-time investment professionals and the investment committee is composed of current and former industry titans. While best-in-class due diligence is important for all asset classes, it is especially important for illiquid asset classes such as private equity, real assets and hedge funds. Investment products for these asset classes tend to be more complicated in terms of fee, liquidity and legal arrangements and in turn can be more difficult to analyze. More importantly, for these asset classes the potential difference in return realized by selecting a top quartile investment manager versus a bottom quartile investment manager is much larger than the

difference realized in traditional equity and fixed income asset classes.

The table above illustrates the importance of manager selection and shows the "due diligence premium" of selecting an outperforming investment manager. The "due diligence premium" of manager selection is calculated as the difference between the return achieved by the manager ranking in the 25th percentile and the return achieved by the manager ranking in the 75th percentile. For the years 1999 through 2008, the average due diligence premium for private equity was exorbitant, at 19.5%! Even more drastic, had an investor picked an underperforming manager in 2008 alone they would have suffered— a 38.7% due diligence premium in that year. Small cap domestic equity also had a high average due diligence premium at 16.4%, although much of the difference in this asset class can be attributed to the earlier part of the decade when many managers were loading up on dot com names, while others stuck to their value discipline. Large cap domestic equity had an average due diligence premium of 9.7%, international equity 9.4%, and core fixed income a mere 2.9%. As the table clearly suggests, the importance of selecting a good investment manager is most apparent for illiquid asset classes versus traditional asset classes.

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Liquidity Concerns

Most investors have a definable liquidity need. For endowments and foundations, this is laid out in their spending policy and the need for funds to support their operational budget. For pension funds, this is defined by their obligations to their beneficiaries. For high net worth investors, this could be either a college tuition payment, retirement income or other planned expenses. For large university endowment funds however, liquidity is not as much of a concern. While they do have a spending policy that is largely based on recent year end market values, it is a relatively conservative percentage of a much larger total endowment market value. Very often, the operational budget is merely subsidized by the endowment as the university receives income from other sources such as student tuition payments and alumni donations. Also as previously mentioned, they have access to significant sources of external borrowing. So for the larger endowment programs, liquidity tends not to be a “disruptive event,” but for most other investors, liquidity clearly becomes an important consideration in declining equity markets.

Let’s look at an example of how a large allocation to illiquid asset classes would affect an investor most similar to that of a

large endowment fund—a smaller endowment fund. But importantly let’s look at the effects on the portfolio *going into a declining equity market*. For purposes of this example, we will call this endowment fund “Ace Endowment.” Let’s assume the Ace Endowment is a \$100 million endowment fund that has decided to move in the direction of the “Yale Model.” Let’s also assume it is the end of 2007, just prior to a large equity market decline. The Ace Endowment has decided to allocate 15% to domestic equity, 12% to domestic fixed income, 15% to foreign equity, 20% to hedge funds, 15% to private equity (committed), 20% to real assets (committed) and 3% to cash. The commitments to the private equity and real asset strategies are not typically called immediately, so we will assume the endowment is going to invest the committed capital in proportions equal to the asset allocation of the remaining funds (except hedge funds). If the money were to remain invested in cash before it was called, the endowment would only have 65% of their net assets invested during the initial period and thus would fall significantly behind peers if a bull market ensues. As the market declines, the Ace Endowment experiences a large decline in the value of their

Liquidity	12/31/2006	12/31/2007						2008	12/31/2008						
		Committed Allocation		Actual Allocations					Actual Allocations w/o Cap Draw			Rebalancing/ Funding	Actual Allocations w/ Cap Draw		
		%	\$	%	\$	+/- vs Target	Returns		%	\$	+/- vs Target		%	\$	+/- vs Target
High Domestic Equity		15%	15,000,000	26.7%	26,666,667	11.7%	-40%	20.5%	16,000,000	5.5%	(6,101,538)	12.7%	9,898,462	-2.3%	
High Foreign Equity		15%	15,000,000	26.7%	26,666,667	11.7%	-40%	20.5%	16,000,000	5.5%	(6,101,538)	12.7%	9,898,462	-2.3%	
High Domestic FI		12%	12,000,000	21.3%	21,333,333	9.3%	5%	28.8%	22,400,000	16.8%	(14,481,231)	10.2%	7,918,769	-1.8%	
Limited Hedge Funds		20%	20,000,000	20.0%	20,000,000	0.0%	-10%	23.1%	18,000,000	3.1%	(4,802,051)	16.9%	13,197,949	-3.1%	
Low Private Equity		15%	15,000,000	0.0%	-	-15.0%	0%	0.0%	-	-15.0%	15,000,000	19.3%	15,000,000	4.3%	
Low Real Assets		20%	20,000,000	0.0%	-	-20.0%	0%	0.0%	-	-20.0%	20,000,000	25.7%	20,000,000	5.7%	
High Cash		3%	3,000,000	5.3%	5,333,333	2.3%	3%	7.1%	5,493,333	4.1%	(3,513,641)	2.5%	1,979,692	-0.5%	
Total	95,238,095		100,000,000		100,000,000				77,893,333				77,893,333		
		Liquid Assets		59,893,333											
		Liabilities		39,552,190											
		Liabilities/Liquid Assets		66.0%											

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portfolio. However, the endowment's liabilities have only declined marginally. Since the spending policy is calculated at a standard rate of 5% of the last three year's rolling average year end market value, the 2009 spending requirement is higher than 5% of the 2008 ending market value. More significantly, the dollar amounts of capital committed to the private equity and real asset investments remain the same. Thus, the endowment now faces an undesirable predicament. The value of the liabilities (spending requirement + capital commitments) now amount to two-thirds of the market value of the liquid assets (domestic equity, domestic fixed income, foreign equity, and cash). If the private equity and real asset general partner were to suddenly draw down on limited partner commitments (perhaps not too far-fetched as many may have perceived inordinate buying opportunities during the market meltdown), the endowment would have to fund those commitments out of depressed asset classes, further moving them away from target allocations. In this example the Endowment would have been over-allocated to private

equity and real assets by a total of 10%—wanting only 35% of assets in these asset classes but having 45%!

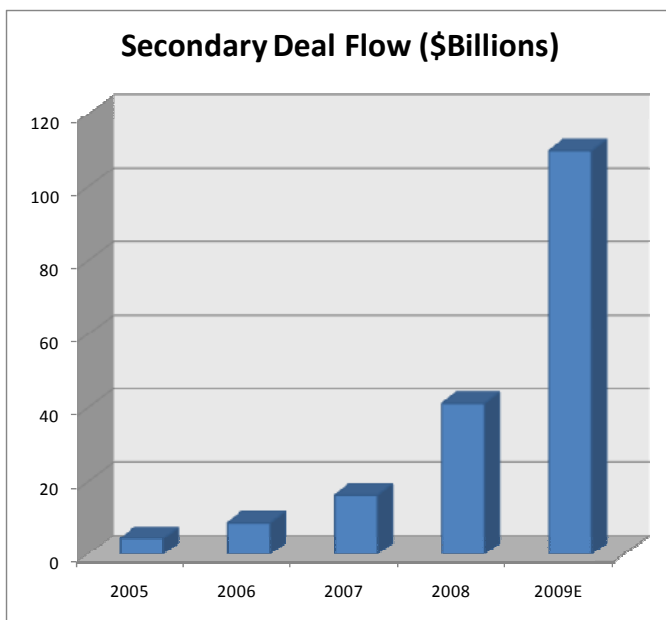
The Cumulative Effect

Many investors faced the predicament of being over-allocated to illiquid assets as was evidenced by the private equity secondary market activity during 2008-2009. The discount to NAV, volume of deal flow, and breadth of investors involved indicated that many were significantly over-committed to illiquid investments. As illustrated in the chart to the left, the volume of private equity secondary offerings went from less than \$20 billion in 2007 to more than \$100 billion in 2009. Also, the discount to NAV at which these secondary offerings were selling was at historic lows. More telling—while historically the players in this market have been mostly banks and family offices, there are now an increasing number of endowments, foundations and pension funds.

Was the Yale model good for other investors? Given these scenarios, clearly not.

2009—An Anomaly?

Now back to Yale—and the abysmal performance of 2009. The recent financial crises marked a period where global equity markets declined by nearly 30%. Portfolios with equity exposure were hurt, diversification became irrelevant in an environment of widespread declines, and illiquid investments further detracted from performance. In 2008/2009 the Yale endowment, was following the “Yale Model” of diversification and equity orientation with more than 95% of the portfolio invested in equity-like asset classes. *Was the Yale model good for Yale?* Observers certainly questioned the University's philosophy. Others pointed to the financial crises as an anomaly, and believe that the more consistent historical perspective, of expected equity returns exceeding expected bond returns, would be



Source: Pomona Capital

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Inevitable going forward if the capitalist system is to function properly.

At its annual June 2009 meeting, the Yale Investment committee made a number of interesting changes to the University's endowment portfolio. They increased private equity allocations from 21% to 26% to accommodate anticipated growth in that sector. Similarly, they increased real assets allocation from 29% to 37%. Surprisingly, these increased allocations to illiquid asset classes were funded by allocations away from more liquid asset classes. Over the longer term, in the past twenty years, the Yale Endowment has altered from a 70% allocation to domestic marketable securities in 1989, to less than a 12% allocation in 2009. Today, more than 88% of the portfolio is allocated to foreign equity, private equity, absolute return strategies, and real assets. *Is the Yale model good for Yale?* Time will tell, but the investment professionals at Yale are clearly doing one thing—sticking with their investment philosophy.

To select asset managers in a variety of illiquid asset classes an investor must have the resources to perform quality, in-depth due diligence; otherwise much of the excess expected return evaporates.

ity constraints—but major university endowments are a rare investor type.

To select asset managers in a variety of illiquid asset classes an investor must have the resources to perform quality, in-depth due diligence; otherwise much of the excess expected return evaporates. This can also be disastrous for trustees as they face significant risk in selecting an underperforming manager. It is also important to stagger the inception dates when committing capital to illiquid investments. While the example we demonstrated is an extreme case, often times investors will over-commit to illiquid investments, taking on too much liquidity risk. It is more prudent to allow the higher expected return of these asset classes to run its course and increase the percent allocated to illiquid investments over several market cycles. Larger endowment programs use this approach and it enables them to manage liquidity issues by funding capital commitments to new investments with distributions from more mature investments.

Overall, there is a historical premium that investors gain by investing in illiquid investments. However, careful consideration should be given to an investor's specific objectives, constraints, due diligence capabilities, and liquidity needs before determining a prudent asset allocation.

Conclusion

So what have we learned from the past decade about the Yale Model and large endowment investing? Well, certainly over the longer term, and in the absence of a cataclysmic financial event, the Yale model has clearly worked for Yale, and the philosophy behind the investment strategy appears to be sound and fitting given the infinite investment horizon and lax liquid-

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A Message from Clearbrook's Leadership team...

In-no-va-tion Function: *noun* Date: 15th century **1** : the introduction of something new **2** : a new idea, method, or device

As Peter Drucker, the father of modern management once said, "Innovation is the specific tool of entrepreneurs, the means by which they exploit change as an opportunity for a different business or a different service. It is capable of being presented as a discipline, capable of being learned, capable of being practiced."

At Clearbrook innovation is central to our core principles. Everyday Clearbrook employees apply innovative thinking in developing investment solutions for their clients, in finding innovative ways of doing business with their advisors, and in devising innovative approaches to their overall business issues. At Clearbrook innovation is a discipline, and it is practiced on a daily basis to the benefit of all of our clients. Again, we hope this Perspectives series is helpful and that this information continues to provide you with positive insight and perspective on Clearbrook.

Sincerely,

John Morris
Chairman

Robert Mooney
Chief Executive Officer

Elliott Wislar
President

Who We Are

We are an independent investment advisory firm whose core business is to provide investment and strategic advice, investment solutions, and related wealth advisory services to institutions, individuals and financial intermediaries worldwide. As of December 31, 2009, Clearbrook Investment Consulting, a subsidiary of Clearbrook, had more than \$30 billion in client assets under advisement.

What We Do

We offer a range of investment services and solutions to institutions, family offices and private clients, and financial intermediaries. We focus on professionalism, innovation and transparency for our clients.

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- Implemented Investment Solutions
- Access to a Broad Array of Money Managers
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