The Yale Endowment 2010

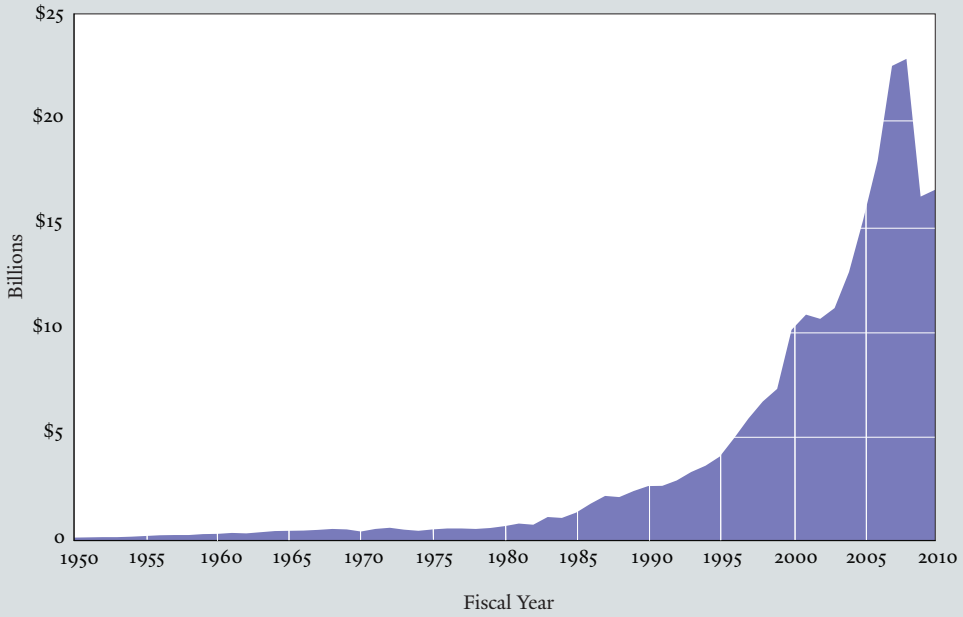
Endowment Highlights

	Fiscal Year				
	2010	2009	2008	2007	2006
Market Value (in millions)	$16,652.1	$16,326.6	$22,869.7	$22,530.2	$18,030.6
Return	8.9%	-24.6%	4.5%	28.0%	22.9%
Spending (in millions)	$ 1,108.4	$ 1,175.2	$ 849.9	$ 684.0	$ 616.0
Operating Budget Revenues (in millions)	2,681.3	2,559.8	2,280.2	2,075.0	1,932.0
Endowment Percentage	41.3%	45.9%	37.3%	33.0%	31.9%

Asset Allocation (as of June 30)

Absolute Return	21.0%	24.3%	25.1%	23.3%	23.3%
Domestic Equity	7.0	7.5	10.1	11.0	11.6
Fixed Income	4.0	4.0	4.0	4.0	3.8
Foreign Equity	9.9	9.8	15.2	14.1	14.6
Private Equity	30.3	24.3	20.2	18.7	16.4
Real Assets	27.5	32.0	29.3	27.1	27.8
Cash	0.4	-1.9	-3.9	1.9	2.5

Endowment Market Value 1950–2010



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Front Cover:
Window of Sterling Memorial Library, east façade.

Right:
Branford Courtyard in the spring.

A Message from the Yale University President

Yale's Endowment provides a critical foundation for the University's mission, supporting today's scholars with annual spending distributions while promising to maintain support for generations to come. The central importance of the University's permanent resources became acutely clear during the recent financial crisis.

During this period of economic difficulty, we are as fortunate as ever to have the management of Yale's financial resources in capable hands. Chief Investment Officer David F. Swensen and his talented staff continue their tireless efforts in support of Yale's mission. The Investments Office's stellar long-term record of wealth creation provides a critical underpinning of the University's current operations and future aspirations.

Just as I am thankful for the strength of the University's investment staff, so am I grateful for the extraordinary work of the Yale Corporation Investment Committee. Chaired by Douglas A. Warner, the Investment Committee is composed of Fellows of the Yale Corporation and other distinguished Yale alumni who bring formidable judgment and expertise to the oversight of Yale's investment program.

As a member of the Investment Committee, I witness firsthand the contribution of these industrious and dedicated Yale men and women. Our discussions are thoughtful, rigorous, and vibrant. Amid turbulent markets and an uncertain economy, the Investment Committee has provided a steady hand at the tiller, offering indispensable guidance with a perspective that befits Yale's long-term goals.

Sensible management and oversight of Yale's investment portfolio cannot alone ensure that Yale will have the financial resources it needs. An institution with Yale's scope and ambition needs active and supportive alumni and friends to help build the Endowment. Gifts to Yale have fueled the University's growth throughout the centuries. Today, more than ever, Yale needs your support.

Under the care of highly skilled investment professionals and a strong Investment Committee, I am confident that the University's financial resources will continue to support its dynamic and ever-expanding mission. I hope that you enjoy, as I have, this report on the 2010 Yale Endowment, which provides a distillation of the thinking that guides the management of Yale's financial resources.

Richard C. Levin

University President Richard C. Levin '74 PH.D. (right), with Investment Committee Chair Douglas A. Warner III '68 (left) and Chief Investment Officer David F. Swensen '80 PH.D.

A Message from the Chief Investment Officer

During financial crises, investors frequently shorten their perspective to an unreasonably short time horizon and often engage in counterproductive activities. In 1987, after the October market crash, portfolio managers sold stocks and bought bonds—selling low, buying high, and damaging portfolio prospects. In 1998, amid Long-Term Capital Management's threat to the financial system, many investors rushed to exit hedge fund positions, liquidating accounts at the point of maximum pain (and maximum prospective opportunity). In 2008, during the most recent crisis, investors behaved as they did in 1987 and 1998, disposing of assets that carried risk and illiquidity in favor of risk-free and ultra-liquid U.S. government bonds.

After the onset of the 2008 crisis, Yale's approach to endowment management, with its focus on equities and emphasis on alternatives, received a great deal of criticism. A November 2008 *Barron's* article, titled "Crash Course," typified the negative press, suggesting that the Yale model called for too much in alternatives and provided too little diversification. The antidote—more traditional stocks and bonds.

Barron's was promoting the trade of the day. Investors with large allocations to marketable bonds (particularly U.S. Treasury securities) and publicly traded equities fare better in the heart of a crisis (as the bonds benefit from a flight to safety) and in the immediate aftermath of a crisis (as the stocks benefit from a relief rally). Viewed in the narrow timeframe of the crisis, liquid assets performed better than illiquid assets and safe assets performed better than risky assets. Viewed in a timeframe more appropriate for a long-term investor, well-chosen positions in illiquid assets perform better than otherwise comparable liquid assets and well-selected portfolios of risky assets produce better returns than risk-free U.S. Treasury securities.

Throughout the crisis, Yale resisted the flight to a safe haven and maintained its equity-oriented, well-diversified portfolio. With an investment horizon measured in decades, if not centuries, a commitment to equities generates the long-term returns necessary to provide significant support for current scholars, while maintaining purchasing power for future generations. Substantial allocations to alternative assets offer a level of diversification unavailable to investors in traditional assets, allowing the creation of portfolios with superior risk and return characteristics.

Consider Yale's ten-year return of 8.9 percent per annum, which remains atop the institutional rankings. During that period, a portfolio with 70 percent in domestic marketable equities and 30 percent in domestic bonds returned a disappointing 1.5 percent per year. Yale's alternative asset classes produced far superior results, with private equity returning 6.2 percent per year, real estate 6.9 percent per year, absolute return 11.1 percent per year, timber 12.1 percent per year, and oil and gas 24.7 percent per year. When evaluated over a reasonably long time horizon, alternatives (many of which are illiquid) contributed mightily to the University's results.

During the decade ending June 30, 2010, Yale's investment program added $7.9 billion relative to the results of the average endowment. The University's twenty-year returns tell a similar story. A market-leading return of 13.1 percent per annum produced $12.1 billion in value added to support Yale's mission of teaching and research. Sensible long-term policies, grounded by a commitment to equities and a belief in diversification, underpin the University's investment success.

David F. Swensen

Introduction

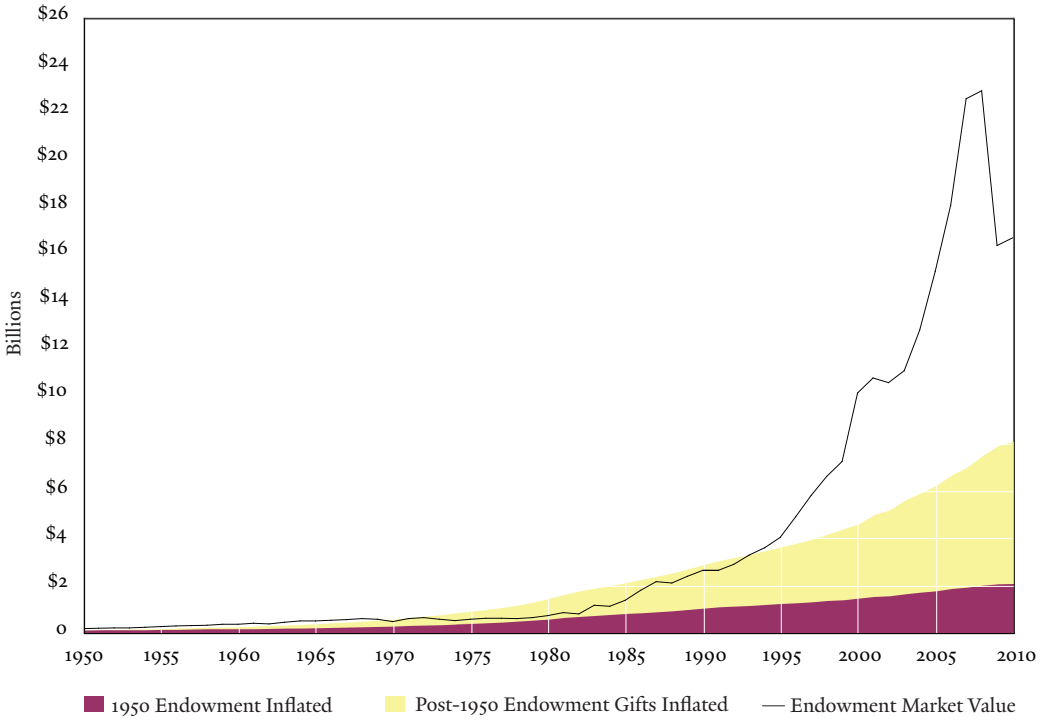
1

Yale's Endowment generated an 8.9 percent return in fiscal year 2010, producing an investment gain of $1.4 billion.

Over the past ten years, the Endowment grew from $10.1 billion to $16.7 billion. With annual net investment returns of 8.9 percent, the Endowment's performance exceeded its benchmark and outpaced institutional fund indices. The Yale Endowment's twenty-year record of 13.1 percent per annum produced a 2010 Endowment value of over six times that of 1990. Yale's long-term record results from disciplined and diversified asset allocation policies and superior active management results.

Spending from the Endowment grew during the last decade from $281 million to $1,108 million, an annual growth rate of approximately 15 percent. On a relative basis, Endowment contributions expanded from 22 percent of total revenues in fiscal 2000 to 41 percent in fiscal 2010. In fiscal 2011, spending will amount to $986 million, or 38 percent of projected revenues. Yale's spending and investment policies have provided support for current scholars while preserving Endowment purchasing power for future generations.

Endowment Growth Outpaces Inflation 1950–2010



The Yale Endowment

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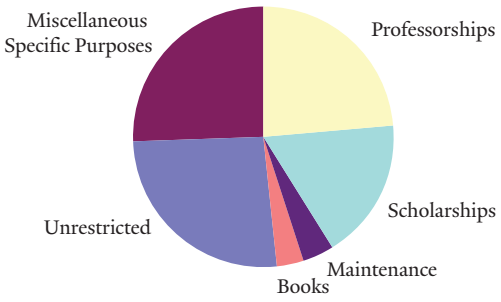
Totaling $16.7 billion on June 30, 2010, the Yale Endowment contains thousands of funds with a variety of designated purposes and restrictions. Approximately three-quarters of funds constitute true endowment, gifts restricted by donors to provide long-term funding for designated purposes. The remaining one-quarter represent quasi-endowment, monies that the Yale Corporation chooses to invest and treat as endowment.

Donors frequently specify a particular purpose for gifts, creating endowments to fund professorships, teaching, and lectureships (24 percent), scholarships, fellowships, and prizes (18 percent), maintenance (4 percent), books (3 percent), and miscellaneous specific purposes (26 percent). Twenty-five percent of funds are unrestricted. Thirty-five percent of the Endowment benefits the overall University, with remaining funds focused on specific units, including the Faculty of Arts and Sciences (29 percent), the professional schools (23 percent), the library (7 percent), and other entities (6 percent).

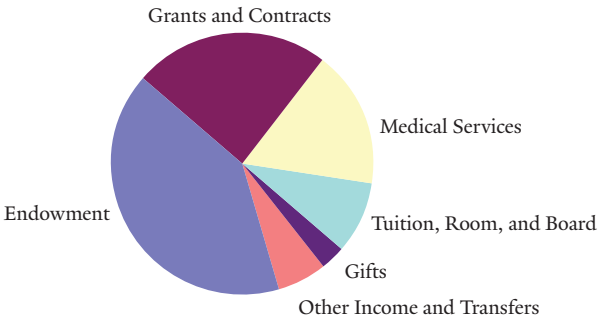
Although distinct in purpose or restriction, Endowment funds participate in a commingled investment pool and are tracked with unit accounting much like a large mutual fund. Endowment gifts of cash, securities, and property are valued and exchanged for units that represent a claim on a portion of the whole investment portfolio.

In fiscal 2010 the Endowment provided $1,108 million, or 41 percent, of the University's $2,681 million of operating income. Other major sources of revenues were grants and contracts of $641 million (24 percent), medical services of $462 million (17 percent), net tuition, room, and board of $230 million (9 percent), gifts of $82 million (3 percent), and other income and transfers of $157 million (6 percent).

Endowment Fund Allocation
Fiscal Year 2010



Operating Budget Revenue in Millions
Fiscal Year 2010



Gifts and Endowment

Strong growth in the Endowment during the past two decades raises questions about contributing to an already wealthy Yale. The answer is simple: had the Endowment not benefited from generous gifts in recent decades, current support for Yale's broad program of education and research would be vastly diminished. Although the Yale Endowment is one of the largest in the world, donor support remains critical to the future of the University.

Gifts Support Yale's Growth

Over the past century, the growth of the Yale Endowment enabled dramatic expansion of the University's programs. In 1910 the Yale Endowment totaled $12.1 million and funded 50 percent of the budget. One hundred years later, the Endowment amounted to $16.7 billion and provided 41 percent of the University's budget. The beginning point of 50 percent and the end point of 41 percent both represent significant departures from the average Endowment support of 34 percent of Yale's operations over the last one hundred years.

In 1910, Yale had 3,317 students enrolled in the College and eight graduate and professional schools; as of June 30, 2010, Yale had 11,520 students enrolled in the College and thirteen postgraduate schools. The expansion was dramatic across the board. New schools founded in those one hundred years include the School of Architecture, the School of Drama, and the School of Management. The School of Medicine expanded its program dramatically in the past century. The growth of the Yale faculty was even more striking. As of June 30, 2010, Yale employed 3,227 faculty members, approximately eight times the 1910 figure.

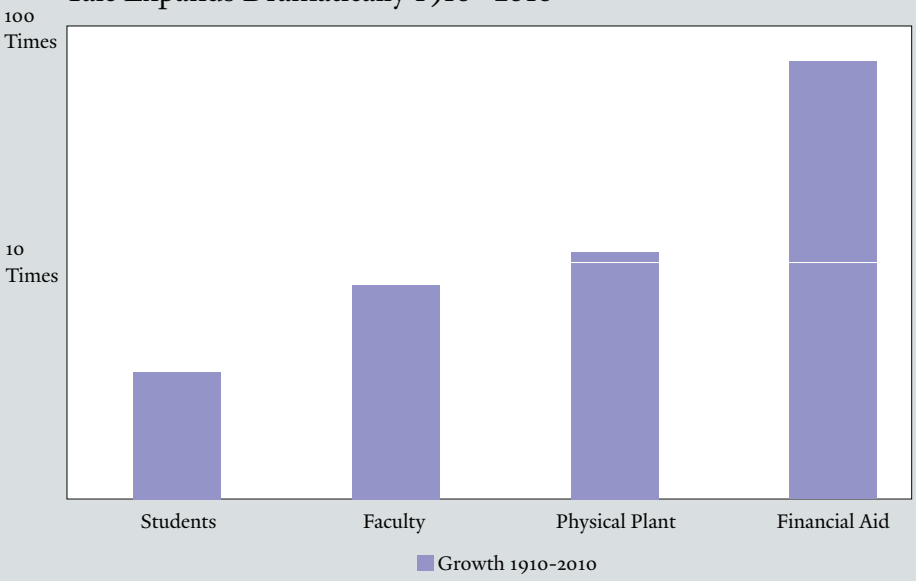
With expansion in the number of students and faculty at Yale came explosive growth in the size of the campus. In 1910, Yale's physical plant totaled approximately 1.5 million square feet; one hundred years later, that figure was around 17.5 million square feet, easily outpacing the growth in students and faculty. Most dramatic, though, was the exponential growth of financial aid offered by Yale. In the 1910 fiscal year, when much of the University's student body came from affluent backgrounds, financial aid totaled only $4.2 million in 2010 dollars. In the year ending June 30, 2010, Yale offered $296.7 million of financial aid, an amazing 71-fold increase from one hundred years earlier.

Gifts Maintain the Endowment's Relevance

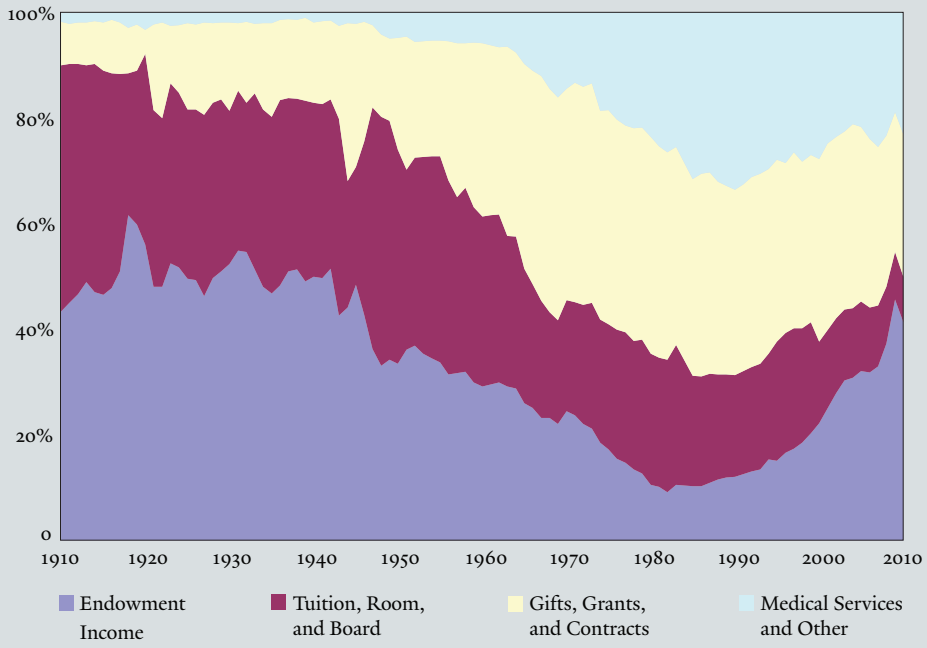
Examining the experience of Harvard, Yale, and the Carnegie Institution over the past one hundred years provides insight into the importance of gifts. The Carnegie Institution of Washington, one of Andrew Carnegie's many philanthropies, pursues cutting-edge scientific research in astronomy, plant biology, embryology, global ecology, terrestrial magnetism, and earth sciences. After establishing the institution in 1902 with a $10 million gift, Carnegie made subsequent gifts to bring the 1910 endowment to $22 million, nearly equal to Harvard's 1910 fund balance of $23 million and vastly exceeding Yale's $12 million.

Over the course of the past one hundred years, the Carnegie Institution endowment more than kept pace with inflation, with June 30, 2010 assets of $687 million comfortably ahead of the approximately $500 million needed to match the rise in price levels. But the formerly comparable Harvard endowment, now at $27.6 billion,

Yale Expands Dramatically 1910–2010

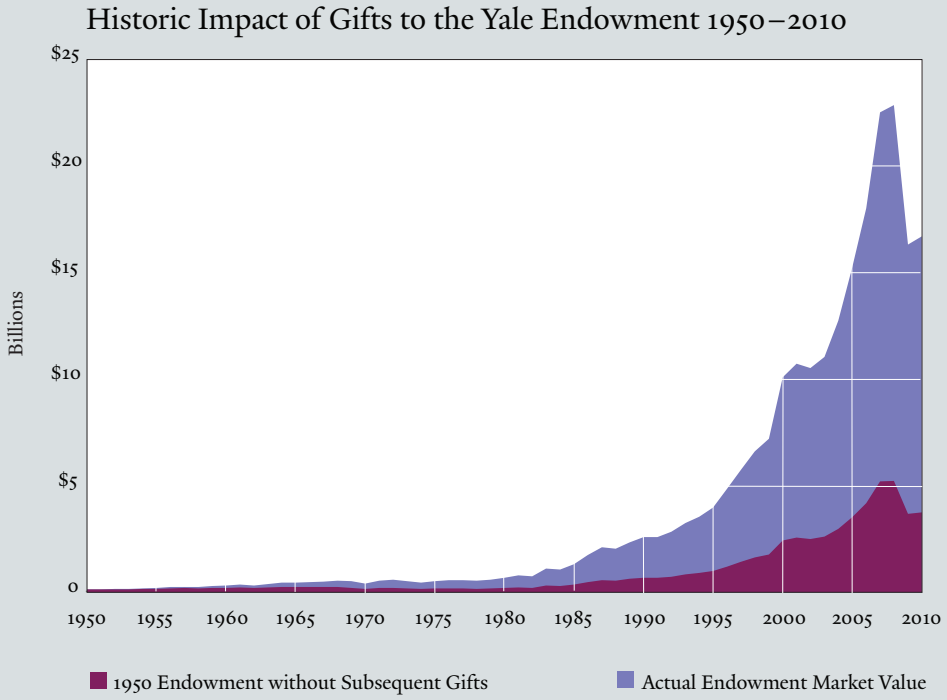


University Revenue by Source 1910–2010



and the previously smaller Yale Endowment, currently at $16.7 billion, dwarf the Carnegie fund. Because the three institutions followed roughly comparable investment and spending policies, the absence of continuing gift inflows constitutes the single most important reason for Carnegie's failure to keep pace. The result is that Carnegie's endowment, once one of the largest in the country, now ranks far lower. By way of comparison, had the Yale Endowment grown at the same rate as Carnegie's, it would total approximately $375 million today; Endowment spending would have been an insignificant $25 million in fiscal 2010, compared to the actual figure of $1.1 billion.

A more precise understanding of the importance of gifts to the Endowment comes from a look at Yale's post-1950 experience, covering the period for which the University has high-quality financial data. Without the benefit of Endowment gifts to Yale in the last sixty years, the 1950 Endowment of $132 million would have grown to about $3.8 billion by 2010 rather than $16.7 billion. The difference—a staggering $12.9 billion—comes from gifts and investment performance on those gifts. Yale's current academic distinction would be unthinkable without these financial contributions. Looking forward, Yale will fail to maintain its importance as a global center for teaching and research unless donors continue to provide Endowment support.



Harkness Tower and the New Haven skyline.

Investment Policy

3

Yale's portfolio is structured using a combination of academic theory and informed market judgment. The theoretical framework relies on mean-variance analysis, an approach developed by Nobel laureates James Tobin and Harry Markowitz, both of whom conducted work on this important portfolio management tool at Yale's Cowles Foundation. Using statistical techniques to combine expected returns, variances, and covariances of investment assets, Yale employs mean-variance analysis to estimate expected risk and return profiles of various asset allocation alternatives and to test sensitivity of results to changes in input assumptions.

Because investment management involves as much art as science, qualitative considerations play an extremely important role in portfolio decisions. The definition of an asset class is quite subjective, requiring precise distinctions where none exist. Returns and correlations are difficult to forecast. Historical data provide a guide, but must be modified to recognize structural changes and compensate for anomalous periods. Quantitative measures have difficulty incorporating factors such as market liquidity or the influence of significant, low-probability events. In spite of the operational challenges, the rigor required in conducting mean-variance analysis brings an important perspective to the asset allocation process.

The combination of quantitative analysis and market judgment employed by Yale produces the following portfolio:

David F. Swensen '80 PH.D.
Chief Investment Officer

Dean J. Takahashi '80, '83 MPPM
Senior Director

Asset Class	June 2010 Actual	June 2010 Target
Absolute Return	21.0%	19.0%
Domestic Equity	7.0	7.0
Fixed Income	4.0	4.0
Foreign Equity	9.9	9.0
Private Equity	30.3	33.0
Real Assets	27.5	28.0
Cash	0.4	0.0

The target mix of assets produces an expected real (after-inflation) long-term growth rate of 6.2 percent with a risk (standard deviation of returns) of 14.7 percent. Because actual holdings differ from target levels, the actual allocation produces a portfolio expected to grow at 6.1 percent with a risk of 14.3 percent. The University's measure of inflation is based on a basket of goods and services specific to higher education that tends to exceed the Consumer Price Index by approximately one percentage point.

At its June 2010 meeting, Yale's Investment Committee adopted a number of changes in the University's policy portfolio allocations. The Committee approved an increase in the private equity target from 26.0 percent to 33.0 percent to accommodate anticipated growth in private equity exposure and decreased the real assets target allocation from 37.0 percent to 28.0 percent. These changes in the illiquid asset classes were balanced by a 4.0 percentage point increase in the absolute return target allocation to 19.0 percent, a 0.5 percentage point decrease in the domestic equity target allocation to 7.0 percent, a 1.0 percentage point decrease in the foreign equity target allocation to 9.0 percent, and a 0.5 percentage point decrease in the cash target allocation to zero percent.

The need to provide resources for current operations as well as preserve purchasing power of assets dictates investing for high returns, causing the Endowment to be biased toward equity. In addition, the University's vulnerability to inflation further directs the Endowment away from fixed income and toward equity instruments. Hence, more than 95 percent of the Endowment is targeted toward investment in assets expected to produce equity-like returns, through holdings of domestic and international securities, real assets, and private equity.

Over the past two decades, Yale dramatically reduced the Endowment's dependence on domestic marketable securities by reallocating assets to nontraditional asset classes. In 1990, almost three-fourths of the Endowment was committed to U.S. stocks, bonds, and cash. Today, target allocations call for 11.0 percent in domestic marketable securities, while the diversifying assets of foreign equity, private equity, absolute return strategies, and real assets dominate the Endowment, representing 89.0 percent of the target portfolio.

The heavy allocation to nontraditional asset classes stems from their return potential and diversifying power. Today's actual and target portfolios have significantly higher expected returns and lower volatility than the 1990 portfolio. Alternative assets, by their very nature, tend to be less efficiently priced than traditional marketable securities, providing an opportunity to exploit market inefficiencies through active management. The Endowment's long time horizon is well suited to exploiting illiquid, less efficient markets such as venture capital, leveraged buyouts, oil and gas, timber, and real estate.

Peter H. Ammon '05 M.B.A., '05 M.A.
Director

Alexander C. Banker
Director

Policy Asset Allocation Targets

Policy asset allocation targets provide the foundation for the investment process, as no other aspect of portfolio management plays as great a role in determining a fund's ultimate performance. Yale derives its target allocation using a combination of quantitative and qualitative analysis. By employing the quantitative tool of mean-variance optimization, the Investments Office identifies efficient portfolios with expected returns that surpass those of all other portfolios for the same level of risk. Inputs to the process include estimated return, risk, and correlation measures for different asset classes. Important qualitative considerations include the nature of active management opportunities, the degree of asset class illiquidity, and Yale's comparative advantages as an investor and active manager.

In producing portfolio recommendations, the Investments Office complements top-down mean-variance optimization with bottom-up assessment of market conditions. By evaluating the absolute and relative attractiveness of investment opportunities uncovered by Yale's far-ranging roster of external investment managers, the Investments Office directs funds toward more attractive opportunities and away from less compelling situations. That said, given the long-term nature of policy targets, bottom-up considerations play a secondary part in the asset allocation process relative to the lead role of mean-variance optimization.

In June 2010 the University adopted a number of changes in its policy targets. Real assets moved from a target of 37.0 percent to 28.0 percent, private equity moved from 26.0 percent to 33.0 percent, absolute return moved from 15.0 percent to 19.0 percent, foreign equity moved from 10.0 percent to 9.0 percent, and domestic equity moved from 7.5 percent to 7.0 percent.

Yale's newly adopted target asset allocation produces an expected real (after-inflation) long-term growth rate of 6.2 percent per annum with a risk (standard deviation of returns) of 14.7 percent. This risk-return combination compares favorably to the average endowment portfolio, which offers a lower expected real return with higher risk. Yale's spending disruption risk—defined as the likelihood of a real reduction of 10 percent in spending from the Endowment over any five-year period—is 28 percent for the current target portfolio. Impairment risk—defined as the likelihood of losing half of purchasing power over a fifty-year horizon—is 17 percent. In contrast, the average endowment runs a 35 percent chance of spending disruption and a 28 percent chance of impairment.

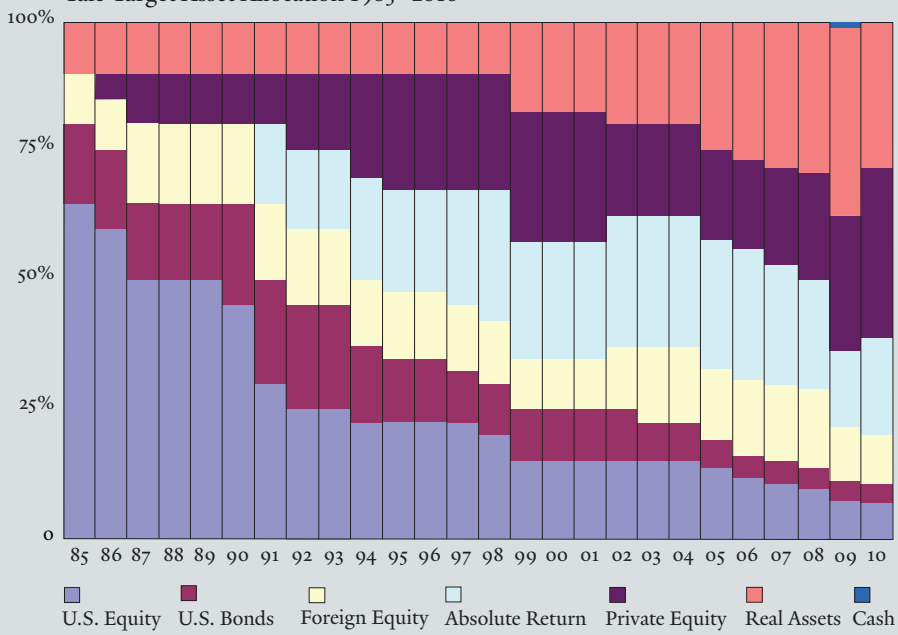
Even though Yale's portfolio has changed dramatically from its position in the mid 1980s, moving from a typical institutional portfolio dominated by marketable securities to a well-diversified, equity-oriented collection of assets, the year-to-year changes tended to be small. Most years saw changes in targets of 5.0 percent or less; in fact, in seven of twenty-five years no changes occurred at all.

Yale reviews asset allocation targets only once per year, limiting the possibility of damage from ill-considered moves made in response to the transient gloom or euphoria surrounding market movements. During the 1987 stock market crash, a 25-standard-deviation event in which the domestic equity market fell more than 20 percent in one day, Yale maintained policy targets in the face of pressure to move assets out of stocks into fixed income. In fact, shortly following the crash, Yale purchased tens of millions of dollars of S&P Index futures to rebalance the portfolio to long-term targets. While other institutions sold depressed equities, purchased inflated bonds, and missed the ensuing recovery, Yale held positions it had adopted as part of the June 1987 annual policy target review. Accordingly, the University benefited from a sensible long-term portfolio allocation.

Serious investors recognize that the principles of diversification and equity-orientation underlie successful long-term investment strategies. Yet many institutions fail to honor these basic tenets. In the mid 1980s typical endowment portfolios exhibited neither diversification nor equity orientation, with roughly 50 percent in domestic equities, 45 percent in domestic bonds and cash, and 5 percent in alternative strategies. Two and a half decades later, average allocations have made substantial progress, with approximately 17 percent in domestic equities, 18 percent in bonds and cash, and 65 percent in alternative strategies. But Yale remains ahead of the curve: with the Endowment's six asset classes exhibiting allocations between 4 percent and 33 percent, the portfolio meets the test of diversification; with five high expected return asset classes accounting for 96 percent of assets, the portfolio embodies a substantial equity-orientation. By implementing a diversified, equity-oriented asset allocation, Yale's Endowment is well positioned to serve the needs of both current and future generations of scholars.

Yale's Portfolio Achieved Diversification by the Mid 1990s

Yale Target Asset Allocation 1985–2010



Prior to 1999, real assets was made up solely of real estate. Oil and gas and timber were classified as private equity.

Asset Class Characteristics

Yale's six asset classes are defined by differences in their expected response to economic conditions, such as price inflation or changes in interest rates, and are weighted in the Endowment portfolio by considering risk-adjusted returns and correlations. The University combines the asset classes in such a way as to provide the highest expected return for a given level of risk.

Absolute Return

In July 1990, Yale became the first institutional investor to pursue absolute return strategies as a distinct asset class, beginning with a target allocation of 15.0 percent. Unlike traditional domestic and foreign equity investments, absolute return investments provide returns largely independent of broad market moves. In contrast with diversifying investments such as cash and bonds, absolute return strategies have excellent prospects of generating high long-term real returns.

Absolute return investments seek to generate high long-term real returns by exploiting market inefficiencies. The absolute return portfolio is managed by investment firms pursuing a wide variety of strategies, which can be broadly categorized as event-driven or value-driven. Event-driven strategies generally involve hedged investments in mispriced securities and depend on specific corporate events, such as mergers or bankruptcy settlements, to achieve targeted returns. Value-driven strategies also entail hedged investments in mispriced securities, but rely on changing company fundamentals or increasing market awareness to drive prices toward fair value.

Today, the absolute return portfolio is targeted to be 19.0 percent of the Endowment. In contrast, the average educational institution allocates 24.6 percent of assets to such strategies. Event-driven strategies are expected to generate real returns of 5.5 percent and value-driven strategies are expected to generate real returns of 5.0 percent, both with risk levels of 15.0 percent.

An important attribute of Yale's absolute return investment strategy concerns the alignment of interests between investors and investment managers. To that end, absolute return accounts are generally structured with performance-related incentive fees, hurdle rates, and clawback provisions. In addition, managers invest a significant portion of their net worth side by side with Yale. In any investment arrangement, when gains are strong, managers benefit and Yale profits. But if losses are incurred, only providers of capital suffer. Significant general partner co-investment ensures that losses will be felt by both the manager and Yale. By aligning the interests of Yale and its managers, the University avoids many of the potential pitfalls of the principal-agent relationship.

Given the opportunistic nature of the absolute return asset class, Yale seeks to vary allocations in response to changes in the investment environment. Fluctuations in bankruptcy rates and merger activity, as well as changes in the regulatory environment and in valuation levels, all affect the relative attractiveness of absolute return strategies. Yale structures accounts to allow timely cash flows (in and out) in order to match asset size with investment opportunities. The University is wary of dedicated specialist funds that lock up investor assets and encourage managers to put money to work regardless of the investment climate. Yale prefers to hire managers that possess the depth and scope of experience to evaluate and invest in more than one strategy.

Alan S. Forman
Director

Timothy R. Sullivan '86
Director

Since June 30, 1990, the absolute return portfolio has achieved its goal of generating high returns with modest volatility and low correlation to domestic equity markets. The portfolio has returned an annualized 11.5 percent in the twenty years since its inception, outperforming its benchmark by 0.8 percent. In addition, the portfolio has outperformed the Wilshire 5000 Index return of 7.9 percent over the relevant time period. The monthly standard deviation of the portfolio was a remarkably low 5.3 percent annualized, relative to 15.4 percent volatility exhibited by the Wilshire 5000. The correlation of monthly returns with the Wilshire 5000 has been 0.16, highlighting the significant diversifying effect of the asset class.

Domestic Equity

Finance theory predicts that equity holdings will generate returns superior to those of less risky assets such as bonds and cash. Traditionally a predominant asset class in U.S. institutional portfolios, domestic equity represents a large, liquid, and heavily researched market. While the average educational institution invests 17.1 percent of assets in domestic equities, Yale's target allocation to this asset class is only 7.0 percent. The domestic equity portfolio has an expected real return of 6.0 percent with a standard deviation of 20.0 percent. The Wilshire 5000 Index serves as the portfolio benchmark.

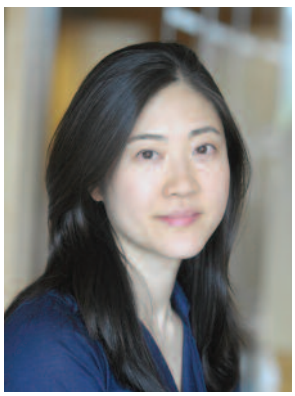
Despite recognizing that the U.S. equity market is highly efficient, Yale elects to pursue active management strategies, aspiring to outperform the market index by a few percentage points annually. Because superior stock selection provides the most consistent and reliable opportunity for generating excess returns, the University favors managers with exceptional bottom-up fundamental research capabilities.

Stephanie S. Chan '97
Associate General Counsel

In constructing the domestic equity portfolio, Yale pays little attention to benchmark allocations. In fact, the current portfolio consists of a variety of specialists seeking to apply in-depth knowledge to concentrated portfolios of securities. The combination of a number of idiosyncratic manager portfolios bears little resemblance to broad-based market indices. While such a portfolio almost guarantees short-term deviation from market returns, the focused application of deep knowledge to the security selection process sows the seeds for longer-term investment success.

Yale's portfolio is typically biased toward small-capitalization stocks that are cheap in relation to fundamental measures such as book value, earnings, or cash flow. Such stocks generally outperform the market over the long term, albeit with higher volatility of returns. Patient investors reap rewards for taking uncomfortable positions in out-of-favor sectors and securities. Yale's overweighting of small-capitalization stocks offers better opportunities for managers to generate excess returns because larger-capitalization stocks tend to be better followed and more efficiently priced than small-capitalization stocks.

When engaging active managers, Yale structures relationships that align the University's interests with its managers' interests. Too many money managers profit by gathering assets at the expense of generating strong investment returns. Significant manager co-investment aligns interests, as does a manager's desire to behave as a true fiduciary.



Deborah S. Chung
Associate General Counsel

Yale often develops new investment management relationships with promising "young and hungry" principals or with experienced groups working independently for the first time. Newer organizations typically have a modest amount of assets under management and something to prove. As investment management organizations progress through their life cycle, Yale monitors relationships carefully to ensure that interests continue to coincide, that assets under management remain at reasonable levels, and that managers stay motivated and capable.

The Investments Office monitors the size of actively managed portfolios, shifting capital both to rebalance market sector exposure and to take advantage of tactical opportunities. Capital allocation to individual managers takes into consideration the sector exposures of the domestic equity portfolio, the degree of confidence Yale possesses in a manager, and the appropriate asset size for a particular strategy. When the University perceives compelling undervaluation in a sector of the market, Yale may allocate additional capital to existing managers and, perhaps, hire new managers to take advantage of the opportunity.

Yale's domestic equity portfolio contains a group of intelligent and dedicated managers with high integrity, sound investment philosophies, strong track records, superior organizations, and competitive advantages. In spite of the difficulty of identifying mispriced securities, by employing a sufficiently long time horizon, the University expects to benefit from the efforts of its domestic equity managers.

Given the efficiency of the U.S. equity market, the University's performance in the asset class has been remarkable. Over the ten years ending June 30, 2010, Yale's domestic equity portfolio returned 6.7 percent per annum, outperforming the Wilshire 5000 by 7.4 percent annually and generating $1.13 billion in value added relative to the portfolio's benchmark.

Kenneth R. Miller '71
Associate General Counsel

J. Colin Sullivan
Associate General Counsel

Exterior of Saybrook College dining hall.

Diversification and Its Long-Term Benefits

Market return studies indicate that high levels of equity market exposure benefit long-term investors. However, the associated risks come through less clearly. Significant concentration in a single asset class poses extraordinary risk to portfolio assets. Fortunately, diversification provides investors with a powerful risk management tool. By combining assets that vary in response to forces that drive markets, investors create more efficient portfolios. At a given risk level, properly diversified portfolios provide higher returns than less diversified portfolios. Conversely, through appropriate diversification, a given level of returns can be achieved at lower risk. Harry Markowitz, known as the father of modern portfolio theory, maintains that portfolio diversification provides investors with a "free lunch," since risk can be reduced without sacrificing expected return.

Yale's Endowment pioneered diversification into alternative asset classes like absolute return, real assets, and private equity. By the mid 1990s, Yale achieved most of the gains in portfolio efficiency available from a diversified, equity-oriented approach. Today, the University boasts one of the most diversified institutional portfolios, with allocations to six asset classes with weights ranging from 4.0 percent to 33.0 percent. Yale's allocations of 7.0 percent to domestic equity and 4.0 percent to fixed income cause only 11.0 percent of the University's assets to be invested in traditional U.S. marketable securities. In contrast, the average endowment has over a third of its assets in U.S. stocks, bonds, and cash.

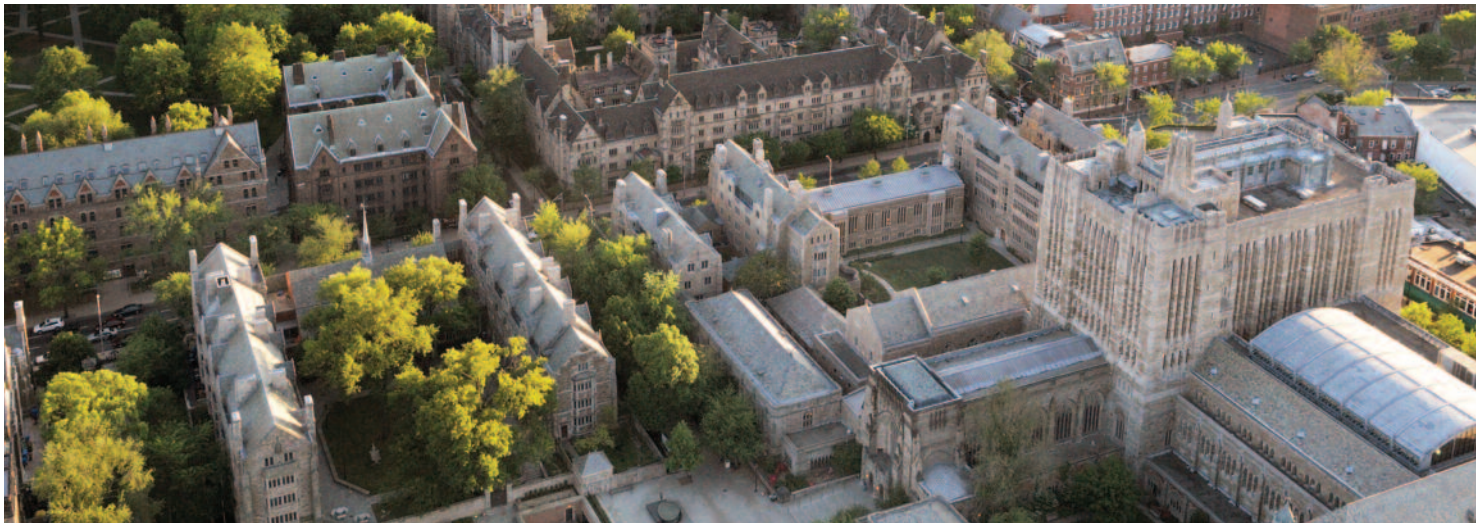
Sticking with portfolio diversification can be painful in the midst of a bull market. When mindless momentum strategies produce great returns, market observers wonder about the benefits of creating a well-structured portfolio. Consider the stock market bubble at the turn of the millennium. In the five years ending June 30, 2000, the S&P 500 returned an amazing 23.8 percent per year, trouncing the performance of foreign developed and foreign emerging markets, which returned 9.7 percent and negative 1.1 percent per year, respectively. During the same period, the median educational endowment returned 16.6 percent annually. Simply owning the S&P 500 would have generated a wealth multiple of 2.9 times, while the average endowment lagged with a multiple of 2.2 times.

By the late 1990s, many investors questioned the wisdom of owning any assets other than U.S. equities, especially high-flying technology stocks, asserting the inherent superiority of American companies and the inevitable dominance of high tech businesses. Not surprisingly, U.S. equity markets eventually collapsed. When the bull market came to a halt in the spring of 2000, Yale was in an extremely strong position to generate handsome returns. Strong performance by the absolute return and real assets portfolios, which had lagged overall Endowment performance in the late 1990s, bolstered Endowment returns.

Just as roaring bull markets encourage diversification skeptics, so do acute financial panics. Based on the substantial decline in Yale's Endowment during the recent financial crisis, some observers questioned the University's diversified, equity-oriented approach. Particular criticism focused on the Yale model's failure to protect the Endowment in the early months of the financial crisis. The criticism, while superficially true, falls short in two ways: (1) in a financial crisis (the market crash in 1987, the Long-Term Capital Management failure in 1998, the Internet bubble collapse, and the downturn in 2008) all risky assets fall in price as market participants seek the safety of government bonds, leaving government bonds as the only diversifying asset that works; and (2) when evaluated over a reasonably long time frame, the opportunity costs of holding government bonds impose a significant drag on portfolio returns.

The fact that diversification among a variety of equity-oriented alternative investments sometimes fails to protect portfolios in the short run does not negate the value of diversification in the long run. Consider an investor in Japanese equities in 1989. An equity-oriented undiversified portfolio invested in the Nikkei at the end of 1989 suffered a decline of 73 percent over the subsequent two decades. Diversification matters.

The University's discipline of sticking with a diversified portfolio has contributed to the Endowment's market-leading long-term record. Going forward, Yale expects superior results from its diversified approach to investing. The University's target portfolio produces an expected real (after-inflation) annual return of 7.2 percent with a risk (standard deviation of returns) of 14.7 percent. In contrast, the undiversified institutional standard of 70 percent stocks and 30 percent bonds produces expected real annual returns of 4.8 percent with risk of 15.2 percent. Yale's diversified portfolio promises higher expected returns with lower risk.



Aerial view of Cross Campus area showing Sterling Memorial Library at far right.

Fixed Income

Fixed income assets generate stable flows of income, providing greater certainty of nominal cash flow than any other Endowment asset class. The bond portfolio exhibits a low correlation with other asset classes and serves as a liquidity reserve and as a hedge against financial accidents. While educational institutions maintain a substantial allocation to fixed income instruments and cash, averaging 15.3 percent, Yale's target allocation to fixed income and cash constitutes only 4.0 percent of the Endowment. Bonds have an expected real return of 2.0 percent with risk of 10.0 percent. The Barclays Capital 1-5 Year U.S. Treasury Index serves as the portfolio benchmark.

Yale is not particularly attracted to fixed income assets, as they have the lowest historical and expected returns of the six asset classes that make up the Endowment. Still, fixed income plays an important role in the Endowment by providing a liquidity reserve to support portfolio management activities. To ensure access to liquidity, the Endowment invests primarily in high-quality instruments backed by the full faith and credit of the U.S. government.

The market for government bonds is the most efficient and liquid in the world, making it difficult for active managers to outperform the benchmark net of fees. In fact, most active managers play a cynical game, consciously exposing client assets to greater-than-benchmark risk and claiming that the incremental returns represent superior performance. As the bond managers pocket fees for providing a disservice, clients lose in more than one way. In addition to the out-of-pocket costs paid for active management, clients lose the protection afforded by high-quality, non-callable fixed income instruments.

Carrie A. Abildgaard
Associate Director

One way in which active managers "outperform" a fixed income benchmark is by overweighting credit-sensitive issues. Under normal circumstances, corporations meet their contractual obligations, providing a spread over the U.S. Treasury return to investors willing to accept credit risk. However, in times of crisis, just when investors most need the protection provided by fixed income portfolios, markets discount the value of corporate promises-to-pay, impairing the defensive character of bond investments.

Another method employed by active managers is to increase the optionality of fixed income holdings. By holding callable corporate or mortgage-backed securities, bond managers again increase returns under normal circumstances. Yet, when interest rates decline, companies and homeowners repay callable debt to refinance existing obligations at lower rates. Just when declining rates ought to boost bond portfolio value, the presence of callable instruments dampens portfolio appreciation and undermines the fundamental reason for holding bonds.

Most active management strategies hurt investors by failing to generate risk-adjusted excess returns and by diluting the hedging characteristics of high-quality, non-callable bond investments. Investors holding pure fixed income—obligations of the U.S. government—best meet the liquidity provision requirements for bond portfolios.

Michael E. Finnerty
Associate Director

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Sensible investors focus on the superior diversifying characteristics of government bonds, holding only the amount necessary to provide sufficient liquidity for portfolio management activities. If portfolios include the minimum allocation necessary, investors free up assets to diversify into alternative asset classes, achieving volatility reduction without sacrificing return. A low allocation to high-quality fixed income reduces the costs associated with holding bonds during normal circumstances and periods of unanticipated inflation, the environments in which fixed income positions tend to impair portfolio performance. Tailoring the bond portfolio to emphasize fixed income's essential diversifying characteristics increases expected benefits, while reducing the long-term costs of holding bonds.

In spite of an aversion to market timing strategies, credit risk, and call options, Yale manages to add value consistently in its internal management of the bond portfolio. Primarily by identifying overlooked securities, over the past decade the Investments Office produced returns of 0.3 percent per year above its composite benchmark. Simply avoiding paying a premium for the most heavily traded, so-called on-the-run securities provides a sensible starting point for portfolio construction. Returns are enhanced by identifying occasional opportunities to purchase full faith and credit obligations of obscure government agencies at spreads of up to a full percentage point over Treasuries. Creative, patient portfolio management leads to superior investment results without impairing the portfolio protection characteristics of high-quality fixed income.

Lisa M. Howie '00, '08 M.B.A.
Associate Director

Suzanne K. Wirtz
Associate Director

The Yale Bowl, completed in 1914, with a seating capacity of more than 61,000.

Foreign Equity

Foreign equity investments give the Endowment exposure to the global economy, providing diversification and the opportunity to earn outsized returns. This diversification, quantitatively reflected in the foreign equity portfolio's expected correlation of 0.68 to domestic equities, reduces the Endowment portfolio's level of risk. Additionally, the large number of underfollowed companies listed in foreign markets and the inefficiencies in their pricing create opportunities to earn above-market returns through active management.

Yale targets 4.0 percent of its portfolio to foreign developed equities and 2.5 percent to emerging market equities. Yale dedicates 2.5 percent of the portfolio to opportunistic foreign positions, with the expectation that holdings will be concentrated in markets, such as China and India, that offer the most compelling long-term opportunities. While Yale's total target foreign equity allocation is 9.0 percent, the average educational institution allocates 18.1 percent to the asset class. Expected real returns for developed equities are 6.0 percent with a risk level of 20.0 percent, while emerging and opportunistic equities both have expected real returns of 7.0 percent with risk levels of 22.5 percent. The foreign equity portfolio is benchmarked against a composite of 44 percent developed markets, measured by the Morgan Stanley Capital International (MSCI) Europe, Australasia, and Far East Index; 28 percent emerging markets, measured by the MSCI Emerging Markets Index; and 28 percent custom opportunistic index, measured by a blend of the MSCI China, MSCI China A-Shares, and MSCI India Indices.

Country allocations heavily influence overall performance in foreign equities. Unfortunately, forecasting country returns proves difficult and generally provides an unreliable source of value added. Even though country valuations of overseas markets sporadically move to extremes that offer identifiable top-down opportunities to generate excess returns, Yale's managers predominantly focus on generating outperformance through bottom-up security-specific investments. Although some of Yale's managers have global mandates, Yale recognizes the value of managers who specialize regionally. A regional mandate facilitates the execution of intensive company research, creating an edge over less focused global funds.

Celeste P. Benson
Senior Portfolio Manager

Emerging markets tend to be less efficient than developed markets, resulting from a lack of liquidity, scant research coverage, and a dearth of sophisticated local investors. Periodic inflows and outflows of institutional capital to and from emerging markets exacerbate these inefficiencies. Emerging markets provide a considerable set of investment opportunities, particularly in companies well positioned to benefit from rapidly growing and changing economies. This combination of dynamic businesses and less efficient markets creates a wealth of opportunities for Yale's managers to add value.

R. Alexander Hetherington '06
Senior Associate

Although Yale's foreign equity managers pursue a broad range of investment mandates, they share a commitment to high-quality research. The University's managers conduct deep due diligence to build differentiated insights on the companies in their investment universe. Comprehensive, fundamental research gives rise to an analytical edge and allows managers to identify undervalued securities at discounts to fair value. Yale's long time horizon enables foreign equity managers to invest in companies that will compound value over several years.

Liquidity

Investors frequently encounter opportunities to generate excess returns from accepting illiquidity. Of course, pursuing every premium return associated with illiquid assets and thereby creating a completely illiquid portfolio is neither reasonable nor realistic. Sensible investors preserve sufficient liquidity to meet the full range of portfolio commitments, bolstered by a comfortable cushion. Yale's Endowment must maintain the ability to fund spending to support current University operations, to satisfy commitments to contribute capital to investment partnerships, to capitalize on attractive investment opportunities, and to provide support for the University's financing activities.

Yale's allocation to private equity and real assets investments has grown steadily over the past twenty-five years, as the University's long-term time horizon enabled it to take advantage of opportunities to add substantial value in less liquid alternative assets. As the Endowment's asset allocation has evolved, the importance of understanding and monitoring Yale's liquidity profile has increased. The evaporation of liquidity during the recent economic and financial market turbulence highlights the importance of prudent liquidity management. Yale carefully monitors its liquidity, stress-testing the University's sources and uses of capital under a variety of market conditions and a number of operating scenarios.

The University has both internal and external sources of liquidity at its disposal. Even a portfolio characterized by high percentages of long-term assets contains more liquidity than might be immediately apparent. Yale's holdings in marketable bonds and equities, absolute return positions, real assets (real estate, oil and gas, and timber), and private equity (leveraged buyouts and venture capital) generate a fair amount of natural internal liquidity. For instance, bonds pay interest, stocks pay dividends, real estate produces rents, energy reserves provide both returns on capital and returns of capital (through depletion), and private equity partnerships distribute proceeds from realizations. The Investments Office carefully forecasts how these distributions will change under a range of economic scenarios.

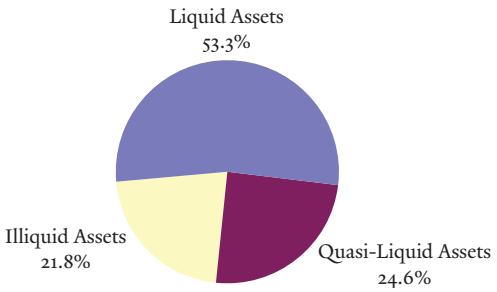
Holdings of marketable securities provide a source of non-disruptive liquidity, namely liquidity generated in a manner that does not change the Endowment's asset class exposure. For example, bonds and stocks can serve as collateral for repurchase agreements (repos) and security lending, respectively. The owner of the securities generates liquidity through proceeds produced by the repo and security lending activity, while retaining the economic exposure associated with the securities.

External borrowing represents another source of non-disruptive liquidity. For example, for nearly two decades Yale has tapped the commercial paper market to provide funds to support operations and capital projects. During the recent financial crisis, the University had access to nearly $2 billion of commercial paper funding. In November 2009, after the crisis subsided, Yale issued $1 billion in five-year fixed-rate taxable bonds. The deal was oversubscribed and Yale achieved attractive pricing. The issuance proceeds funded new and existing capital projects and generated a substantial amount of University liquidity.

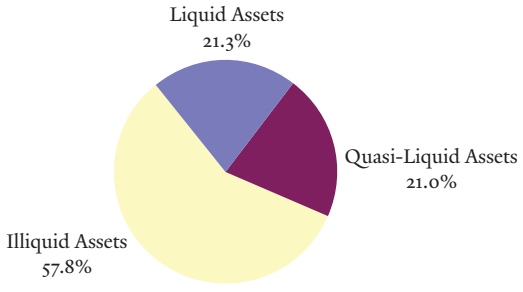
Yale's Endowment can also generate disruptive liquidity, namely liquidity created in a manner that changes the Endowment's asset class exposure. Outright sales of bonds or stocks generate liquidity, but alter portfolio characteristics. Withdrawals from absolute return managers provide an additional source of disruptive liquidity. Whole or partial sales of private equity and real assets represent a third, albeit quite unappealing, means of confronting liquidity squeezes. Even under the best of circumstances, sales of illiquid partnerships take place at meaningful discounts to fair value. In the heart of a financial crisis, sales of illiquid holdings generally occur at dramatic discounts to fair value, producing liquidity that is both expensive and disruptive.

Liquidity matters, even to portfolios with modest spending requirements and long-term horizons. By implementing mechanisms to tap a variety of internal and external sources of liquidity, endowment managers provide the means for educational institutions to satisfy the full range of portfolio commitments. Careful monitoring and forecasting of Yale's liquidity ensures that the University will meet its cash needs, even during periods of market stress, without disrupting the portfolio.

Average Endowment Liquidity
June 30, 2010



Yale Endowment Liquidity
June 30, 2010



Yale's preference for regionally focused managers that perform bottom-up, fundamental analysis may cause Yale's country, sector, and security allocations to diverge significantly from those of broad global indices. Yale's managers have identified stocks throughout the capitalization spectrum that are cheap in relation to fundamental measures such as book value, earnings, or cash flow. Small-capitalization stocks, lying below the radar screen of large institutional funds, have historically offered greater opportunities for active managers to add value. In recent years, however, Yale's foreign equity managers have found inefficiencies even in large-capitalization stocks and premier companies.

The Investments Office continuously monitors the size of actively managed portfolios, shifting capital both to rebalance market exposures and to take advantage of tactical opportunities. Capital allocation to individual managers takes into consideration the degree of confidence Yale possesses in a manager, the country allocation of the manager's portfolio, and the appropriate size for a particular strategy. In addition, Yale will exploit compelling undervaluations in a country, sector, or strategy by allocating additional capital or, on occasion, by hiring a new manager.

In general, Yale's managers do not hedge currencies, since a modest amount of exchange rate exposure actually improves overall portfolio diversification. However, managers will occasionally incorporate insights on exchange rates into security selection decisions, such as by favoring exporters in countries with weakening currencies. In extreme circumstances, some of Yale's managers will selectively hedge foreign exchange exposure.

The University's performance in foreign equities has been outstanding. Over the ten years ending June 30, 2010, Yale's foreign equity portfolio returned 13.8 percent per annum, easily besting the annualized 5.9 percent return of the asset class's composite benchmark, generating $1.17 billion in value added relative to the portfolio's benchmark.

Matthew S.T. Mendelsohn '07
Senior Financial Analyst

Jonathan Rhinesmith '08
Senior Financial Analyst

Interior of Ingalls Rink. Designed by Eero Saarinen, the rink was completed in 1958 and recently renovated.

Private Equity

Private equity offers extremely attractive long-term risk-adjusted return characteristics, stemming from the University's strong stable of managers that exploit market inefficiencies. Yale's private equity investments include participations in venture capital and leveraged buyout partnerships. The University's target allocation to private equity of 33.0 percent far exceeds the 10.2 percent actual allocation of the average educational institution. In aggregate, the private equity portfolio is expected to generate real returns of 10.5 percent with risk of 27.7 percent.

Yale was among the first institutional investors to participate in the now widely pursued asset class of private equity, making its first commitment to leveraged buyouts in 1973 and to venture capital in 1976. The University participates in private equity through partnerships managed by the nation's leading private equity firms, including venture capitalists Greylock Partners, Kleiner Perkins Caufield & Byers, and Sutter Hill Ventures and buyout specialists Bain Capital, Berkshire Partners, Clayton Dubilier & Rice, and Golden Gate Capital.

Yale's private equity program is regarded as one of the best in the institutional investment community and the University is frequently cited as a role model by other investors. Since inception in 1973, Yale's private equity portfolio has generated a 30.3 percent annual return. Over the past ten years, it has produced a 6.2 percent annual return, outpacing the S&P 500 by 7.8 percent per annum. The success of Yale's program led to a 1995 Harvard Business School case study, "Yale University Investments Office," by Professors Josh Lerner and Jay Light. The popular case study was updated in 1997, 2000, 2003, and 2006.

Yale's private equity assets concentrate on partnerships with firms that emphasize a value-added approach to investing. Such firms work closely with portfolio companies to create fundamentally more valuable entities, relying only secondarily on financial engineering to generate returns. Investments are made with an eye toward long-term relationships—generally, a commitment is expected to be the first of several—and toward the close alignment of the interests of general and limited partners.

Of particular note has been the success of Yale's venture capital managers, which have helped start some of the nation's leading companies. In the 1970s and 1980s, Yale participated in a number of start-ups that helped define the technology industry, including Compaq Computer, Oracle, Genentech, Dell Computer, and Amgen. The high-flying 1990s included lucrative investments in Amazon.com, Yahoo, Cisco Systems, Red Hat, and Juniper Networks. Yale's more recent investments in Google, Facebook, LinkedIn, Twitter, and Zynga illustrate the home-run potential of venture capital investing; for example, the University's $300,000 investment in Google generated $75 million of gains after the company went public in 2004.

While lacking the dramatic appeal of venture investments, Yale's leveraged buyout investments have delivered high returns with remarkable consistency. Notable transactions in which Yale participated through its leveraged buyout firms include Snapple Beverage, AutoZone, Lexmark International, Kinko's, Carter's, Domino's Pizza, and Bare Escentuals.

John V. Ricotta '08
Senior Financial Analyst

Michael R. Schmidt '08
Senior Financial Analyst

Increasingly, Yale has invested in private equity abroad. The European leveraged buyout market provides appealing investment opportunities and Asian venture capital presents explosive potential, albeit with the increased risks of investing in developing countries with less well-established laws and markets. India and China, in particular, represent areas of great opportunity for private equity investors.

The success of Yale and other long-time investors in private equity has attracted numerous new investors to the field. Vastly larger sums of capital were raised in the 2000s, prompting concerns about future returns. Because the recent financial crisis has dampened many investors' appetites for illiquid asset exposure, Yale sees a better future for the asset class. The hallmark of Yale's successful private equity program has been long-term relationships with the very best venture capital and leveraged buyout managers. By aligning itself with premier firms, the University hopes to continue to generate attractive returns to support Yale's educational mission.

Real Assets

Real estate, oil and gas, and timberland share common characteristics: sensitivity to inflationary forces, high and visible current cash flow, and opportunity to exploit inefficiencies. Real assets investments provide attractive return prospects, excellent portfolio diversification, and a hedge against unanticipated inflation. Yale's 28.0 percent long-term policy allocation significantly exceeds the average endowment's commitment of 11.6 percent. Expected real returns are 6.0 percent with risk of 15.5 percent.

Holdings of real assets offer risk and return characteristics well suited for the Yale Endowment. Real assets investments provide claims on future streams of inflation-sensitive income, supplying protection against unanticipated inflation and playing an important diversifying role in the portfolio. In addition to attractive diversifying characteristics, real assets present tremendous opportunities for superior managers to add value and outperform industry averages. The illiquid nature of real assets and the information-intensive aspects of the transaction processes favor skilled and experienced investors.

Cain P. Soltoff '08
Senior Financial Analyst

To take advantage of inefficient real estate, oil and gas, and timberland markets, the University seeks talented and motivated investment managers with proven ability to create value independent of underlying market or commodity price movements. Believing that the basic return from real assets investments can be augmented by operational expertise, Yale looks for firms with superior operating capabilities, as opposed to groups with only financial engineering skills. Yale's strong preference is to work with operators that focus on a geographic region or property type, or both, believing that specialized managers with deep market knowledge and experience gain an important edge over more diffuse organizations.

Tess A. Dearing '09
Financial Analyst

Yale attempts to create strong, long-term partnerships in which the interests of the University and its investment managers are closely aligned. Yale requires investment managers to own a meaningful economic interest in every deal, encouraging thoughtful acquisitions, careful oversight, and timely dispositions. Yale targets employee-owned firms to ensure that incentive compensation benefits the individuals doing the work and that general partner co-investment comes principally from the partners of the firm. Yale demands that its partners maintain reasonable levels of assets under management, encouraging pursuit of only the most

History of Yale's Spending Policy

Until the mid 1960s, the University limited the Endowment's annual contribution to the operating budget to investment yield—the interest, dividend, and rental income generated by the Endowment. In 1967, recognizing that simply spending yield could result in too high or too low a spending rate and could bias investment decisions toward securities with high yield but low appreciation potential, Yale adopted a total return spending policy. Under the total return policy, the University supported operations with current yield plus a prudent portion of the appreciation of Endowment market value.

Concurrent with the decision to employ a total return concept, Yale instituted a formal method, called the "University Equation," to calculate the total amount that could responsibly be spent from the Endowment. The method set spending in a given year by adjusting the previous year's spending by the difference between the University's long-term investment return (measured over the prior twenty-year period) and the current percentage of the Endowment being spent. Higher long-term returns would lead to higher annual spending, while lower long-term returns would lead to reduced spending. Unfortunately, the University Equation did not adjust rapidly enough to changes in Endowment market value. As a result, in the 1970s, when inflation increased and market returns dropped, the University spent an unsustainably high portion of the Endowment to support current operations.

In 1977, recognizing that the rate of spending was eroding the real value of the Endowment, the Yale Corporation voted to cap spending at the existing level (adjusted for inflation) until the spending rate was brought in line with the expected real (after-inflation) return from the Endowment. The Endowment's expected real return was taken to be 4.5 percent, consistent with historical experience.

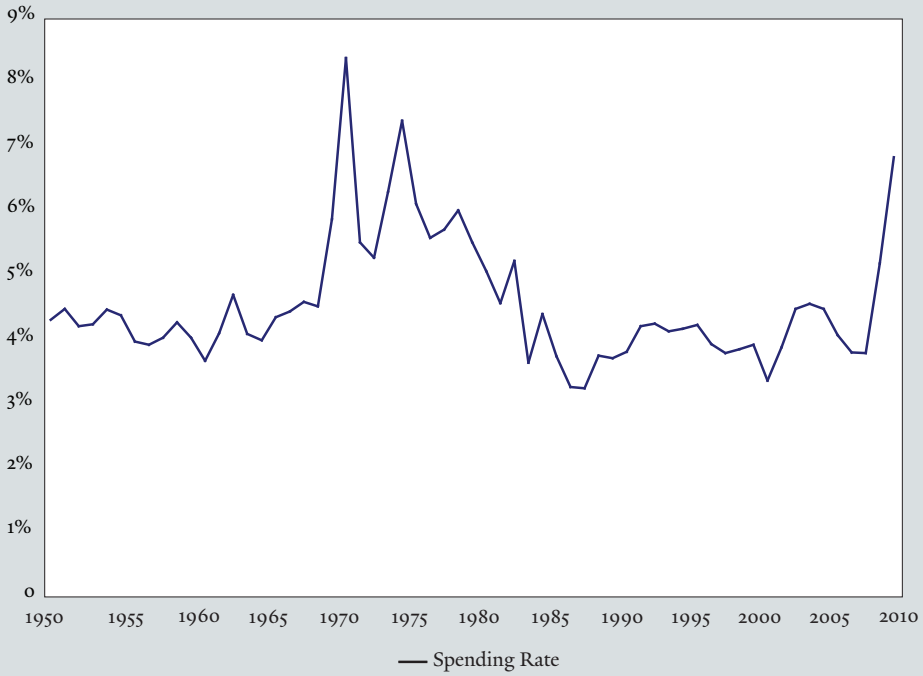
In 1982, upon bringing spending to an appropriate level, the Corporation adopted a spending rule that attempted to release substantial income for current scholars and preserve purchasing power of the Endowment for future generations. Under the new rule, Endowment spending amounted to the weighted average of 70 percent of the previous year's spending, adjusted for inflation, plus 30 percent of the targeted long-term spending rate of 4.5 percent applied to the Endowment's market value. The 70 percent weight on prior year spending promised budgetary stability, while the 30 percent weight on market value provided purchasing power sensitivity.

Since 1982, the spending rule has been adjusted five times. In 1992 the Corporation authorized an increase in the long-term spending rate from 4.5 percent to 4.75 percent. In 1995 Yale adopted a further increase in the target rate to 5.0 percent. In 2004 the Corporation increased the spending rate to 5.25 percent and changed the smoothing rule from 70/30 to 80/20. The increases in spending rates resulted from improvement in Endowment portfolio characteristics. The change in weight assigned to budgetary stability stemmed from recognition that increased budgetary dependence on Endowment income required greater stability in flows of Endowment income to support operations.

The final two adjustments were made in 2007. Both were intended to address a period of spending at rates substantially below Yale's target due to exceptional investment performance. The first revision modified the calculation used to adjust the spending level because it was determined using prior fiscal year data. The second revision established a cap and floor with the cap set at 6.0 percent and the floor set at 4.5 percent. While the cap and floor structure does not preclude contemporaneous spending rates below the sensible threshold of 4.0 percent or above the reasonable limit of 6.5 percent, the new structure materially reduces the likelihood of such extreme outcomes. Both modifications operated as if the changes were made as of fiscal 2002 and included one-time compensating distributions (special dividends) made in fiscal 2008 and 2009.

Unfortunately, action (in the form of special dividends) to address the problem of underspending came right before the onset of the financial crisis. Had Yale simply followed the spending policy in place in 2004, the University would have benefited from year-over-year increases in spending distributions, even through the financial crisis. Instead, the special dividends inflated spending levels and caused Yale to cut distributions from Endowment to return to sustainable spending levels.

Yale's Endowment Spending Rate 1950-2010



Monte Carlo Simulations

To assess the efficacy of various combinations of investment and spending policies, the Investments Office developed a model that uses simulations to evaluate the impact of a range of policy combinations on Yale's Endowment and operating budget. Using "Monte Carlo" techniques, the model employs random numbers to produce portfolio return patterns consistent with assumptions regarding asset class expected return, risk, and correlation characteristics. The resulting path of simulated returns determines Endowment values and spending levels, based on the modeled investment and spending policies. Thousands of simulations provide a robust picture of the potential effectiveness of any given policy combination.

The two most important criteria used to analyze the results of various policies are (1) the likelihood of a significant, sustained intermediate-term drop in Endowment support for the operating budget; and (2) the likelihood of a dramatic long-term reduction in Endowment purchasing power. A significant decline in support for the operating budget is defined as a real reduction of 10 percent over a five-year period. A dramatic decline in Endowment purchasing power is defined as a 50 percent drop over a fifty-year horizon.

The Monte Carlo simulations represent a substantial extension of (and improvement over) conventional mean-variance optimization techniques. Mean-variance analysis simply identifies a set of efficient portfolios, namely portfolios with the highest return for a given level of risk or portfolios with the lowest risk for a given level of return. The mean-variance framework provides no intuitive mechanism for portfolio choice and fails to incorporate the impact of spending policy. In contrast, by extending the analysis with Monte Carlo simulations, decision makers enjoy the opportunity to assess the trade-off between easily understood criteria: stable operating budget support (probability of losing 10 percent of Endowment spending) and purchasing power preservation (probability of losing 50 percent of Endowment purchasing power).

Empirically, financial economists find that market returns exhibit fat tails—a greater frequency of extreme results—than would be found in normal distributions with the same mean and variance. Though Monte Carlo simulations often use normally distributed random numbers, Yale addressed this weakness by running simulations that transition between different world states, each with its own distinct underlying normal distribution. Defining various world states, such as bear and bull markets, allows Yale to improve specification of the asset class characterizations. For example, by increasing the likelihood of a bear market state, Yale can control the skew and fatness of the left tail in the overall distribution, improving the description of financial market reality relative to an unadjusted normal distribution.

Monte Carlo simulations applied to the Endowment's current target asset allocation and spending policies indicate a 28 percent chance of real spending falling by more than 10 percent over a five-year span. Although the Endowment's real growth rate is expected to outpace the 5.25 percent target spending rate, a roughly 17 percent chance exists that the purchasing power of the Endowment would drop by more than 50 percent after fifty years. The only means to improve spending stability and purchasing power preservation would be to lower Yale's target spending rate.

Using the metrics of stable operating budget support and purchasing power preservation, the Endowment demonstrated substantial improvement over the past twenty years. As Yale improved diversification by allocating more of the Endowment to the alternative asset classes of absolute return, private equity, and real assets, risks plummeted for both spending and purchasing power degradation. In 1990, when alternative asset classes accounted for only 15 percent of the Endowment, Yale faced a 40 percent chance of real spending dropping 10 percent over five years and a 49 percent chance of real Endowment values diminishing by 50 percent over fifty years. By 2000, when absolute return, private equity, and real assets accounted for nearly 60 percent of the Endowment, disruptive spending drop risk fell to 31 percent and purchasing power impairment risk declined to 27 percent.[1]

Investment and spending policies of other educational institutions provide more disturbing results. Using Monte Carlo simulations and the typical endowment spending rule (5 percent target rate applied to a three-year moving average of endowment value), the Investments Office estimates that the average endowment faces a 35 percent chance of a 10 percent spending drop over five years and runs a 28 percent chance of losing half of its purchasing power over a fifty-year period.

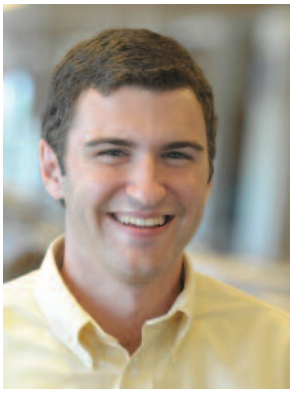
In the simulations, the median purchasing power of the average endowment after fifty years amounts to only 85 percent of its beginning purchasing power. In general, educational institutions spend at rates far too high to be supported by undiversified portfolios that contain far too many low-returning assets. Yale's simulations show relatively significant probabilities of circumstances that would be traumatic for educational institutions, highlighting the tenuous balance between protecting Endowment purchasing power and maintaining a steady and substantial stream of spending.

1 As both spending policies and capital markets assumptions have changed between 1990 and today, the Investments Office used today's policy and assumptions to calculate the disruptive spending drop risk and purchasing power impairment risk using the historical asset allocations of 1990 and 2000.

Gateway to Silliman College.

attractive opportunities and forcing managers to create wealth through the generation of high returns rather than the collection of large annual management fees.

Yale's investment strategy compels the University to support emerging investment management groups that are not well-known, brand name companies. Even though newly formed groups typically include several highly experienced and talented founding partners, backing start-ups exposes the University to managerial and organizational risk as the individuals attempt to jell as a team and the management company seeks to reach break-even. In spite of the risks, the University benefits enormously from the close relationships forged with organizations that the Investments Office introduced to the institutional funds management business.



David S. Katzman '10
Financial Analyst

Nilesh V. Vashee '09
Financial Analyst

Xinchen Wang '09
Financial Analyst

Yale prefers real assets investments that generate a current cash yield, whether from property rents, reserve production, or sustainable timber harvests. The presence of a substantial cash yield makes the total return on investment less sensitive to the length of the holding period and reduces valuation risk. Yale attempts to garner a margin of safety by paying a low purchase price. In real estate deals, Yale pursues investments in which asset pricing is at a discount to replacement cost; in oil and gas, reserve acquisitions at a discount to long-term normalized pricing; and in timber, forestland at a substantial discount to standing timber value.

In the real estate portfolio, Yale has developed a deep roster of investment managers focused on multiple property types and geographies. Because local supply and demand dynamics play a large role in determining market returns, much of the real estate portfolio is located in supply-constrained areas. Reflecting the University's bias toward focused managers, the portfolio's largest managers are niche players, concentrating on narrowly defined areas. Specialized managers with excellent market knowledge add enormous value, supporting the notions that real estate is not a commodity and that values can vary tremendously even between neighboring properties.

In the oil and gas and timber arenas, price changes in the underlying commodity strongly influence investment returns. Unfortunately, macroeconomic and political factors drive commodity prices, making them extremely difficult, if not impossible, to forecast. Rather than depend on uncertain future price increases, Yale's natural resource investments must meet return targets in flat price environments. If commodity prices rise, Yale's natural resource portfolio will generate handsome performance even as other parts of the Endowment suffer from the higher costs of basic materials and energy.

In the oil and gas portfolio, Yale emphasizes the low-risk purchase of high-quality proven reserves. In finding managers that evaluate and operate assets more efficiently than large oil and gas companies, Yale generates substantial returns without depending on higher-risk exploration strategies. A portion of the energy portfolio is allocated to private investments in which investment managers take meaningful stakes in energy exploration, production, or service companies with attractive growth prospects.

When investing in timberland, Yale concentrates on the purchase and sustainable management of natural forests in the United States. While generally slower growing than plantation forests, natural forests tend to be priced less efficiently and to offer more opportunities for

skilled managers to add value through silvicultural activities, selective harvests, and wood merchandising. Like value stocks in the marketable securities world, slower growing forests sometimes can be purchased for overly discounted prices because of lack of interest by other investors.

In real assets, like other asset classes, Yale seeks value and behaves in a contrarian manner. Investments reflect compelling opportunities and the University's ability to find suitable managers, regardless of activity in the broad market. This approach has generated strong investment performance and important diversification to the Endowment. Over the ten years ending June 30, 2010, the portfolio returned an annualized rate of return of 10.9 percent, surpassing the benchmark return of 9.8 percent. Correlations with other asset classes over the last decade have ranged from a low of 0.23 with the fixed income asset class to a high of 0.42 with the domestic equity asset class.

Asset Allocations

	Yale University	Educational Institution Mean
Absolute Return	21.0%	24.6%
Domestic Equity	7.0	17.1
Fixed Income	4.0	15.3
Foreign Equity	9.9	18.1
Private Equity	30.3	10.2
Real Assets	27.5	11.6
Cash	0.4	2.8

Data as of June 30, 2010

Thad C. Brown '92

Matthew L. Ramadanovic

Degree of Investment Opportunity

Yale directs active management efforts to less efficiently priced asset classes and employs less aggressive approaches for more efficiently priced assets. Given equal expenditure of time and effort, active management promises greater rewards in the infrequently traded, illiquid world of private assets than in the heavily traded, liquid world of fixed income.

In the absence of direct measures of market efficiency, active manager behavior provides clues about the degree of opportunity in various markets. In those markets with limited opportunities for active management, managers deviate little from the market portfolio, tending to obtain market-like returns. Why do managers in efficient markets "hug" the benchmark? In a world of efficiently priced assets, consider the business consequences to investment managers who hold portfolios that differ markedly from the market portfolio. Large overweights and underweights in security holdings cause portfolio results to vary dramatically from the benchmark. Underperforming managers lose clients, suffering a punishing loss in assets. Overachievers gain clients (and public adulation), yet because efficient markets price securities accurately, success will be transitory. Since efficient markets present no significant mispricings for active managers to exploit, good results stem from luck, not skill. Eventually, luck runs out and results disappoint. Over time, managers in efficient markets gravitate toward "closet indexing," structuring portfolios with only modest deviations from the market, ensuring both mediocrity and survival.

In contrast, active managers in less efficient markets exhibit greater variability in returns. In fact, many private markets lack benchmarks for managers to "hug," eliminating the problem of closet indexing. Inefficiencies in pricing allow managers with great skill to achieve great success, while unskilled managers post commensurately poor results. Hard work and intelligence reap rich rewards in an environment where superior information and deal flow provide an edge.

The degree of opportunity for active management (at least as measured by manager behavior) relates to the distribution of actively managed returns in a particular asset class. Any measure of dispersion provides some sense of the richness of active management opportunities. The spread in returns between the first and third quartiles in collections of actively managed portfolios illustrates the notion that more efficiently priced assets provide less opportunity for active managers and that less efficiently priced assets provide more opportunity.

The accompanying chart shows active manager returns for various asset classes for the decade ending June 30, 2010. U.S. Treasury securities, arguably the most efficiently priced assets in the world, trade in staggering volumes in markets dominated by savvy financial institutions. The Treasury market provides the benchmark for all other fixed income trading. Since nobody (with the possible exception of the Federal Reserve) knows where interest rates will be, few managers employ interest rate anticipation strategies. Without potentially powerful differentiating bets on interest rates, institutional portfolios tend to exhibit market-like interest rate sensitivity, or duration. As a result, managers generally limit themselves to modest security selection decisions, causing returns for most active managers to mimic benchmark results. The spread between first and third quartile results for active bond managers

Dispersion of Active Management Returns

Asset Returns by Quartile. Ten Years Ending June 30, 2010

Asset Class	First Quartile	Median	Third Quartile	Range
U.S. Fixed Income	5.9%	5.6%	5.2%	0.6%
U.S. Large-Capitalization Equity	2.5	(0.0)	(2.0)	4.5
Absolute Return	6.3	4.2	1.4	4.9
U.S. Small-Capitalization Equity	8.5	5.6	2.1	6.5
Venture Capital	3.7	(2.6)	(8.7)	12.4
Leveraged Buyouts	20.3	12.0	4.3	16.0
Real Estate	20.8	11.3	(4.1)	24.8

measures an astonishingly small 0.6 percent per annum for the decade.

Less efficiently priced securities trade in wider ranges. Stocks provide more difficult pricing challenges than bonds. Instead of discounting relatively certain fixed income cash flows, valuation of equities involves discounting more-difficult-to-project corporate cash flows. The greater volatility in equity markets also contributes to the wider active manager spread. Large-capitalization domestic equities represent the next rung of the efficiency ladder, with a range of 4.5 percent.

Absolute return strategies, which generate returns independent of markets and lack an investible benchmark, demonstrate less efficiency than fixed income and large-capitalization equity securities, with a range of 4.9 percent between top and bottom quartiles. In all likelihood, survivorship bias in the absolute return data understates the true spread of manager results. If failed managers, with their poor results, were included, the reported dispersion would increase.

Domestic small-capitalization stocks show a larger gap, with a range of 6.5 percent per annum between top and bottom quartiles. The progression of degree of opportunity across types of marketable securities makes intuitive sense.

Illiquid assets show substantially larger spreads, with venture capital at 12.4 percent per annum, leveraged buyouts at 16.0 percent per annum, and real estate at 24.8 percent per annum. Lacking a benchmark to hug, managers of illiquid assets succeed or fail by dint of their abilities, not by action (positive or negative) of the market.

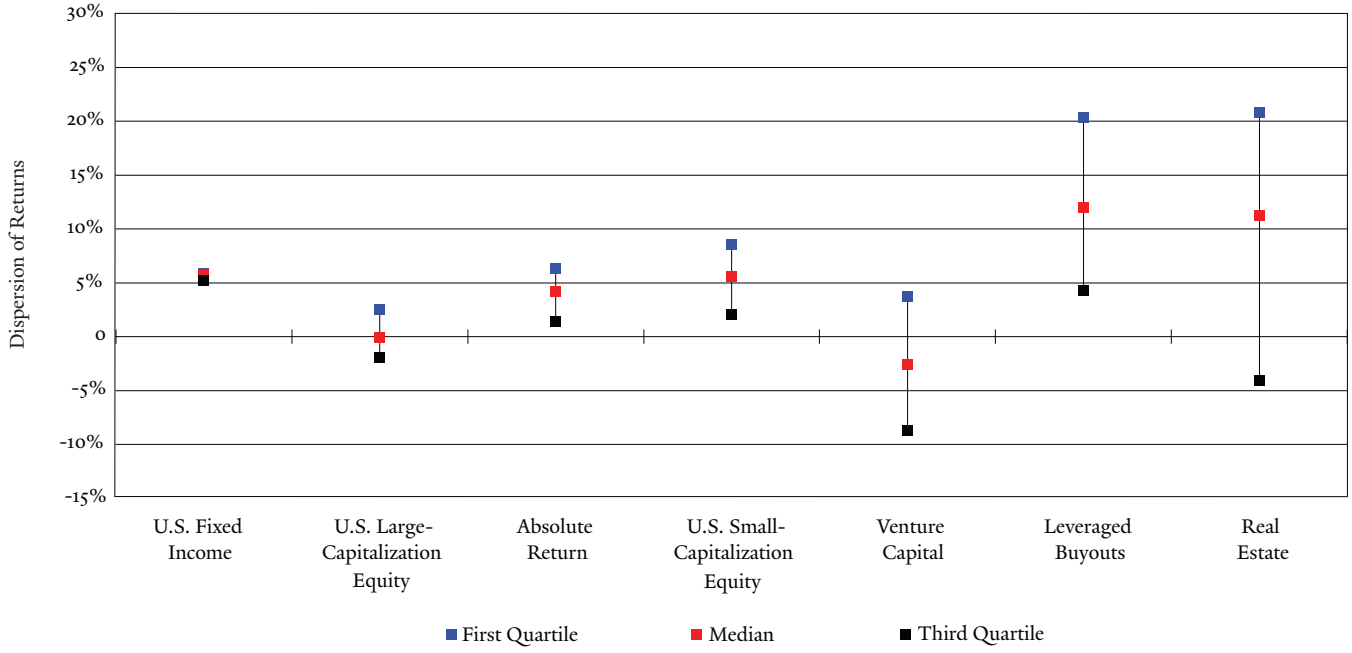
Selecting top managers in private markets leads to much greater reward than identifying top managers in public markets. In the extreme case, over the past decade, choosing a first-quartile fixed income manager added only 0.3 percent per annum relative to the median result. In contrast, the first-quartile real estate manager added 9.5 percent per annum relative to the median. Ironically, identifying superior managers in the relatively inefficiently priced private markets proves less challenging than in the efficiently priced marketable securities markets.

In the ultra-efficient bond market, Yale holds a portfolio with market-like interest rate sensitivity, occasionally making carefully controlled security selection bets.

At the opposite end of the spectrum, the Investments Office devotes considerable time and effort to identify opportunities in the far less efficient private equity market. The Endowment bond portfolio, structured with respect for market efficiency, produced a 0.4 percent per annum excess return over the past two decades. In contrast, Yale's private equity positions boast a 30.6 percent per annum return over the last twenty years, far exceeding the 16.6 percent per annum results of a pool of private equity managers compiled by Cambridge Associates. While both the bond portfolio and the private equity portfolio benefited from superior active management, the absolute contribution from superior results in the inefficient world of private equity far exceeded the contribution from superior results in the efficient world of government bonds. Careful consideration of the degree of market opportunity when structuring portfolios makes an important contribution to Yale's investment performance.

Alternative Asset Returns Exhibit Significant Dispersion

Asset Returns by Quartile. Ten Years Ending June 30, 2010



Spending Policy

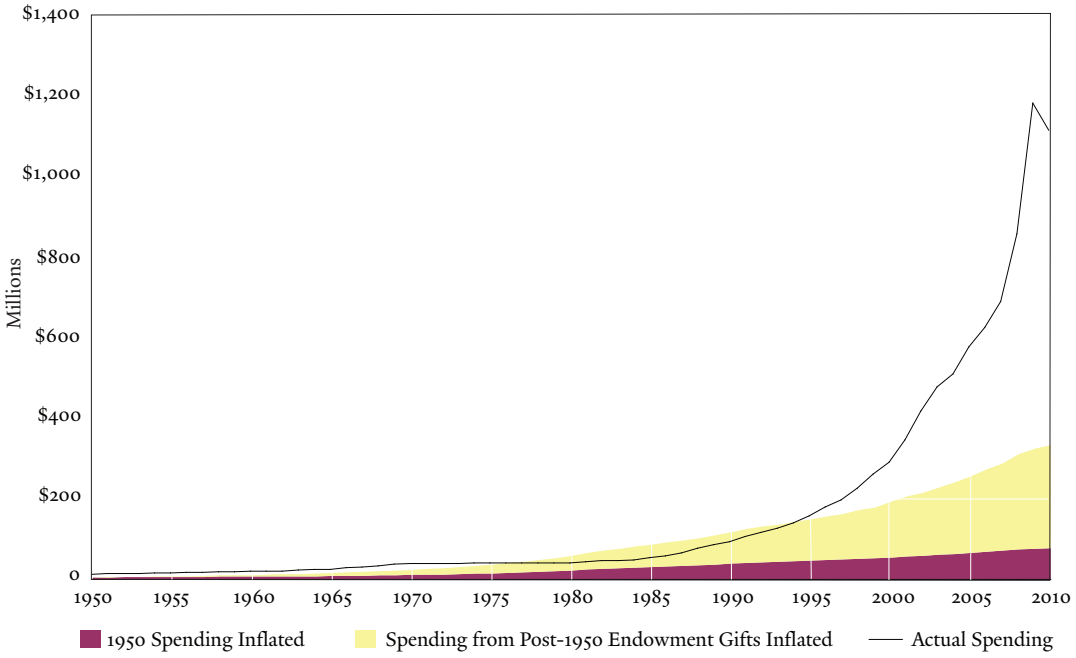
4

The spending rule is at the heart of fiscal discipline for an endowed institution. Spending policies define an institution's compromise between the conflicting goals of providing substantial support for current operations and preserving purchasing power of Endowment assets. The spending rule must be clearly defined and consistently applied for the concept of budget balance to have meaning.

The Endowment spending policy, which allocates Endowment earnings to operations, balances the competing objectives of providing a stable flow of income to the operating budget and protecting the real value of the Endowment over time. The spending policy manages the trade-off between these two objectives by using a long-term spending rate target combined with a smoothing rule, which adjusts spending in any given year gradually in response to changes in Endowment market value.

The target spending rate approved by the Yale Corporation currently stands at 5.25 percent. According to the smoothing rule, Endowment spending in a given year sums to 80 percent of the previous year's spending and 20 percent of the targeted long-term spending rate applied to the market value two years prior. The spending amount determined by the formula is adjusted for inflation and constrained so that the calculated rate is at least 4.5 percent, and not more than 6.0 percent of the Endowment's inflation-adjusted market value one year prior. The smoothing rule and the diversified nature of the Endowment are designed to mitigate the impact of short-term market volatility on the flow of funds to support Yale's operations.

Spending Growth Surpasses Inflation 1950–2010



The spending rule has two implications. First, by incorporating the previous year's spending, the rule eliminates large fluctuations, enabling the University to plan for its operating budget needs. Over the last twenty years, the standard deviation of annual changes in spending has been less than two-thirds that of annual changes in Endowment value. Second, by adjusting spending toward the long-term target spending level, the rule ensures that spending will be sensitive to fluctuating Endowment market values, providing stability in long-term purchasing power.

Despite the conservative nature of Yale's spending policy, distributions to the operating budget rose from $281 million in fiscal 2000 to $1,108 million in fiscal 2010. The University projects spending of $986 million from the Endowment in fiscal 2011, representing 38 percent of revenues.

Helen Betts

Joyce Jepsen

Aerial view of Harkness Tower.

Illiquid Asset Valuation

Accurate and timely valuations serve many important functions in the investment and management of Endowment assets. Valuations help determine spending levels, Endowment unit values, asset allocation targets, and investment performance. Sensible valuation policies enhance confidence in portfolio management and facilitate fiduciary oversight.

Spending policies specify the trade-off between protecting assets for the benefit of future scholars and providing stable operating support to the University. An accurate Endowment valuation plays an important role in achieving inter-generational fairness. An undervalued Endowment disadvantages the scholars of today, as too little money is released to the operating budget. Conversely, an overstated Endowment disadvantages future generations of Elis, as too much is put toward current use.

Correct valuations are vital in the formulation and maintenance of Endowment asset allocation. Studies have shown that asset allocation is the primary determinant of fund performance. If the true value of certain asset classes is misstated, the University may unintentionally be holding a misallocated pool of assets, adversely affecting its ultimate performance.

The University's policy is to record investments at fair value, defined by Financial Accounting Standards Board (FASB) Topic 820, formerly codified in FASB-157 as the "price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants." For marketable securities in the domestic equity, foreign equity, absolute return, and fixed income portfolios, holdings are marked using closing prices or quotations from major stock exchanges and over-the-counter markets.

Illiquid investments, such as those held in the private equity and real assets portfolios, are much more difficult to value given the lack of a publicly quoted system. In general, Yale uses valuations provided by the general partner to account for illiquid assets. FASB Accounting Standards Update No. 2009-12 allows the Endowment to employ general partner valuations without adjustment provided that the net asset value of the underlying investments is determined in accordance with Topic 820. However, in rare situations the Investments Office may report valuations different from those provided by managers if there is a strong reason to believe that reported figures differ measurably from true economic value.

According to Topic 820, three valuation techniques are generally accepted in the determination of fair value: market approach, income approach, and cost approach.

The market approach, or comparable sales analysis, uses recent transactions of comparable assets to derive a range of market-based pricing metrics that are applied to non-marketed assets. The income approach, or discounted cash flow analysis, converts a stream of repeated future cash flows to a single present value at a required rate of return for the asset. The cost approach, or replacement analysis, is based on the estimated cost required to replace an asset; that is the price at which a market participant would be indifferent between acquiring an asset and constructing a substitute of comparable utility.

The private equity portfolio consists of leveraged buyout and venture capital investments. Most leveraged buyout firms provide Yale with quarterly statements that reflect the fair value of underlying investments. For public companies held within the portfolio, general partners may discount public market quotes to reflect trading restrictions. For private companies, values are determined using multiples of operating cash flow or earnings for comparable public companies or recent transactions involving comparable private companies.

Most of Yale's venture capital firms employ similar valuation techniques to produce quarterly reports. Early stage companies tend to be valued at cost. Should a company complete a major round of external financing, Yale's managers most often mark up or mark down their investment to the valuation at which the financing was completed. For more mature positions that have not raised recent third-party financings, comparable company analysis has become increasingly common. Like their peers in the leveraged buyout world, venture capital firms sometimes take liquidity discounts on publicly traded stocks in their portfolio.

The real assets portfolio consists of real estate, timberland, and energy investments. Real estate valuations rely on the appraisal process as the primary method for determining fair value. The two most important valuation techniques employed in the appraisal of real property are comparable sales studies and discounted cash flow analyses. Comparable transactions yield a series of pricing data that serves as a reasonable basis for the valuation of real estate. However, transactions involving similar properties contemporaneous with the measurement date are rare, necessitating subjective adjustments to account for differences in timing, property quality, and location. During periods of relatively low transaction activity, real estate appraisal relies on the income approach. This method, however, is no more accurate than the assumptions used for rental growth, vacancy, operating expenses, capital expenditures, and exit multiples. Timberland assets are valued primarily through an appraisal process using valuation techniques developed for real property. Similarly to real estate, appraisers use both the market approach and the income approach, with the latter representing the more prevalent method for Yale. Appraisals performed using the income method examine the size, species mix, and growth rate of the timber on the property, as well as the potential value from development rights, easement sales, and recreational leases.

The valuation of privately held oil and gas assets hinges on projected hydrocarbon production and expenses (operating and capital), expected commodity prices, and the cost of capital employed to discount future cash flows to their present value. Production and expense forecasts are the result of well-by-well analysis by oil and gas engineers and are subject to annual third party audits. Price projections depend on the futures markets for both oil and natural gas. Discount rates are a function of interest rate levels and the risk premiums associated with producing oil and gas assets.

Several problems arise from the valuation of illiquid assets. The infrequency of appraisals and lack of current data result in values that reflect past, rather than current, market conditions. The timing mismatch generally causes private values to lag behind their public counterparts. Furthermore, periodic valuation naturally mutes volatility, dampening short-term changes in value and complicating evaluation of the risk profile of the asset.

Analysis of disposition proceeds (acquisitions, public offerings, bankruptcies, etc.) compared to the previous June 30 carrying values for illiquid assets over the last ten years shows a conservative bias on the part

of illiquid asset managers, with notable exceptions after significant equity market corrections in 2001 and 2009. In 2001, disposition proceeds came in at 47 percent of June 2000 Internet bubble valuations, and in 2009, disposition proceeds came in at 92 percent of the pre-crisis June 30, 2008 carrying value. Fortunately, disposition activity in 2001 and 2009 was significantly lower than in other years, leading to an average ratio over ten years of approximately 160 percent, indicating that the average disposition value exceeded the carrying value by 60 percent.

The Investments Office recognizes both the importance of accurate valuation and the complexity of the process. Yale periodically reviews internal valuations and independent third party appraisals in detail with its partners to understand the fundamental inputs involved in the process. By paying careful attention to illiquid asset valuation, the University improves day-to-day management of the overall portfolio and increases understanding of the character of individual manager portfolios.

Spires of Yale Law School, completed in 1931, designed by James Gamble Rogers.

Investment Performance

5

Yale has produced excellent long-term investment returns. Over the ten-year period ending June 30, 2010, the Endowment earned an annualized 8.9 percent return, net of fees, surpassing annual results for domestic stocks of -0.7 percent and domestic bonds of 6.5 percent, and placing it in the top one percent of large institutional investors. Endowment outperformance stems from sound asset allocation policy and superior active management.

Yale's long-term superior performance relative to its peers and benchmarks has created substantial wealth for the University. Over the ten years ending June 30, 2010, Yale added $0.6 billion relative to its composite benchmark and $7.9 billion relative to the average return of a broad universe of college and university endowments.

Performance by Asset Class

Yale's long-term asset class performance continues to be outstanding. In the past ten years every asset class posted superior returns, outperforming benchmark levels.

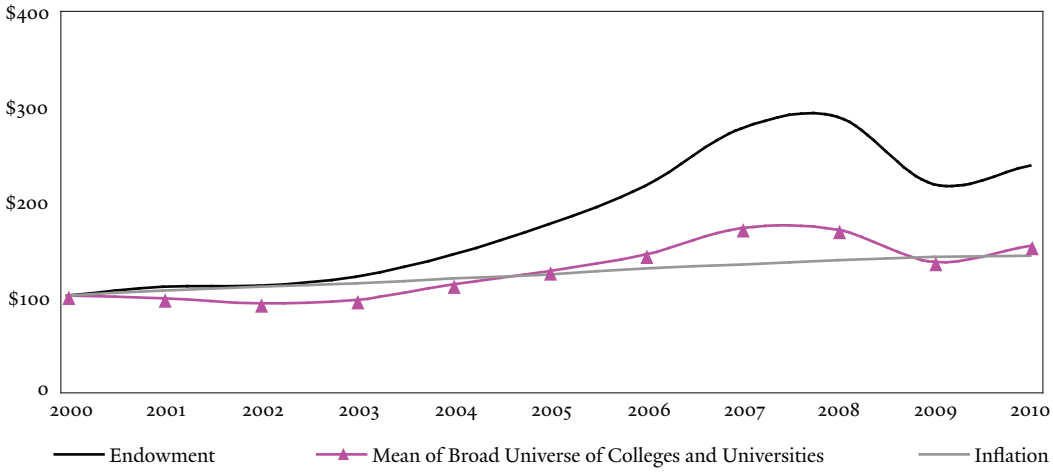
Over the past decade, the absolute return portfolio produced an annualized 11.1 percent, exceeding the passive benchmark of the One-Year Constant Maturity Treasury plus 6 percent by 1.3 percent per year and besting the active benchmark of hedge fund manager returns by 5.1 percent per year. For the ten-year period, absolute return results exhibited little correlation to traditional marketable securities, although correlation has risen in recent years.

For the ten years ending June 30, 2010, the domestic equity portfolio returned an annualized 6.7 percent, outperforming the Wilshire 5000 by 7.4 percent per year and the Russell Median Manager return by 6.8 percent per year. Yale's active managers have added value to benchmark returns primarily through stock selection.

Yale's internally managed fixed income portfolio earned an annualized 6.3 percent over the past decade, exceeding the Barclays Capital Treasury Index by 0.3 percent per year and the Russell Median Manager

Yale's Performance Exceeds Peer Results

2000 to 2010, 2000=$100



return by 0.6 percent per year. By making astute security selection decisions and accepting a moderate degree of illiquidity, the Endowment benefited from excess returns without incurring material credit or option risk.

The foreign equity portfolio generated an annual return of 13.8 percent over the ten-year period, outperforming its composite benchmark by 8.0 percent per year and the Russell Median Manager return by 7.9 percent per year. The portfolio's excess return is due to astute country allocation and effective security selection.

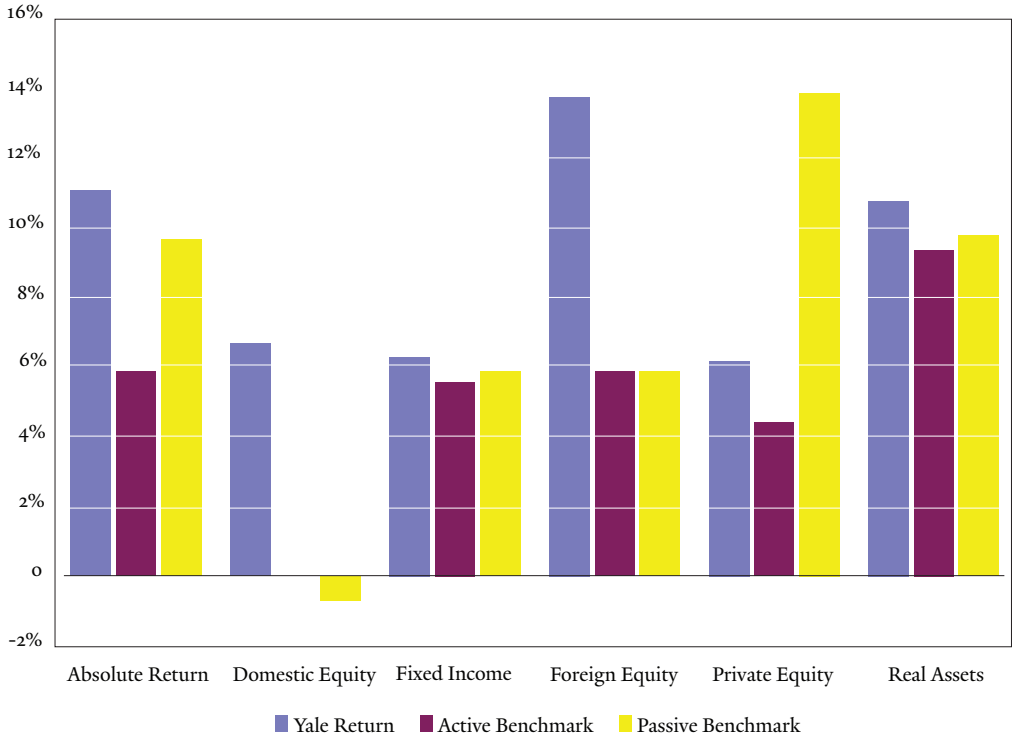
Results from Yale's non-marketable assets demonstrate the value of superior active management. Private equity earned 6.2 percent annually over the last ten years, underperforming the passive benchmark of University inflation plus 10 percent by 7.7 percent per year, but outperforming the return of a pool of private equity managers compiled by Cambridge Associates by 2.4 percent per year. Since inception in 1973, the private equity program has earned an astounding 30.3 percent per annum.

Real assets generated a 10.9 percent annualized return over the ten-year period, outperforming the passive benchmark of University inflation plus 6.0 percent by 1.1 percent per year and the active benchmark of real assets manager returns by 1.5 percent per year. Yale's outperformance is due to successful exploitation of market inefficiencies and timely pursuit of contrarian investment strategies.

Kelsie Newsom

Kimberly E. Stewart

Yale Asset Class Results Beat Benchmarks
2000–2010



Active Benchmarks
Absolute Return: CSFB/Tremont Composite
Domestic Equity: Frank Russell Median Manager, U.S. Equity
Fixed Income: Frank Russell Median Manager, Fixed Income
Foreign Equity: Frank Russell Median Manager Composite, Foreign Equity
Private Equity: Cambridge Associates Composite
Real Assets: NCREIF and Cambridge Associates Composite

Passive Benchmarks
Absolute Return: 1-year Constant Maturity Treasury + 6%
Domestic Equity: Wilshire 5000
Fixed Income: BarCap 1-5 Yr Treasury
Foreign Equity: 44% MSCI EAFE Index, 28% MSCI EM Index, 28% Opportunistic Benchmark (custom China/India blend)
Private Equity: University Inflation + 10%
Real Assets: University Inflation + 6%

Management and Oversight

6

Since 1975, the Yale Corporation Investment Committee has been responsible for oversight of the Endowment, incorporating senior-level investment experience into portfolio policy formulation. The Investment Committee consists of at least three Fellows of the Corporation and other persons who have particular investment expertise. The Committee meets quarterly, at which time members review asset allocation policies, Endowment performance, and strategies proposed by Investments Office staff. The Committee approves guidelines for investment of the Endowment portfolio, specifying investment objectives, spending policy, and approaches for the investment of each asset category.

Investment Committee

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Chairman
Former Chairman
J.P. Morgan Chase & Co.

Richard C. Levin '74 PH.D.
President
Yale University

G. Leonard Baker '64
Managing Director
Sutter Hill Ventures

Joshua Bekenstein '80
Managing Director
Bain Capital

Stefan Kaluzny '88
Former Managing Director
Golden Gate Capital

Henry F. McCance '64
Chairman Emeritus
Greylock Management

William I. Miller '78
Chairman
Irwin Management Company

Ranji Nagaswami '86 M.B.A.
Chief Investment Advisor
City of New York

Dinakar Singh '90
CEO and Founding Partner
TPG-Axon Capital

Fareed R. Zakaria '86
Host
CNN

The Investments Office manages the Endowment and other University financial assets, and defines and implements the University's borrowing strategies. Headed by the Chief Investment Officer, the Office currently consists of twenty-five professionals.

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Senior Financial Analyst

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Senior Financial Analyst

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Nilesh V. Vashee '09
Financial Analyst

Xinchen Wang '09
Financial Analyst

Sources

Much of the material in this publication is drawn from memoranda produced by the Investments Office for the Yale Corporation Investment Committee. Other material comes from Yale's financial records, Reports of the Treasurer, and Reports of the President.

Pages 6-7
Yale data from George W. Pierson, *A Yale Book of Numbers: Historical Statistics of the College and University 1701-1976* (New Haven: Yale University Press, 1983) and Yale Office of Institutional Research.

Pages 11-25
Educational institution asset allocations from Cambridge Associates.

Page 26
Domestic and foreign equity, absolute return, and fixed income numbers are based on BNY Mellon data; venture, leveraged buyout, and real estate numbers are based on Cambridge Associates data.

Page 32
The Endowment's annual return for the ten years ending June 30, 2010 ranks in the top one percent of institutional funds as measured by the SEI Large Plan Universe.

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Other photographs by Michael Marsland, Yale Office of Public Affairs.

Design

Strong Cohen/*D. Pucillo*

Opposite: The Yale shield, from Sheffield-Sterling-Strathcona Hall.

Left: Gargoyle at Yale Law School.


LUX ET
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ותמים
VERITAS