



The Yale Endowment 2005

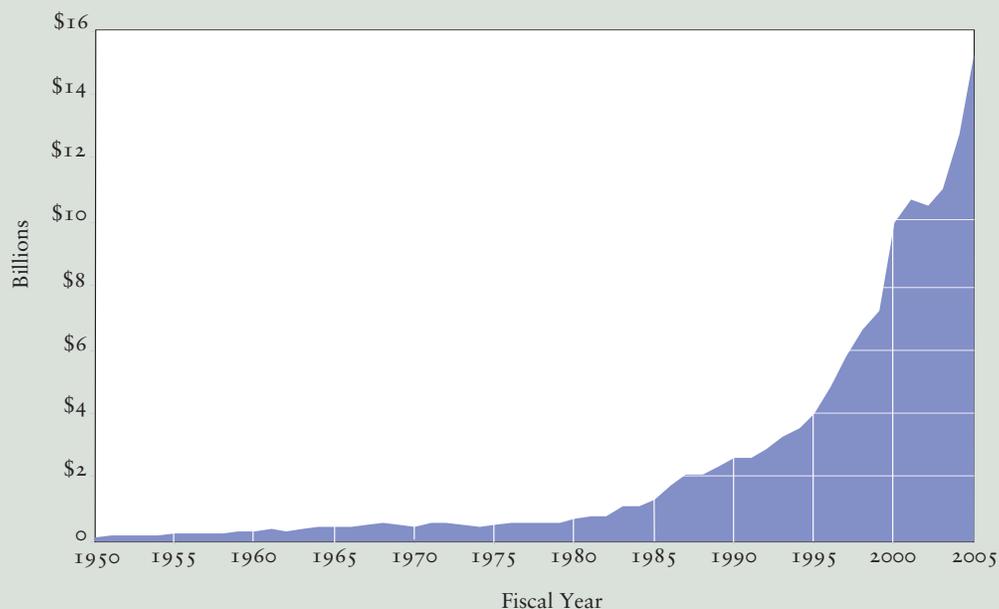
## Endowment Highlights

	Fiscal Year				
	2005	2004	2003	2002	2001
Market Value (in millions)	\$15,224.9	\$12,747.2	\$11,034.6	\$10,523.6	\$10,725.1
Return	22.3%	19.4%	8.8%	0.7%	9.2%
Spending (in millions)	\$ 567.0	\$ 502.0	\$ 470.1	\$ 409.3	\$ 337.5
Operating Budget Revenues (in millions)	1,768.0	1,630.8	1,553.7	1,466.6	1,352.9
Endowment Percentage	32.2%	30.8%	30.3%	27.9%	24.9%

### Asset Allocation (as of June 30)

Domestic Equity	14.1%	14.8%	14.9%	15.4%	15.5%
Absolute Return	25.7	26.1	25.1	26.5	22.9
Foreign Equity	13.7	14.8	14.6	12.8	10.6
Private Equity	14.8	14.5	14.9	14.4	18.2
Real Assets	25.0	18.8	20.9	20.5	16.8
Fixed Income	4.9	7.4	7.4	10.0	9.8
Cash	1.9	3.5	2.1	0.3	6.2

Endowment Market Value 1950–2005



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*Front cover:*  
Wall carving from west façade, Sterling  
Memorial Library.

*Right:*  
View of the Beinecke Rare Book and Manuscript  
Library in Hewitt Quadrangle, from the  
colonnade of University Commons.



## A Message from the Yale University President

For more than three centuries Yale has remained at the forefront of higher education, even as the challenges universities face have intensified and as the scope of operations has expanded from regional to national to global. To maintain leadership in this rapidly evolving sphere requires a far-reaching vision as well as substantial and reliable sources of financial support.

We have been fortunate indeed in recent decades to have the management of Yale's financial resources in such capable hands. The Investment Committee, chaired by Charles D. Ellis, has provided guidance from some of our country's most sage and resourceful financial experts. The Investments Office, under Chief Investment Officer David F. Swensen, has consistently led the field of higher education in terms of investment return and growth.

I know that thousands of readers will appreciate and enjoy, as I have, this report on the 2005 Yale Endowment. You will find here a distillation of the thinking that guides us so well and a description of the policies and discipline that have kept the value of the Yale Endowment advancing at unparalleled rates. With the growth in net worth has come steady progress in support for the operating budget. In 1990 the Endowment furnished 12 percent of Yale's operating revenues; today the budget receives approximately 33 percent of its funding from this source. As a conse-

quence, Yale has an ever greater degree of independence, excellence, and stability.

Superior management of Yale's investment portfolio cannot alone ensure the financial growth and stability we need. Crucial to the fortunes of an institution with the scope and ambition of Yale is the role of our alumni and friends in building the Endowment. Gifts to Yale have remained a fundamental engine of the University's growth throughout the centuries. The report discusses the role of our donors in advancing Yale's pursuit of excellence.

Financial support from Yale's assets represents a critical underpinning for the University's aspirations—to build on the University's traditional strengths, to intensify our efforts in laboratory science, medicine, and engineering, to think and perform globally, to maintain a student body and faculty second to none.

It is a pleasure to congratulate our investment team on their remarkable performance. At the same time, I express heartfelt thanks to all our dedicated alumni and friends whose generosity continues to mean so much to Yale.



Richard C. Levin



President Richard C. Levin (right) with Charles D. Ellis, Chairman of the Yale Corporation Investment Committee.

## A Message from the Investment Committee Chairman

As a result of generous support from alumni and friends and the continuing achievements by the Investments Office, Yale's Endowment increased its support of the University's expanding budget from 10 percent of revenues in 1986 to 33 percent in 2006. During the past two decades, the Endowment's annual support for the University has increased by \$564 million, supported in large part by Yale's \$5.4 billion of value-added versus its endowment peers.

This extraordinary achievement quite naturally attracts all the attention, yet close observers can say that the real secret to Yale's remarkable success is defense, defense, defense. But how, you might ask, can defense be so important to Yale's remarkably positive results? Starting with that great truism of long-term success in investing—if investors could just eliminate their larger losses, the good results would take care of themselves—we remind ourselves of the great advantages of staying out of trouble.

Yale's rigorous defense in investing combines a series of rational initiatives rooted in the powerful body of investment theory developed at Yale and other universities. The architecture of Yale's portfolio structure is designed to locate the Endowment portfolio on the efficient frontier in trade-off between risk and return. Utilizing Monte Carlo simulations, Yale's portfolio is tested using thousands of possible scenarios, with particular attention to avoiding disruptive adversity and untoward portfolio outcomes. Yale's Investment Committee devotes a full meeting each year to challenging every aspect of the portfolio structure in the classic tradition that only the well-tested decision merits strong, sustained commitment.

Selection of specific external managers adds another powerful defense—and has clearly added significantly to Yale's superior returns. The obvious risks in manager selection are two: hiring managers after their best results and terminating managers after their worst. Yale strongly favors long-term continuing commitments to very carefully chosen managers, often at an early stage in their development. As a result, serial capital additions to each manager's mandates are frequent and turnover among Yale's manager relationships is quite low.

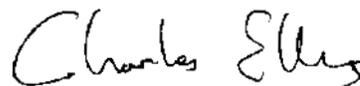
Yale's process for selecting managers is unusually rigorous, partly because the Investments Office staff is so well experienced and so in touch with the markets; partly because extensive "due diligence" contacts are made; and partly because Yale selects only those managers who demonstrate considerable strength on several criteria: investment skills; organizational coherence; clarity of business strategy; appropriate fees and incentives; and, most importantly, personal and professional integrity.

Each new manager is recommended through a formal memorandum that details all "due diligence" research; explains the manager's record, organization, investment philosophy, and decision-making process; and provides the professional record of each principal. Each of these in-depth background briefings—typically 15 to 20 pages long—provides the basis for a thorough discussion with staff professionals. Quarterly Investment Committee meetings are much like an advanced seminar in investment theory and practice, led by two Yale Ph.D.'s: President Richard Levin and Chief Investment Officer David Swensen.

Committee members are chosen for their devotion to Yale, their ability to work unusually well in a small group, and, most particularly, for their capacity to provide effective oversight. Our University is indeed fortunate to have such capable women and men working so conscientiously with our professional team in the Investments Office.

Consistently superior achievement by any investment organization depends ultimately on the people who do the important work. Yale has a remarkable team of highly skilled investment professionals, each with a different area of focus and expertise, who share objectivity when making qualitative decisions; commitment to teamwork; tenacity to purpose when searching out or nurturing relationships with investment managers; and appreciation of the importance of serving Yale unusually well.

Sincerely yours,



Charles D. Ellis

## Introduction

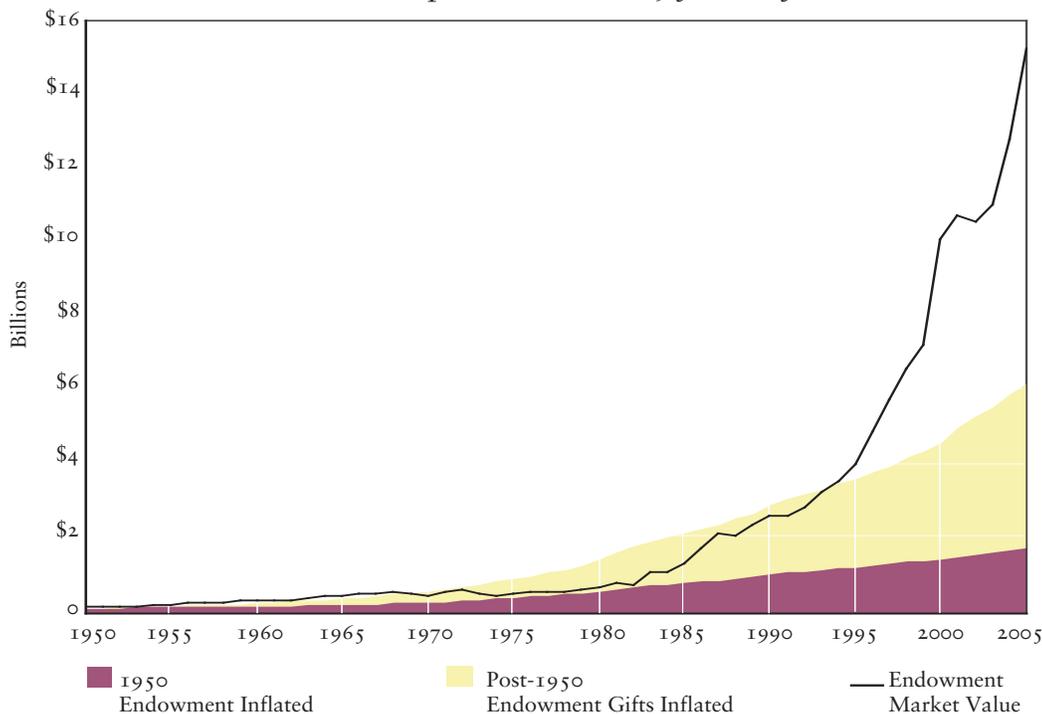
# I

Yale's Endowment produced extraordinarily strong results in fiscal year 2005, generating returns of 22.3 percent and gains of \$2.8 billion. In an environment of single-digit returns for domestic marketable securities, the University's non-traditional asset classes drove portfolio results. Once again, Yale benefited from the Endowment's equity orientation, broad diversification, and active management.

Over the past ten years, the Endowment grew from \$4.0 billion to \$15.2 billion. With annual net investment returns of 17.4 percent, the Endowment's performance exceeded its benchmark and outpaced institutional fund indices. The Yale Endowment's two-decade record of 16.0 percent per annum produced a 2005 Endowment value of more than ten times that of 1985. Yale's superb long-term record resulted from disciplined and diversified asset allocation policies, superior active management results, and strong capital market returns.

Spending from Endowment grew during the last decade from \$149 million to \$567 million, an annual growth rate of 14 percent. On a relative basis, Endowment contributions expanded from 15 percent of total revenues in fiscal 1995 to 32 percent in fiscal 2005. Next year, spending will approximate \$613 million, or 33 percent of projected revenues. Yale's spending and investment policies have provided handsome levels of cash flow to the operating budget for current scholars while preserving Endowment purchasing power for future generations.

Endowment Growth Outpaces Inflation 1950–2005



# 2

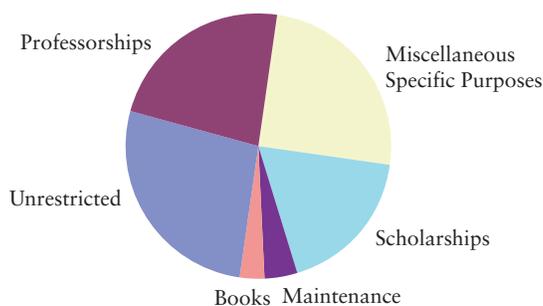
Totaling \$15.2 billion on June 30, 2005, the Yale Endowment contains thousands of funds with a variety of designated purposes and restrictions. Approximately four-fifths of funds constitute true endowment, gifts restricted by donors to provide long-term funding for designated purposes. The remaining one-fifth 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 (23 percent), scholarships, fellowships, and prizes (18 percent), maintenance (4 percent), books (3 percent), and miscellaneous specific purposes (25 percent). The remaining funds (27 percent) are unrestricted. Thirty-four percent of the Endowment benefits the overall University, with remaining funds focused on specific units, including the Faculty of Arts and Sciences (31 percent), the professional schools (22 percent), the library (7 percent), and other entities (6 percent).

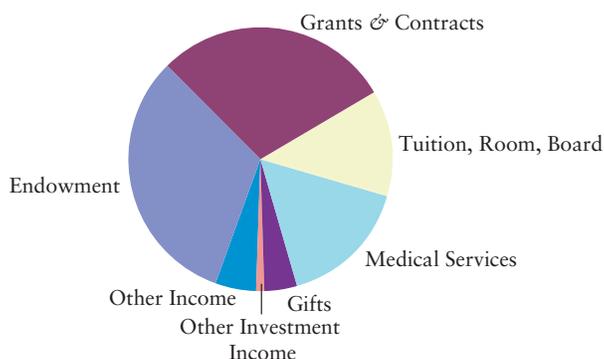
Although distinct in purpose or restriction, Endowment funds are commingled in an investment pool and tracked with unit accounting much like a large mutual fund. Endowment gifts of cash, securities, or property are valued and exchanged for units that represent a claim on a portion of the whole investment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

In fiscal 2005 the Endowment provided \$567 million, or 32 percent, of the University's \$1,768 million operating income. Other major sources of revenues were grants and contracts of \$507 million (29 percent), medical services of \$277 million (16 percent), net tuition, room, and board of \$234 million (13 percent), gifts of \$76 million (4 percent), other investment income of \$24 million (1 percent), and other income and transfers of \$83 million (5 percent).

Endowment Fund Allocation  
Fiscal Year 2005



Operating Budget Revenue  
Fiscal Year 2005



# Gifts and Endowment

Strong growth in the Endowment during the past two decades raises questions about the sensibility of contributing to Yale given the apparent wealth of the University. In fact, recent asset growth simply brought Endowment contributions to the operating budget to the historical trend line. Moreover, had the Endowment not benefited from generous gifts over the years, 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 mirrored the dramatic expansion of the University's programs. In 1905, the Yale Endowment totaled \$7.4 million and funded 34 percent of the budget. One hundred years later, the Endowment amounted to \$15.2 billion and provided 33 percent of the University's budget. In a surprising commonality with the beginning point of 34 percent and the end point of 33 percent, Endowment support for Yale's operations over the last 100 years averaged 33 percent of revenues.

In 1905, Yale had 3,138 students enrolled in the College and eight graduate and professional schools; as of June 30, 2005, Yale had 11,359 students enrolled in the College and twelve post-graduate 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, with the School of Medicine expanding its program dramatically. The growth of the Yale faculty was even more striking. As of June 30, 2005, Yale employed 3,236 faculty members, approximately seven times the 1905 figure.

With this expansion in the number of students and faculty at Yale came explosive growth in the size of the campus. In 1905, Yale's physical plant totaled approximately one million square feet; one hundred years later, that figure was around thirteen 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 1905 fiscal

year, when much of the University's student body came from affluent backgrounds, financial aid totaled only \$1.7 million in 2005 dollars. In the year ending June 30, 2005, Yale offered \$180.7 million of financial aid, an amazing 109-fold increase from one hundred years earlier.

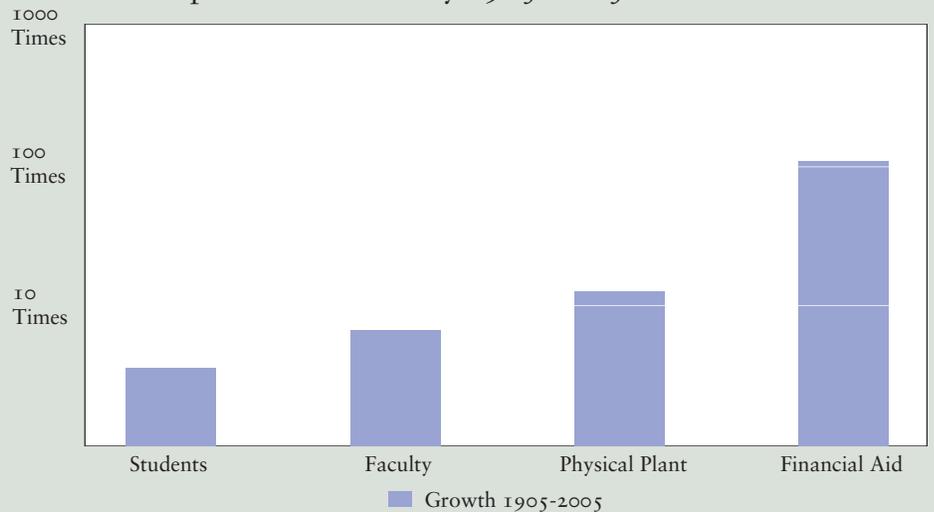
## Gifts Maintain the Endowment's Relevance

Examining the experience of Harvard, Yale, and the Carnegie Institution over the past 95 years provides insight into the importance of gifts. The Carnegie

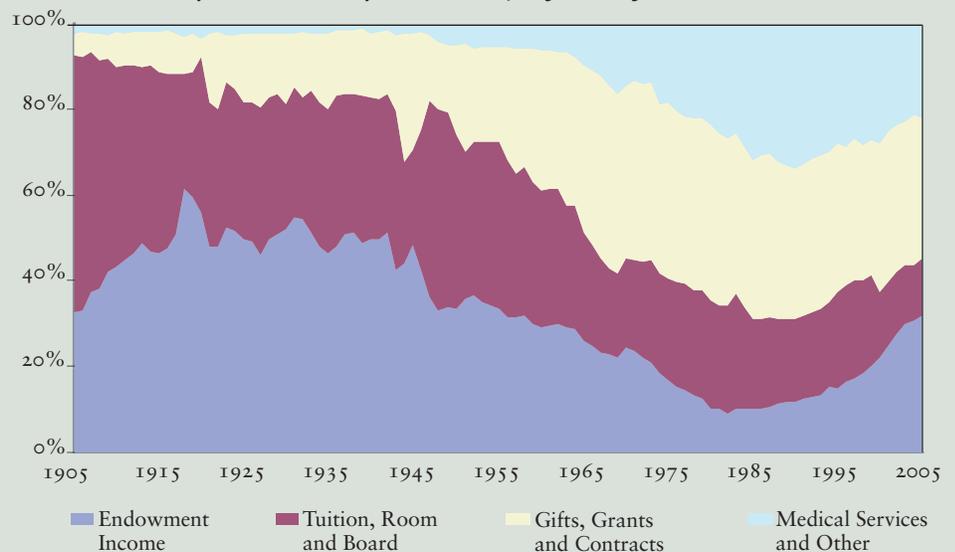
Institution of Washington, one of Andrew Carnegie's many philanthropies, pursues cutting-edge scientific research in astronomy, plant biology, embryology, global ecology, terrestrial magnetism, and earth sciences. Establishing the institution in 1902 with a \$10 million gift, Carnegie made subsequent 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 95 years, the Carnegie Institution endowment

Yale Expands Dramatically 1905–2005



University Revenue by Source 1905–2005



more than kept pace with inflation, with June 30, 2005 assets of \$650 million comfortably ahead of the approximately \$450 million needed to match the rise in price levels. But the formerly comparable Harvard endowment, now at \$25.9 billion, and the previously smaller Yale endowment, currently at \$15.2 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 \$350 million today; Endowment spending would be an insignificant \$14 million in fiscal 2006, compared to the actual figure of \$613 million.

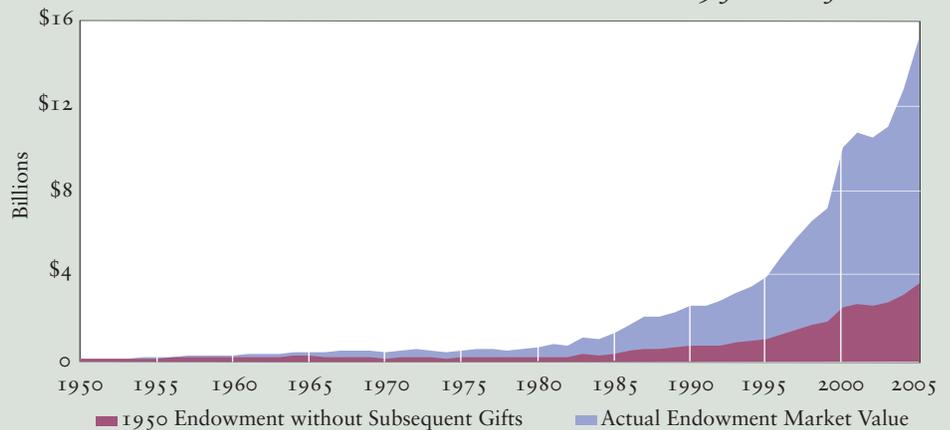
A more precise understanding of the importance of gifts to Endowment comes from a look at Yale's post-1950 experience, covering the period for which the University has high-quality financial data. Without the benefit of Endowment gifts to Yale in the last 55 years, the 1950 Endowment of \$132 million would have grown to about \$3.7 billion by 2005 rather than \$15.2 billion. The difference—a staggering \$11.5 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's Endowment will fail to maintain its level of importance to the University over the long term unless donors continue to provide Endowment support.

### Gifts Underpin Yale's Excellence

Endowments provide the means for institutions to establish a superior educational environment. On the margin, endowment income attracts better scholars, provides superior facilities, and funds pioneering research. As a result, the ability of endowment to support a large portion of a university's budget correlates strongly with institutional excellence. As the chart below indicates, a direct relationship exists between endowment support and educational quality. The top quartile of private universities, as ranked by *U.S.*

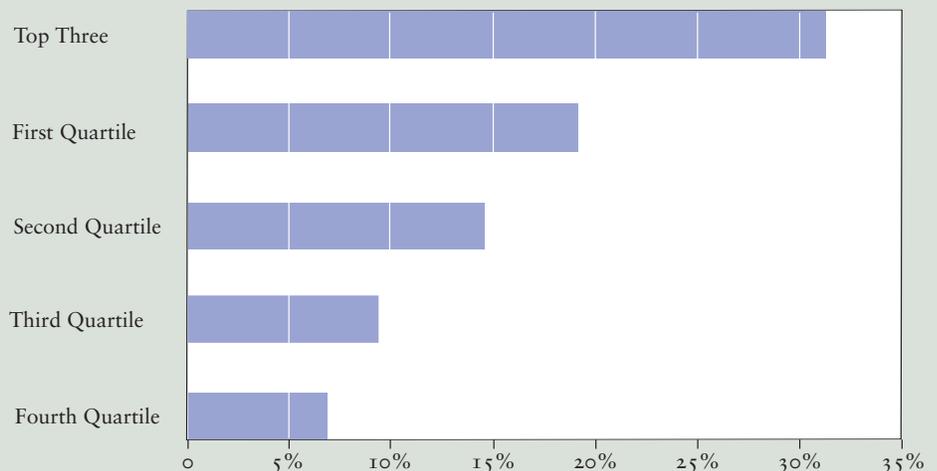
*News and World Report* in its 2005 report "America's Best Colleges," relied on investment income for 19.1 percent of their fiscal 2004 budgets; the top three—Harvard, Princeton, and Yale—averaged 31.2 percent, with investment income surpassing all other revenue sources. In contrast, fourth quartile institutions counted on investment income for only 6.8 percent of revenues. Maintaining an endowment large enough to fund a sizable percentage of a university's budget clearly correlates with institutional excellence.

Gifts Prove Crucial to Endowment Growth 1950–2005



### Investment Income Correlates with Quality of Top Research Universities

Fiscal 2004 Percentage of Budget Supported by Investment Income



# 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

Asset Class	June 2005	Current Target
Domestic Equity	14.1%	14.0%
Fixed Income	4.9	5.0
Absolute Return	25.7	25.0
Foreign Equity	13.7	14.0
Private Equity	14.8	17.0
Real Assets	25.0	25.0
Cash	1.9	0.0



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

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 11.9 percent. Primarily because of shortfalls relative to the target in private equity holdings, the actual allocation produces a portfolio expected to grow at 6.0 percent with a risk of 11.4 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 2005 meeting, Yale's Investment Committee adopted a number of changes in the University's policy portfolio allocations. The combination of valuation increases in energy, timber, and real estate and new commitments to timber and real estate drove the real assets allocation to the upper end of the specified range. Based on strong investment characteristics, the Committee approved an increase in the real assets target from 20.0 percent to 25.0 percent. The 5.0-percentage-point increase was funded by a 2.5-percentage-point decrease in fixed income to 5.0 percent, a 1.0-percentage-point decrease in each of domestic equity and foreign equity to 14.0 percent, and a 0.5-percentage-point decrease in private equity to 17.0 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, 95.0 percent of the Endowment is targeted for 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 reduced dramatically the Endowment's dependence on domestic marketable securities by reallocating assets to nontraditional asset classes. In 1985, more than 80 percent of the Endowment was committed to U.S. stocks, bonds, and cash. Today, target allocations call for less than 20 percent in domestic marketable securities, while the diversifying assets of foreign equity, private equity, absolute return strategies, and real assets dominate the Endowment, representing more than 80 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 1985 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.



Seth D. Alexander '95  
*Director*



Alexander C. Banker  
*Director*

## 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 these assets in such a way as to provide the highest expected return for a given level of risk.

## Domestic Equity

Finance theory predicts that equity holdings will generate returns superior to those of less risky assets such as bonds and cash. The predominant asset class in most U.S. institutional portfolios, domestic equity, represents a large, liquid, and heavily researched market. While the average educational institution invests 32.0 percent of assets in domestic equities, Yale's target allocation to this asset class is only 14.0 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. Over the past five fiscal years, security selection generated extraordinary returns, as the University outperformed the market by a cumulative 61 percentage points. The efforts of Yale's external active managers, aided by a tail wind favoring value-oriented and small-capitalization securities, led to this outstanding result.

As a consequence of the domestic equity portfolio's unconventional structure, Yale experienced significant underperformance preceding the recent success. For the five years prior to the market peak in March 2000, a period when the market favored large-capitalization growth stocks, the University dropped 16 percentage points relative to the market. Only by sticking with an uncomfortable, contrarian position did the University ultimately benefit from its unusual portfolio.

In constructing the domestic equity portfolio, Yale pays little attention to sectoral allocations. In fact, the current portfolio consists of a variety of specialists seeking to apply in-depth knowledge to concentrated portfolios of securities. The aggregation of individual manager portfolios focused on energy, biotechnology, and technology, along with a number of less specialized managers, 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 typically favors value and small-capitalization stocks. Value stocks, securities that are cheap in relation to fundamental measures such as book value, earnings, or cash flow, generally outperform the market over the long term, albeit with higher



Alan S. Forman  
Director



Timothy R. Sullivan '86  
Director

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 stems from a belief that larger stocks tend to be better followed and more efficiently priced than small-capitalization stocks, offering better opportunities for superior managers to generate excess returns. In addition, studies indicate that, over the very long term, small-capitalization stocks tend to generate slightly higher risk-adjusted returns than do large-capitalization stocks. Thus small-capitalization stocks have a prevailing, albeit somewhat unreliable, wind at their back.

When engaging active managers, Yale structures relationships that align the University's interests with the manager's. Too many money managers profit by gathering assets at the expense of generating strong investment returns. High levels of side-by-side investment contribute to creating coincidence of interest, as does a manager's ethical desire to serve the client's interest.

Yale often develops new investment management relationships with promising "young and hungry" principals or with an experienced group working independently for the first time. Newer organizations typically have small amounts 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 stand 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, 2005, Yale's domestic equity portfolio returned 15.7 percent per annum, outperforming the Wilshire 5000 by 5.8 percent annually, generating \$746 million in value added relative to the portfolio's benchmark.



Kenneth R. Miller '71  
*Associate General Counsel*



Michael E. Finnerty  
*Associate Director*

## Student Activities

Yale College students enjoy an extraordinary quality of campus life. Donors to Yale's Endowment have contributed to the undergraduate experience by providing permanent support for a wide variety of student activities, which enrich the learning experience while encouraging leadership and involvement in social services.

A historical review indicates that the issue of student well-being was not a major concern of donors in the early history of Yale College. In the eighteenth and nineteenth centuries, a college education had been more or less restricted to the leisure class, with the result that a student's free time—aside from intercollegiate athletics—remained largely a private matter funded by the individual's own resources. The notion that a university should provide students with a pleasant, stimulating, and well-rounded experience became more firmly entrenched in the twentieth century, as reflected in the quickening pace of contributions to the University for extracurricular student activity. With the democratization of higher education came a sense of responsibility for student well-being, as well as a concern for wholesome, organized activity for undergraduates.



A poster announcing the performance on June 17, 1911 of a Yale Dramatic Association ("Dramat") play called "The Knight of the Burning Pestle." This poster dates from a few years after the student theater group received endowed funding in 1907.



The Yale Glee Club in 1888. The man with the long whiskers is Thomas G. Shepard, second director of the club. In the back row, last man on the left, is Amos Alonzo Stagg, B.A. 1888, later a famous football and basketball coach.

An early endowment for student activities, the John W. Hendrie Debating Fund, established in 1900 by Mr. Hendrie, B.A. 1851, supports what may be the most long-standing extracurricular activity at Yale. Debating, which is closely associated with political life, suits an institution that aspires to produce leaders as well as scholars. In addition to debating, Yale has endowed support for many prizes for oratory.

Other early endowments emphasized cultural pursuits and reinforced Yale's association with the arts. A 1907 endowment originally funded with contributions from a number of donors finances the Yale Dramatic Association, known as the Dramat. Endowment funding placed student drama productions on permanent financial footing, which has helped cement theater's place as one of the liveliest aspects of Yale's extracurricular life. Yale's Philharmonia Orchestra, another arts-related extracurricular activity, benefits from the Lucy S. and Henry C. White Fund, which started with a \$50,000 bequest by Mrs. White in 1927.

One of the most widely supported student activities has been the Glee Club, which relies on at least eight different endowed funds. Endowment support for the Glee Club began with the Joseph Horne Holmes Fund of 1936, presented by the brother and sons of the honoree to "assist the Yale Glee Club in meeting expenses." Some funds thoughtfully provided for travel expenses so the Glee Club can accept engagements throughout the world. Other funds support undergraduate

musical performance more broadly, including the Sarah E. Cogan Dean's Discretionary Fund (1978) that provides funds for "singers and their travel and for instrument maintenance and replacement, among more general needs" and the William Weston Bray, Jr. (B.E. 1950E) Undergraduate Music Fund (1994) for the support of undergraduate music programs. Performing arts receive funding from the 2003 David Shaber '54 M.F.A. Memorial Fund for Undergraduate Performing Arts.

In 1933, Yale founded the residential college system, which created space on campus for the growing body of undergraduates (many of whom had previously been forced to live in boarding houses off campus), divided them into small communities, and integrated social, extracurricular, and academic life. From the 1930s forward, student activity funds tended to be associated with the colleges. Each of Yale's twelve residential colleges boasts a number of endowments for student activities, which complement funds to support the more academic side of residential college life such as seminars, research travel, and scholarly prizes.

The earliest of the residential college funds for student activities, the Paul Haviland (B.A. 1927) Memorial Fund established in 1935, supports an intramural golf tournament among the colleges. The Haviland fund was unusual for its time in that it promoted athletic competition instead of cultural activity.

A bequest from alumnus Allison V. Armour, B.A. 1884, established a fund in 1941 to enable the master of Daven-

port College to acquire books, works of art, or furnishings for the college, particularly for the Fellows' Room. Shortly thereafter the Kent Arnold and Harry Llewelyn Evans, Jr. Memorial Fund (1945) gave the master of Berkeley the wherewithal to encourage student interest in natural sciences and music, but without indicating how that should be accomplished on income from a total gift of \$1,740.

A 1936 gift from Hendon Chubb, Ph.B. 1895, created the Chubb Fellowship in Timothy Dwight College to bring distinguished speakers to campus each year. In its nearly seven-decade history, the Chubb Fellowship enabled students to hear talks by national figures including George H.W. Bush, Jimmy Carter, Gerald Ford, Betty Friedan, John Kenneth Galbraith, and Norman Mailer. The guests often participate in the Yale institution known as the Master's Tea, which brings visitors into the master's living room for a conversation with students. Campus visits by leaders in government, business, sports, the arts, and the media undeniably add luster to a Yale College education, providing a real-world complement to theoretical studies.

Chubb inspired other residential colleges to follow suit, generating a range of funds for guest lectureships and exchanges with prominent national and international figures. In 1958 the Charles D. Dickey (B.A. 1916, M.A.H. 1946, LL.D. 1963) Davenport College Fund, named for a former fellow of the Yale Corporation, established support for guest speakers, as did the Lovett Lectureship Fund of Pierson College. Other colleges followed. A similar endowment for the University as a whole, the John-Christophe Schlesinger Visiting Writer Endowment Fund, 1999, has sponsored campus visits by authors including Tobias Wolff, author of *This Boy's Life*.

Increasingly, endowments for student activities provide substantial flexibility. For example, in 1960, several donors combined forces to create the Calhoun College Fund "to be used at the discretion of the Master of Calhoun College for the benefit of the College." Many years later, in 2003, the Evelyn and John McNiff (B.A. 1983) Calhoun College Fund for Student Activities provided the same flexible student activity support. Most colleges have at least one such discretionary master's fund that serves a great range of purposes. The

Abraham Pierson Fund of 1991, for instance, provides for: (1) college breakfasts for graduating seniors and others residing on campus until Commencement; (2) common room furnishings; (3) maintenance and upkeep of the Pierson squash courts; and (4) other purposes including emergency loans for students and maintenance of the pool room, TV room, exercise and weight room, and similar facilities. Discretionary funds enable the college masters to support important activities, including social events and celebrations.

The Residential Colleges Intramurals Fund, contributed by the William and Martha Ford Fund in 1981, provides ongoing support for athletic competition among the residential colleges. For those with more artistic inclinations, the Louis Sudler (B.A. 1925) Performing Arts Fund supports performing arts activities in the residential colleges.

In a more spiritual vein, religious activities receive support from the William Sloane Coffin, Jr. (B.A. 1949, B.D. 1956) Fund, established in 1976, while programs of the Slifka Center for Jewish Life and the St. Thomas More Chapel have endowments as well. Some

endowments address the needs of particular groups of undergraduates, such as the Peter Greeman (B.A. 1954) Fund established in 1999 to support Ethnic Counselors for undergraduates and Cultural Connections (a pre-orientation program for freshmen).

Endowed funds often reflect the changing character of Yale, providing permanent funding for new initiatives. For example, to support the current effort to increase international opportunities available to Yale students, the Richard G. Corey Fund, established in 2003, provides funds for internships abroad for Yale undergraduates, so that the students may either perform volunteer services or work in foreign countries. The fund helps to make non-academic activity abroad affordable for all students, increasing international interests and knowledge.

Endowments play a crucial role in shaping the character and quality of undergraduate life. Yale's generous donors have provided a wide variety of funds that expose students to provocative ideas, healthy competition, and new experiences.



The Yale Golf Course, which opened in 1926 on land given to the University in 1923 by Mrs. Sarah Wey Tompkins, occupies about 300 acres. The eighteen-hole course hosts the Yale men's and women's varsity golf teams as well as the annual Yale College intramural golf tournament, which receives support from the Paul Haviland (B.A. 1927) Memorial Fund.

## 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 covariance with other asset classes and serves as a hedge against financial accidents or periods of unanticipated deflation. While educational institutions maintain a substantial allocation to fixed income and cash, averaging 19.5 percent, Yale's target allocation to fixed income constitutes only 5.0 percent of the Endowment. Bonds have an expected real return of 2.0 percent with risk of 10.0 percent. The Lehman Brothers 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 making up the Endowment. Still, fixed income plays an important role in the Endowment by providing a diversifying hedge against financial accidents or periods of unanticipated deflation. To achieve this hedge, the Endowment invests primarily in high-quality instruments backed by the full faith and credit of the U.S. government. Yale's portfolio emphasizes non-callable securities, ensuring that the Endowment receives the hoped-for protection in periods of declining interest rates.

The government bond market is arguably the most efficiently priced asset class, offering few opportunities to add significant value through active management. In fact, most fixed income 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 for active management, clients lose the protection afforded by high-quality, non-callable fixed income instruments.

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, the markets discount the value of corporate promises-to-pay, impairing the defensive character of corporate 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. In periods of deflation, 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—long-term obligations of the



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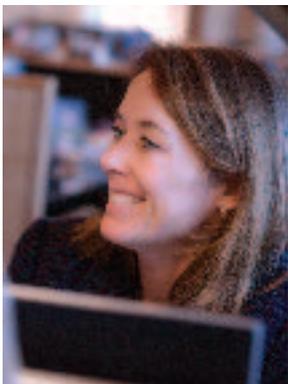
U.S. government—best meet the crisis protection and deflation hedging requirements for bond portfolios.

Yale generally engages external managers to make active security selection decisions, operating with the philosophy that superior investment results stem from creating partnerships with top-notch managers around the globe. Fixed income represents the exception that proves the rule. Based on skepticism about active fixed income strategies and belief in the efficacy of a highly structured approach to bond portfolio management, the Investments Office chooses to manage Endowment bonds internally. In spite of an aversion to market timing strategies, credit risk, and call options, Yale manages to add value consistently. Primarily by identifying overlooked, illiquid securities, over the past decade the Investments Office produced returns of 7.4 percent per annum, 67 basis points per year above the benchmark return. Creative, patient portfolio management leads to superior investment results without impairing the portfolio protection characteristics of high-quality fixed income.

Sensible investors focus on the diversifying characteristics of long-term government bonds, holding only the amount necessary to protect portfolios against financial trauma. If portfolios include the minimum allocation necessary to provide insurance against catastrophe, 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 in time of crisis, while reducing the long-term costs of holding bonds.



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*Senior Associate*



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# Policy Asset Allocation Targets

Establishing policy asset allocation targets represents the heart of the investment process, as no other aspect of portfolio management plays as great a role in determining a fund's ultimate performance. Yale's target allocation is achieved 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, the value of gradualism in making changes, and Yale's comparative advantages as an investor.

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. Nonetheless, 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 2005 the University adopted a number of changes in policy targets. Real assets moved from a target of 20.0 percent to 25.0 percent, while fixed income moved from 7.5 to 5.0 percent, domestic equity moved from 15.0 to 14.0 percent, foreign equity moved from 15.0 to 14.0 percent, and private equity from 17.5 to 17.0 percent.

The real assets portfolio has grown rapidly in recent times due to increases in valuations and robust deal flow; the shift from a 20.0 percent target to 25.0 percent closes the gap between the University's actual and target allocations. Real assets, with attractive expected returns and the ability to hedge against inflation, represent an ideal core investment for the Endowment. Real asset equity investments provide claims on future streams of income that tend to

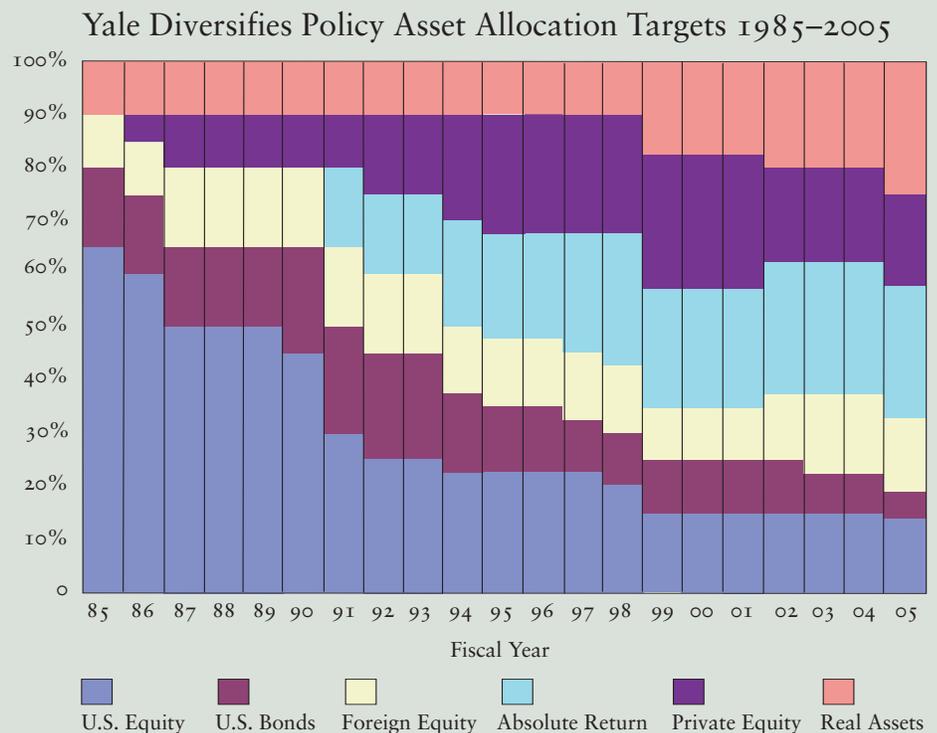
increase along with inflation, producing an important diversification for investment portfolios. In addition to attractive diversifying characteristics, real assets present tremendous opportunities for superior managers to add value and outperform industry averages. The illiquid nature of real assets, information asymmetries, and the importance of operating skill all contribute to the chances for active management success.

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 11.9 percent. This risk-return combination compares favorably to the average endowment portfolio, which offers an expected real return lower than Yale's, 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 24 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 36 percent chance of spending disruption and a 33 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 2.5 percent or 5.0 percent; in fact, in seven of twenty years no changes occurred at all.

Yale's asset allocation targets are reviewed only once per year, limiting the possibility of damage from ill-considered moves made in response to the gloom or euphoria imbuing market conditions. 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



Prior to 1999, Real Assets included only real estate. Oil and gas and timber were classified as Private Equity

purchased tens of millions of dollars of S&P 500 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 did not reverse—after the fact—positions it had adopted as part of a recent annual policy target review. Accordingly the University was spared from a counter-productive whipsaw.

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, as they consisted of roughly 50 percent domestic equities, 45 percent domestic bonds and cash, and 5 percent alternative strategies. Two decades later, average allocations have made only some progress, with approximately 32 percent in domestic equities, 20 percent in bonds and cash, and 48 percent in alternative strategies. But Yale

remains ahead of the curve: with the Endowment's six asset classes exhibiting allocations between 5 percent and 25 percent, the portfolio meets the test of diversification; with five high expected return asset classes accounting for 95 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.

## *Foreign Equity*

Investments in overseas markets give the Endowment exposure to the global economy, providing substantial diversification. Because forces that drive markets differ from country to country, market returns will vary from one country to another. This diversification, quantitatively reflected in the foreign equity portfolio's expected correlation of 0.7 to domestic equities, reduces the Endowment portfolio's level of risk. Additionally, the large volume of undercovered companies listed in foreign markets and the inefficiencies in their pricing create opportunities to earn above-market returns through active management.

Yale's foreign equity target allocation of 14.0 percent stands slightly below the average endowment's allocation of 17.4 percent. Expected real returns for developed equities are 6.0 percent with risk of 20.0 percent, while emerging equities are 8.0 percent with a risk level of 25.0 percent. The portfolio is measured against a composite benchmark of 50 percent developed markets, measured by the Morgan Stanley Capital International (MSCI) Europe, Australasia, and Far East Index, and 50 percent emerging markets, measured by the MSCI Emerging Markets Index.

Emerging markets, with their rapidly growing economies, are particularly intriguing, causing Yale to target one-half of its foreign portfolio to developing countries. Emerging markets tend to be less efficient than developed markets, a consequence of illiquidity, little research coverage, and relatively unsophisticated local investors. Emerging markets provide an expanded set of investment opportunities, with a large number of companies well positioned to benefit from rapidly growing and changing economies. Given expectations of powerful underlying economic growth plus greater opportunities to find undervalued stocks, developing countries constitute an attractive arena for active management.

Yale looks for foreign equity managers that concentrate on creating portfolios using bottom-up stock selection rather than top-down macro considerations. Accordingly, Yale's country, sector, and

security allocations may differ significantly from those of broad global indices. Small-capitalization stocks, lying below the radar screen of large institutional funds, offer particularly compelling opportunities to add value. Although some of Yale's managers have global mandates, Yale recognizes the value of managers that specialize regionally. A regional mandate facilitates the conduct of intensive company research, creating an edge over less focused global funds.

Country allocations heavily influence overall performance in foreign equities. Unfortunately, forecasting country returns proves difficult in developed markets and provides a generally unreliable source of value added. In emerging markets, country valuations sometimes move to extremes that offer identifiable top-down opportunities to generate excess returns. In general, however, Yale's managers focus on identifying bottom-up security-specific investments.

The Investments Office monitors the size of actively managed portfolios, shifting capital 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 sometimes exploits compelling undervaluations in a country, sector, or strategy by hiring a new manager to take advantage of the opportunity.

Although Yale's foreign equity managers pursue a broad range of investment mandates, they share a commitment to fundamental research. In the developed portfolio, Yale has core allocations to managers that search for undervalued securities, employing proprietary models to identify value. Investment approaches range from using highly sophisticated quantitative modeling techniques, to conducting thorough bottom-up company analysis, to identifying out-of-favor, asset-rich companies at deep discounts to fair value. Yale manages internally a portfolio of closed-end funds and investment trusts that contain both developed and emerging market equities. Through these vehicles the University can increase or decrease exposure to foreign markets as needed and add incremental value by purchasing at wide discounts and selling at narrower discounts.

In the developing markets portfolio, Yale employs a global emerging markets manager complemented by managers with regional concentrations in Eastern Europe, Russia, Asia, and Africa. The University's managers use fundamental research to understand potentially attractive companies, often making hundreds of company visits per year.

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 back to the dollar or to other currencies.

The University's performance in foreign equities has been outstanding. Over the ten years ending June 30, 2005, Yale foreign



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equities returned 12.7 percent per annum, more than twice the annualized 6.1 percent return of the asset class's composite benchmark, generating \$672 million in value added relative to the portfolio's benchmark.

## *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 percent. Unlike traditional domestic and foreign equity investments, absolute return investments provide returns largely independent of overall 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 coupled with low risk.

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 positions in mispriced securities and depend on a specific corporate event, such as a merger or bankruptcy settlement, 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 25.0 percent of the Endowment. In contrast, the average educational institution allocates 17.6 percent of assets to such strategies. Absolute return strategies are expected to generate real returns of 6.0 percent with risk levels of 10.0 percent for event-driven strategies and 15.0 percent for value-driven strategies.

An important attribute of Yale's investment strategy concerns the alignment of interests between investors and investment managers. To that end, absolute return accounts are 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 aspect of the absolute return asset class, Yale seeks to vary capital commitments in response to degrees of opportunity. Fluctuations in bankruptcy rates and merger activity, as well as changes in regulatory environment and 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, encouraging managers to put money to work regardless of the investment climate. We prefer to hire managers with the depth,



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Senior Financial Analyst



Daniel G. Kilpatrick '03  
Senior Financial Analyst

scope, and experience to assess and allocate funds across more than one strategy.

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 12.7 percent in the fifteen years since its inception, outperforming its benchmark by 1.7 percent. In addition, the portfolio has outperformed the Wilshire 5000 return of 10.8 percent over the relevant time period. The monthly standard deviation of the portfolio was a remarkably low 5.1 percent annualized, relative to 14.6 percent volatility exhibited by the Wilshire 5000. The correlation of monthly returns with the Wilshire 5000 has been exactly zero, highlighting the significant diversification effect of the asset class.

## *Private Equity*

Private equity offers extremely attractive long-term risk-adjusted return characteristics, stemming from the University's strong stable of value-added 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 17.0 percent far exceeds the 6.1 percent actual allocation of the average educational institution. In aggregate, the private equity portfolio is expected to generate real returns of 11.4 percent with risk of 29.0 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, Kleiner Perkins, Sequoia, and Sutter Hill, and buyout specialists Bain Capital, Berkshire Partners, Clayton Dubilier & Rice, and Madison Dearborn Partners.

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, private equity has generated a 31.0 percent annual return; over the past ten years Yale's private equity portfolio has generated a 39.5 percent annual return, including an amazing return of 168.5 percent in fiscal 2000, when the University made \$2.1 billion on its private equity investments. 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, and 2003.

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.



Carrie A. Abildgaard  
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*Financial Analyst*

Of particular note has been the success of Yale's venture capital managers, which have started some of the nation's leading companies. In the 1970s and 1980s, Yale participated in a number of start-ups that defined 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 investment in Google illustrates the home-run potential of venture capital investing; the University's \$300,000 investment 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, and Domino's Pizza.

Increasingly, Yale has invested in private equity abroad. The European leveraged buyout market has emerged as an appealing investment opportunity, as private equity gains more widespread acceptance. Venture capital in Asia presents intriguing potential, albeit with the increased risks of investing in developing countries with less well-established laws and markets.

The successes of Yale and other long-time investors in private equity have attracted numerous new investors to the field. Vastly larger sums of capital have been raised, prompting concerns about future returns. 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 these premier firms, the University hopes to continue to generate attractive returns in an increasingly competitive marketplace.



## 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 25.0 percent long-term policy allocation significantly exceeds the average endowment's commitment of 7.5 percent. Expected real returns are 6.0 percent with risk of 15.0 percent.

Holdings of real assets offer risk and return characteristics well suited for the Yale Endowment. Real assets represent claims on future streams of inflation-sensitive income, supplying protection against unanticipated inflation and playing an important diversifying role in the portfolio. Real assets provide relative stability to the Endowment during periods of public market turmoil, at the price of an inability to keep pace during bull markets. 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.

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.

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 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 a stable financial footing. In spite of the risks, the University benefits enormously from the close relation-



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Financial Analyst

ships forged with organizations that Yale introduced to the institutional funds management business.

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 garners 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 developed a deep roster of investment managers focused on multiple property types and geographies. Because local supply and demand 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, such as prime office buildings in central business districts of major metropolitan markets, retail assets in the Northeast, and office and residential properties in the Westside submarket of Los Angeles. Specialized managers with excellent market knowledge provide enormous value added, 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, and attempt to influence the management and growth of the companies.

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



Matthew L. Ramadanovic



Thad C. Brown '92

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, 2005, the portfolio returned an annualized rate of return of 17.7 percent, surpassing the benchmark return of 9.8 percent. Correlations over the last ten years between real assets and Yale's other asset classes have been extremely low, ranging between a low of -0.04 with the foreign equity asset class and a high of 0.29 with the absolute return asset class.

### *Asset Allocations*

	Yale University	Educational Institution Mean
Domestic Equity	14.1%	32.0%
Fixed Income	4.9	16.3
Absolute Return	25.7	17.6
Foreign Equity	13.7	17.4
Private Equity	14.8	6.1
Real Assets	25.0	7.5
Cash	1.9	3.2

Data as of June 30, 2005



The Class of 1954 Environmental Science Center on Sachem Street adjacent to the Peabody Museum.

# Liquidity

Many market participants place an extraordinary value on liquidity. Players seek the ability to trade out of yesterday's loser and acquire today's hot prospect, to sell during a market panic and buy into a bull market. Managers responsible for large sums of money focus on heavily traded securities, allowing movement in and out of positions with minimal market impact. However, in pursuing more-liquid securities, investors often miss out on the opportunity to establish positions in illiquid securities at meaningful discounts to fair value.

Highly liquid large-capitalization stocks receive extensive coverage, generating enormous amounts of public data. The widespread availability of information contributes to an environment in which investors have difficulty in obtaining an analytical edge. In contrast, less liquid small-capitalization stocks have less available information, creating an opportunity to be rewarded for uncovering nuggets of data relevant to valuation. Rewarding investments tend to reside in dark corners, not in the glare of floodlights.

The liquidity so many investors seek tends to disappear when most needed. In the crash of October 1987, market makers possessed neither the resources nor the willingness to absorb the extraordinary volume of selling demand that materialized. The liquidity that

investors paid dearly for evaporated in the panic selling on October 19, just when the ability to make an immediate sale might have had value.

J. M. Keynes argued in *The General Theory* that “of the maxims of orthodox finance none, surely, is more anti-social than the fetish of liquidity, the doctrine that it is a positive virtue on the part of investment institutions to concentrate their resources upon the holding of ‘liquid’ securities. It forgets that there is no such thing as liquidity of investment for the community as a whole.”

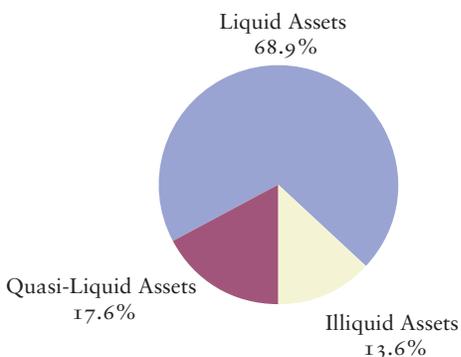
In fact, less frequently traded assets can provide good returns relative to liquid ones. PEFCO bonds, obligations of the Private Export Funding Corporation, enjoy the full faith and credit backing of the U.S. government. Because PEFCO bonds are issued in smaller amounts and receive less attention than more liquid U.S. Treasury bonds, buyers can expect that they will be more difficult to trade. In return, owners receive higher returns. In May 2005 the Investments Office bought PEFCO 4.55 percent bonds set to mature on May 15, 2015 at a yield of 4.57 percent. Compared to U.S. Treasuries maturing on the same date, the PEFCOs provided an incremental yield of 37 basis points. Earning a spread over U.S. Treasuries for U.S. Treasury equivalent credit makes sense.

Investments in companies backed by venture capital illustrate the rewards of accepting illiquidity. In December 1997, eToys, an online retailer, received its first round of private financing, valuing the company at \$15 million. Obviously, as a privately held start-up, shares of the concern exhibited extreme illiquidity. When eToys went public on May 20, 1999, quadrupling on the first day of trading, the company's value skyrocketed to \$7.8 billion, representing an extraordinary gain for the original private investors.

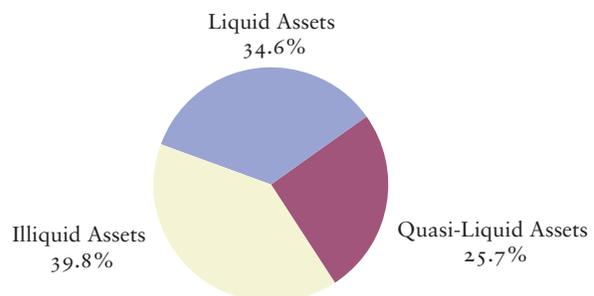
Liquidity of securities tends to increase and decrease as the popularity of the underlying assets waxes and wanes. On the day when eToys went public, approximately \$1 billion worth of shares traded. Not even two years later, when eToys filed for bankruptcy, trading volume amounted to only \$100,000. Clearly, a mindset that avoids illiquid start-ups and prefers highly liquid IPOs carries a clear set of risks.

Once illiquid private investments succeed, liquidity follows as investors clamor for shares of the hot initial public offering. In contrast, if public, liquid investments fail, liquidity dries up as a company falls from favor or declares bankruptcy. Investors should fear failure, not illiquidity.

Average Endowment Liquidity  
June 30, 2005



Yale Endowment Liquidity  
June 30, 2005



Liquid Assets: Marketable Equity, Bonds, and Cash  
 Quasi-Liquid Assets: Absolute Return  
 Illiquid Assets: Private Equity and Real Assets

## Yale's Schools for the Arts

Architect Louis Kahn, painter John Trumbull, director Lloyd Richards, and composer Charles Ives have two things in common. First, these individuals were world-renowned artistic figures. Second, they are closely associated with Yale—but not just because they studied, taught, or practiced their craft here. Their names grace endowed funds in the School of Architecture, School of Art, School of Drama, and School of Music. Other distinguished individuals who share an association with Yale and the Endowment include architects James Gamble Rogers, Paul Rudolph, and Eero Saarinen; designer Paul Rand and painter Andrew Forge; playwright Eugene O'Neill; author Rebecca West; actress-singer Lotte Lenya; and composers Virgil Thomson and Mitch Leigh.

The University's prominence in this domain, epitomized by the existence of four distinct fine arts schools, arose from the vision of the faculty. While endowment gifts helped to foster the excellence of these schools, to maintain leadership the University's arts institutions must increase the role of endowed funding for such essential needs as teaching and financial aid.

The oldest of Yale's arts institutions, the School of Art, traces its history back to 1864 when Yale founded the nation's first university-affiliated school of fine arts, under a committee that included painter and inventor Samuel F.B. Morse, an 1810 graduate of Yale College. The School began to offer instruction in architecture in 1908 and drama in 1925. The School of Music became a distinct institution in 1894, and subsequently the University established separate graduate-level schools for the other disciplines; the School of Drama traces its official establishment to 1955 and the Schools of Art and Architecture became distinct institutions in 1972, though they shared the Art and Architecture Building until 2000.

### School of Art

As the oldest professional arts school, the School of Art benefits from some of Yale's longest-standing arts-related endowed funds. The earliest of the important funds for the School is the William Leffingwell Fund, which came through an 1878 bequest from Caroline Mary Leffingwell Street, widow of



William Leffingwell, 1765-1834 (in a portrait by John Wesley Jarvis, ca. 1805-15), is commemorated in the William Leffingwell Professorship of Painting and Design, endowed by his daughter, Mrs. Caroline L. Street, in 1878. The Leffingwell chair at the School of Art has been held by major artists including Andrew Forge (photo), whose celebrated painting *The Tree of Life* hangs in the Yale Center for British Art.



Augustus Russell Street, B.A. 1812. Mr. Street, whose name still adorns Street Hall, was an early benefactor of the art gallery. The Street bequest established the Leffingwell Chair to be held by a distinguished professor of painting who is "a practical artist of acknowledged ability." The incumbent since 1999, Professor Richard Lytle, has produced works ranging from giant oil paintings to watercolors to ink drawings. The position has been held in the past by distinguished artists such as Andrew Forge (1923-2002), Jack Tworikov (1900-82), and John Ferguson Weir (1841-1926). Mrs. Street's bequest also created the Caroline Leffingwell Street Professorship in the field of graphic design.

A noted designer and long-term faculty member is commemorated by the Paul Rand (M.A.H. 1985) Annual Lectureship in Design, which was funded by the Cummins Engine Foundation and other donors in 1997. Mr. Rand (1914-96) is remembered as a pioneering graphic designer whose corporate logos for such firms as United Parcel Service, IBM, and ABC have become icons of American commerce. Marion Rand, his widow, contributed generously toward the renovation of the

new School of Art's Holcombe T. Green, Jr. Hall and presented Mr. Rand's personal library to the School.

Funding for financial aid includes the Rebecca Taylor Porter Scholarship established in 1923; the George R. Bunker (1945W) Fund established in 1989 with preference for students in Painting, Printmaking, or Sculpture; and the Norman Ives Scholarship Fund established in 1997, the gift of Azar Khosrovi Ivorsohk (M.F.A. 1972) and friends and family in memory of Norman Ives. A graduate of the School of Art, Ives had a distinguished career in graphic design and as a member of the faculty of the School.

The School has benefited throughout its history from the role of bequests by artists affiliated with the institution. Endowments at the School of Art also include several unrestricted funds, such as the Timothy Dwight Fund, created in 1900, and the Mary E. Ives Fund of 1908. Unrestricted endowments provide important flexible, long-term support for evolving needs.

## School of Architecture

Yale has an internationally recognized School of Architecture whose alumni are among the most prominent architects of the twentieth century. Endowed funds have a direct impact on its ability to attract students and pre-eminent faculty.

Support for faculty includes such long-standing endowments as the Architectural Teaching Fund, established in 1909 through a gift from alumni Henry Fowler English (LL.B. 1874) and John Davenport Wheeler (Ph.B. 1858). Professorships at the School, which honor donors, alumni, and distinguished faculty, ensure that leaders in the field from all over the world continue to provide outstanding teaching at Yale.

Among the School's endowed chairs, the J.M. Hoppin Professorship of Architecture has a particularly distinguished history. The chair was created in 1923 through a bequest from James Mason Hoppin, B.A. 1840, a longtime Yale faculty member (1861–99). The Hoppin Professorship has been held by distinguished architects including Everett Victor Meeks, former Dean of the School of Fine Arts (1922–47), and Architecture Chairs George Howe (1950–54) and Paul Rudolph (1957–65). Dean Robert A.M. Stern is the current incumbent.

The Eero Saarinen Visiting Professorship, established in 1984 by architect Kevin Roche, colleagues, and friends, honors the famous Yale-trained (B.F.A. 1934) architect of the David Ingalls Rink and Morse and Stiles Colleges. The list of architects who came to the School as Saarinen Visiting Professors included Pritzker Prize winning architects Philip Johnson (the first Pritzker Prize recipient), Cesar Pelli, Zaha Hadid, and Thom Mayne, the 2005 Pritzker Prize winner.

Former Professor Louis I. Kahn, who designed both the Yale University Art Gallery and the Yale Center for British Art, has inspired two separate funds. The Louis I. Kahn Visiting Professorship, funded by friends and colleagues in 1980, has brought to the School such noted architects as Peter Eisenman, Frank Gehry, Daniel Libeskind, Tod Williams and Billie Tsien. An anonymous donor endowed the Kahn Visiting Assistant Professorship in 2003 as well as the Vincent Scully Visiting Professorship in architectural history to honor Sterling Professor Emeritus Vincent



Eero Saarinen (top left), one of the leading architects of the international movement in the mid-twentieth century, designed several Yale buildings including the David S. Ingalls Rink. He taught at the School of Architecture and today his name is associated with a lecture series and with the Eero Saarinen Visiting Professorship, endowed in 1962. Among leading architects who have served as Saarinen Visiting Professors was Thom Mayne (above left), the 2005 winner of the important Pritzker Prize. Shown here (above right) is one of Mayne's recent works, the Diamond Bar High School near Pomona, California.

Scully, one of Yale's most esteemed faculty members.

Also crucial to the School's success is financial aid from endowed funds. The Everett Victor Meeks (B.A. 1901, B.F.A. 1917, M.A.H. 1919) Graduate Fellowship Fund (1956) honors the former dean and professor. Classmates, friends, and business associates of Eero Saarinen endowed a memorial scholarship in his name in 1962. The James Gamble Rogers (Class of 1889) Memorial Fellowship Fund, endowed by his son in 1990, honors the architect who designed many Yale buildings in the 1920s and 1930s, including Sterling Memorial Library, the Sterling Law Buildings, and residential colleges such as Berkeley, Branford, and Saybrook.

The School of Architecture has long recognized the importance of a global approach to the training of students, encouraging travel and study abroad. The William Wirt Winchester Fund (1895), the School's most prestigious fellowship and its oldest endowment,

was established to provide for study and travel outside the United States. The Henry Hart Rice Fund in Architecture, created in 1999 by the Rice Family Foundation, supports teacher-directed term-time travel for students at the School of Architecture.

Endowed discretionary funds provide crucial flexible support. The School's first discretionary funds include the Gertrude Vanderbilt Whitney Fund and the Robert W. DeForest Fund, both established in 1927 for general purposes, and the Richard Hellmann Architectural Fund (1973) endowed by the Richard Hellmann Foundation "to be used by the Dean, at his discretion, to take advantage of educational opportunities as they may arise."

## School of Music

The School of Music's highest profile endowed fund is most likely its newest, an anonymous \$100 million five-year pledge announced in October 2005. The gift, the largest in the School's history, will allow it to provide free tuition for all students beginning in the 2006–2007 academic year, and to enhance its relationships with conservatories across the world.

The tuition subsidy from the new gift builds on a strong existing base of scholarship support. The Henry (B.A. 1900) and Lucy Moses Fellowship Fund (1990) and the Stephen and Denise Adams Endowed Scholarship Fund for the School of Music (1999) each make grants to more than a dozen students per year; and the Horatio Parker Scholarship Fund (1945) in honor of the School's first dean has been awarded to a number of outstanding musicians.

Individualized music instruction began at Yale in 1854 thanks to a gift of \$5,000 from Joseph Battell, a merchant and music lover, whose family was generous to Yale in many ways. The School of Music summer program at Norfolk, Connecticut occupies the former Battell estate, and the Battell family's gifts include a professorship in the Yale Department of Music.

The School of Music, founded in 1894, instructs students in performance and composition, while Yale's Department of Music teaches theory



American composer Charles E. Ives, B.A. 1898, is commemorated in three School of Music endowment funds. The photo of Ives in his summer home in West Redding, Connecticut, is believed to date from July 1950.

and history of music. One of many prominent composers who have been affiliated with Yale, the innovative Charles E. Ives (1874–1954), B.A. 1898, inspired three different endowments. His widow, relatives, and friends created the Charles E. Ives Memorial Fund in 1962 for the maintenance and enhancement of the Charles E. Ives Collection in the Library of the School of Music. The collection contains the Ives papers, a valuable resource for research on one of America's greatest composers. In 1970, a bequest from Harmony T. Ives, the composer's widow, established the Charles E. Ives Fund for general support of the School. In 1985, Helen T. Ives (wife of the composer's nephew, Brewster Ives) funded the Charles

Ives Scholarship for School of Music students.

In a more popular musical vein, the composer of Broadway musicals including *Man of La Mancha*, Mitch Leigh, MUS.B. 1951, MUS.M. 1952, and his wife Abby Leigh have had a considerable impact on the fortunes of the School. The building housing classrooms and offices at 435 College Street bears the name of Leigh Hall in honor of their generosity, which includes support for the Keith L. Wilson Scholarship Fund, established in 1984. The fund honors Mr. Wilson, an award-winning clarinetist who taught at the School from 1946 to 1987 and served as associate dean.

Other great names grace the list of the School of Music's endowed funds. Distinguished cellist Aldo Parisot lent his name to a fund created for scholarships in 1995 and donors have named endowments for legendary pianists Vladimir Horowitz and Artur Schnabel.

The School of Music enjoys a unique distinction among the ten professional schools at Yale in that Music is the only school that has an endowed deanship. Thanks to a bequest, the dean bears the title of the Henry (B.A. 1900) and Lucy Moses Dean of the Yale School of Music.

## School of Drama

In December 1924, the Yale Corporation recorded "the deep gratitude of the President and Fellows to Edward S. Harkness, B.A. 1897, for his constant desire to further the development of the University as evidenced anew by his gift of one million dollars for the establishment of a Department of Dramatic Art in the School of Fine Arts." Mr. Harkness's largesse permitted Yale to purchase land and erect the building for the University Theatre, besides providing an endowment for the drama department. In 1955, the department was reorganized to form the Yale School of Drama.

Endowed funds that supported the Department of Drama in its early decades included the Henry McCormick Professorship (1953) and the Henrietta Hoffman Lord Memorial Scholarship (1929) intended for promising women students. The Oliver Thorndike (Class of 1940) Acting Award Fund, established in 1957, shortly after Drama



The Horatio Parker Scholarship Fund for students at the School of Music, established in 1945, honors the School's first Dean, composer-conductor Horatio Parker, shown in a portrait by Erica von Kager. Recipients have included noted clarinetist Richard L. Stoltzman (shown above, right); pianist Joan C. Panetti, a long-time faculty member at the School; baritone Patrick J. Carfizzi of the Metropolitan Opera; and Paul A. Jacobs, chairman of the Organ Department at the Juilliard School.





Meryl Streep was the 1975-76 recipient of the Annie G. K. Garland Memorial Fellowship Fund while studying at the School of Drama. The photograph shows her in a Yale Repertory Theatre performance of *The Idiots Karamazov* (by Christopher Durang and Albert Innaurato) in 1974 with Ralph Redpath. Ms. Streep was associated with another endowment as winner of the Oliver Thordike Prize at the School, a prestigious award that has gone to such well-known figures as Stacy Keach, Mark Baker, and Richard Grusin.

became a full-fledged Yale professional school, recognizes outstanding students, including such luminaries as Meryl Streep and Stacy Keach. The George Pierce Baker (M.A.H. 1925) Memorial Scholarship Fund (1960) honors the first chairman of the Department of Drama, the country's then-leading teacher of playwriting, who joined the Yale faculty in 1925.

An endowment from the Ford Foundation in 1978 proved helpful to the School and its sister institution, the Yale Repertory Theatre. The Yale Rep, founded in 1966 as a performance venue, adds considerably to the theatrical life of the School. Another important unrestricted endowment, the Simsbury Fund, created by Virginia Brockman and Robert E. Darling, Jr. in 1980, provides financial support for the Drama School and the Rep.

Important names in American theater and film have strong associations with the School of Drama's endowment. Nobel Prize winning playwright Eugene O'Neill, who received an honorary Doctor of Letters in 1926, and his widow, Mrs. Carlotta O'Neill created the Eugene O'Neill Scholarships through a 1970 bequest. At that time,

Yale already had on its books the Eugene O'Neill (LITT.D. HON. 1926) Memorial Scholarship Fund, established in 1958 to honor the playwright.

As director of the Rep and dean of the School of Drama from 1979 to 1991, Lloyd Richards played an important role in the history of drama at Yale. Under his direction the Repertory Theatre launched major plays by such figures as Lee Blessing, Athol Fugard, and August Wilson. Mr. Richards, who made history in 1958 as the first African-American director to work on Broadway, is recognized at the School by the Lloyd Richards Professorship Fund (1991), established by a group of his friends and admirers.

In the field of design, the School received an endowment in 1995 for the Donald M. Oenslager Professorship for Scene, Costume, and Lighting Design. The late Mr. Oenslager was one of the

original Drama department faculty members in 1925 and started the Design department in 1926. He retired from the School in 1970, but his theater career continued; he was active as a Broadway designer, producer, and performer from 1925 to 1975, working in dozens of original productions of such shows as *The Man Who Came to Dinner*, *Of Mice and Men*, and *Sabrina Fair*. Presented to Yale by his widow, Mary P. Oenslager, the professorship has been held since its inception by noted Broadway designer Ming Cho Lee.

In taking stock on the occasion of the University's 300th anniversary, in 2001, President Richard C. Levin stated, "Yale is arguably the premier university in the world in the humanities and the arts." Endowments provide funds critical to achieving, maintaining, and enhancing Yale's artistic excellence.



Established in 1991, the Lloyd Richards Professorship at the School of Drama honors the former dean of the School and artistic director of the Yale Repertory Theatre. Richards directed several works at Yale by playwright August Wilson (seen at right, wearing hat, with Richards at the theater), including *The Piano Lesson*. The original production of the play at Yale in 1987 starred Samuel L. Jackson (seen in photo above with LaJara Henderson).



# 4

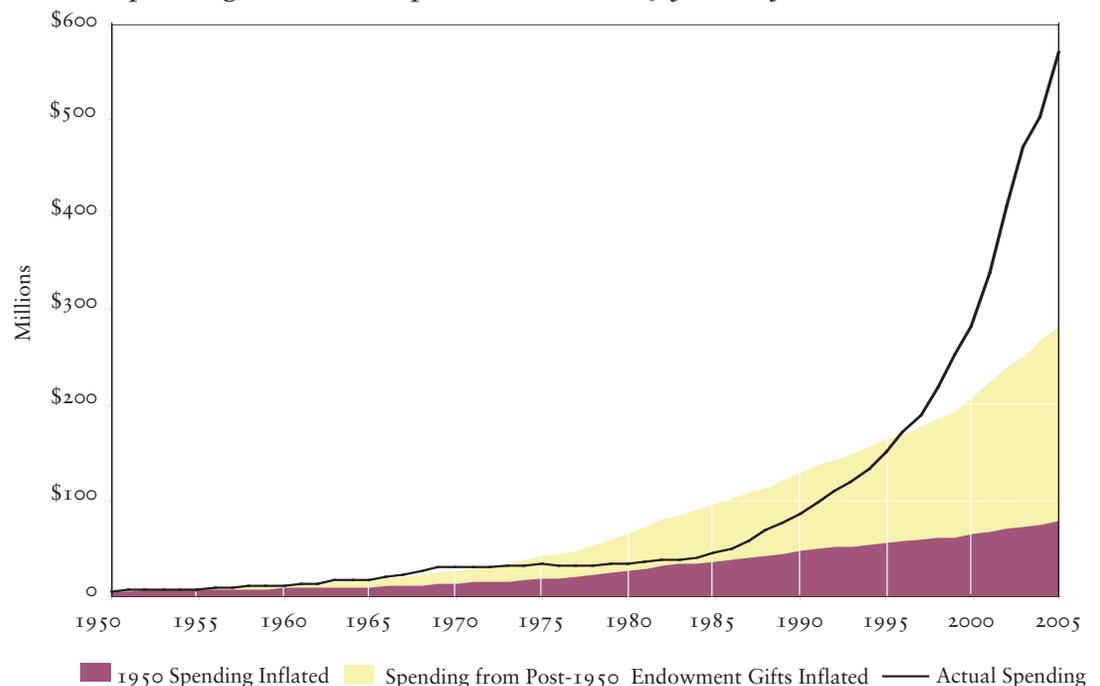
The spending rule is at the heart of fiscal discipline for an endowed institution. Spending policies define an institution’s compromise between the conflicting goals of providing substantial support for current operations and preserving purchasing power of Endowment assets. The spending rule must be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

Yale’s policy is designed to meet two competing objectives. The first goal is to release substantial current income to the operating budget in a stable stream, since large fluctuations in revenues are difficult to accommodate through changes in University activities or programs. The second goal is to protect the value of Endowment assets against inflation, allowing programs to be supported at today’s level far into the future.

Yale’s spending rule attempts to achieve these two objectives by using a long-term spending rate combined with a smoothing rule that adjusts spending gradually to changes in Endowment market value. The amount released under the spending rule is based on a weighted average of the prior year’s spending adjusted for inflation and an amount determined by applying the target rate to the current Endowment market value.

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, annual changes in spending have been less than a third as volatile as 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.

Spending Growth Surpasses Inflation 1950-2005



In fiscal 2005 the Yale Corporation adopted changes in the spending policy designed to increase the stability of flows to the operating budget. Because Endowment support for operations increased from 11 percent of revenues in fiscal 1985 to 32 percent in fiscal 2005, prospective declines in Endowment value carry greater risk for Yale's activities. To mitigate that risk the new spending policy places greater weight on the stabilizing factor of last year's spending (moving to 80 percent from 70 percent) and less weight on the volatile factor of the target Endowment spending level (moving to 20 percent from 30 percent). In large part to reflect the new rule's reduced sensitivity to current market values, the target spending rate increased to 5.25 percent from 5.0 percent.

Despite the conservative nature of Yale's spending policy, distributions to the operating budget rose from \$149 million in fiscal 1995 to \$567 million in fiscal 2005. The University projects spending of \$613 million from the Endowment in fiscal 2006, representing 33 percent of revenues.



Kimberly E. Stewart



Joyce M. Jepsen



Entryway to the Hall of Graduate Studies.

# 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.

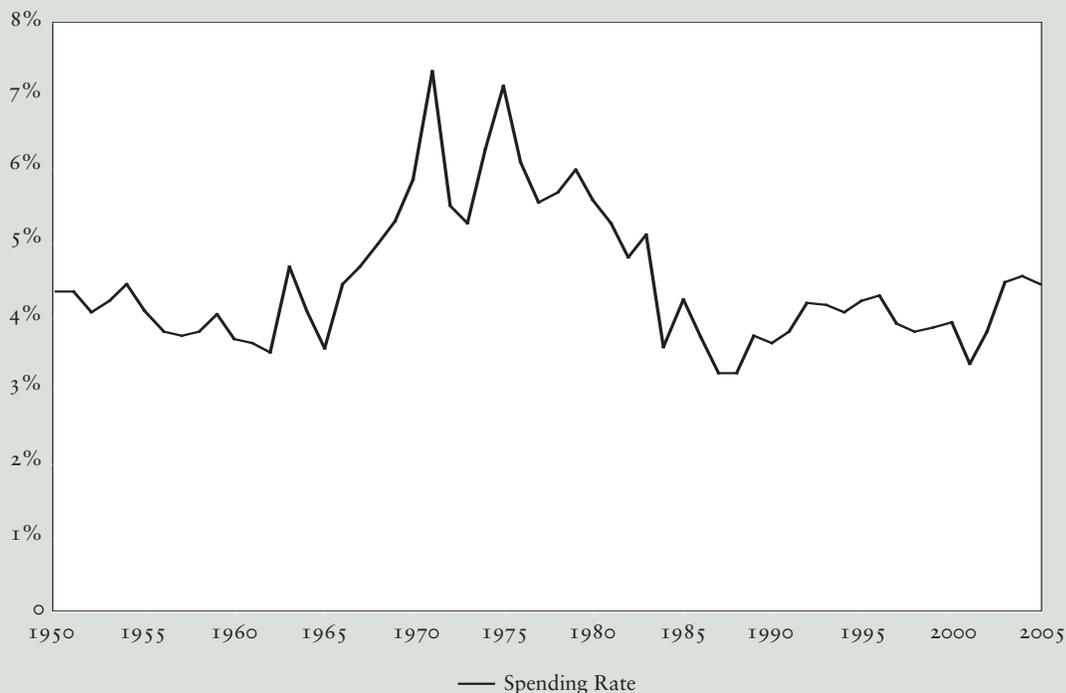
In 1977, recognizing that the rate of spending was eroding the real value of the Endowment, the Yale Corporation voted to cap spending at the existing level (adjusted for inflation) until the spending rate was brought in line with the expected real (after-inflation) return from the Endowment. The Endowment's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

In 1982, upon bringing the spending level to an appropriate level, the Corporation adopted a spending rule that attempted to produce 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 previous year's Endowment's market value. The 70 percent weight on prior year spending promised budgetary stability, while the 30 percent weight on current market value provided purchasing power sensitivity.

Since 1982, the spending rule has been adjusted three 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.

Yale's Endowment Spending Rate 1950–2005



## 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 risk and return 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 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).

Monte Carlo simulations applied to the Endowment's current target asset allocation and spending policies indicate a 24 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.

Using the metrics of stable operating budget support and purchasing power preservation, the Endowment demonstrated substantial improvement over the past fifteen years. As Yale allocated more of the Endowment to the alternative asset classes of absolute return, private equity, and real assets, risks plummeted for both a significant decline in spending and a dramatic reduction in Endowment purchasing power. In 1990, when alternative asset classes accounted for only 15 percent of the Endowment, Yale faced a 34 percent chance of real spending dropping 10 percent over five years and a 31 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 24 percent and purchasing power impairment risk declined to 14 percent.

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 36 percent chance of a 10 percent spending drop over five years and runs a 33 percent chance of losing half of its purchasing power over a fifty-year period.

After fifty years, the median ending purchasing power of the average endowment amounts to only 61 percent of its beginning purchasing power. In general, educational institutions spend at rates far too high to be supported by undiversified portfolios that contain 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.

# 5

## Performance by Asset Class

Yale has produced excellent investment returns. Over the ten-year period ending June 30, 2005, the Endowment earned an annualized 17.4 percent return, net of fees, placing it in the top one percent of large institutional investors. Endowment outperformance came from sound asset allocation policy and superior active management.

Yale's long-term superior performance relative to its peers and benchmarks created substantial wealth for the University. Over the ten years ending June 30, 2005, Yale added \$6.3 billion relative to its composite benchmark and \$6.7 billion relative to the average return of a broad universe of college and university endowments.

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

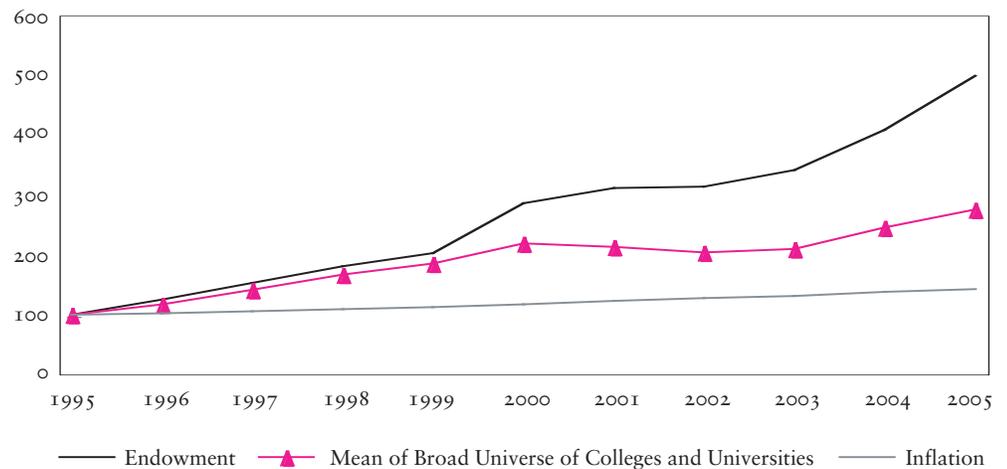
For the decade ending June 30, 2005, the domestic equity portfolio returned an annualized 15.7 percent, outperforming the Wilshire 5000 by 5.8 percent per year and the Russell Median Manager return by 5.3 percent per year. Yale's active managers have added value to benchmark returns primarily through stock selection.

Yale's internally managed fixed income portfolio earned an annualized 7.4 percent over the past decade, exceeding the Lehman Brothers Treasury Index by 0.7 percent per year and the Russell Median Manager return by 0.5 percent per year. By making astute security selection decisions and accepting illiquidity, the Endowment benefited from excess returns without incurring material credit or option risk.

Over the past decade, the absolute return portfolio produced an annualized 13.1 percent, exceeding the passive benchmark of the One-Year Constant Maturity Treasury plus 6 percent by 2.4 percent per year and besting its active benchmark of hedge fund manager returns by 0.8 percent per year. For the ten-year period, absolute

### Yale's Performance Exceeds Peer Results

1995 to 2005, 1995 = 100



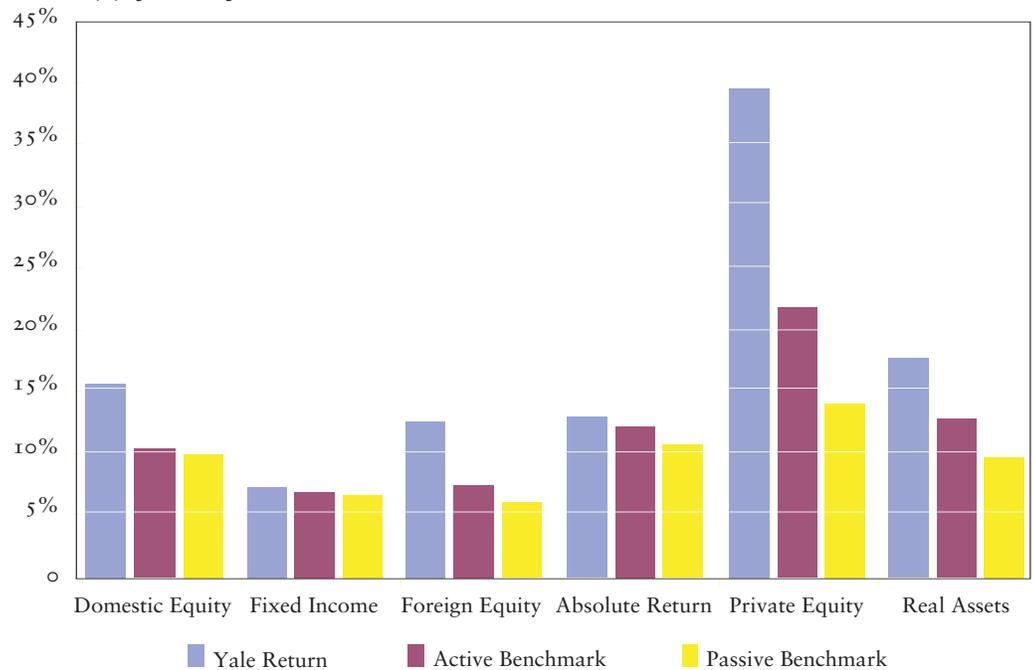
return results exhibited essentially no correlation to traditional marketable securities.

The foreign equity portfolio generated an annual return of 12.7 percent over the ten-year period, outperforming its composite benchmark by 6.5 percent per year and the Russell Median Manager return by 5.2 percent per year. The portfolio's excess return is due to effective security selection and country allocation by active managers.

Results from Yale's non-marketable assets demonstrate the value of superior active management. Private equity earned 39.5 percent annually over the last ten years, outperforming the passive benchmark of University inflation plus 10 percent by 25.5 percent per year and the return of a pool of private equity managers compiled by Cambridge Associates by 17.6 percent per year. Since inception in 1973, the private equity program has earned an astounding 31.0 percent per annum.

Real assets generated a 17.7 percent annualized return over the ten-year period, outperforming the passive benchmark of University inflation plus 6.0 percent by 7.9 percent per year and an active benchmark of real assets manager returns by 4.9 percent per year. Yale's outperformance is due to the successful exploitation of market inefficiencies and timely pursuit of contrarian investment strategies.

### Yale Asset Class Results Trounce Benchmarks 1995–2005



Helen M. Betts



Kelsie L. Newsom

**Active Benchmarks**  
*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  
*Absolute Return:* CSFB Composite  
*Private Equity:* Cambridge Associates Composite  
*Real Assets:* NCREIF and Cambridge Associates Composite

**Passive Benchmarks**  
*Domestic Equity:* Wilshire 5000  
*Fixed Income:* Lehman Brothers Treasury Index  
*Foreign Equity:* 50% MSCI EAFE Index, 50% MSCI EM Index  
*Absolute Return:* 1-year Constant Maturity Treasury + 6%  
*Private Equity:* University Inflation + 10%  
*Real Assets:* University Inflation + 6%

## Degree of Investment Opportunity

Yale directs active management efforts to less efficiently priced asset classes and employs less aggressive, diversified 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 equity than in the heavily traded, liquid world of government bonds.

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. Non-market weightings in security holdings cause portfolio results to vary dramatically from the benchmark. Under-performing managers lose clients, suffering a punishing loss in assets, while overachievers gain clients (and public adulation). Yet, because efficient markets price securities accurately, success will be transitory. Since efficient

markets present no mispricings for active managers to exploit, good results stem from luck, not skill. 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 where active management opportunities lie. 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, 2005. U.S. Treasury securities, arguably the most efficiently priced asset in the world, trade in staggering volumes in markets dominated by savvy financial institutions. Since nobody (possibly excepting 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 measures an astonishingly small 0.5 percent per annum for the decade.

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

### Dispersion of Active Management Returns

Asset Returns by Quartile. Ten Years Ending June 30, 2005

Asset Class	First Quartile	Median	Third Quartile	Range
U.S. Fixed Income	7.2%	6.9%	6.7%	0.5%
U.S. Large Capitalization Equity	11.3	10.4	9.4	2.0
U.S. Small Capitalization Equity	15.3	13.2	10.5	4.7
International Equity	9.7	8.2	5.7	4.0
Absolute Return	15.6	12.5	8.5	7.1
Real Estate	17.6	12.0	8.4	9.3
Leveraged Buyouts	13.3	8.0	-0.4	13.7
Venture Capital	28.7	-1.4	-14.5	43.2

contributes to the wider active manager spread.

Less efficiently priced securities trade in wider ranges. Large-capitalization domestic equities represent the next rung of the efficiency ladder, with a range of 2.0 percent between top and bottom quartiles. Foreign developed market equities exhibit a range of 4.0 percent. Domestic small-capitalization stocks show the biggest performance gap, with a range of 4.7 percent per annum between top and bottom quartiles. The progression of degree of opportunity across types of marketable securities makes intuitive sense.

Absolute return strategies, which generate returns independent of markets and lack a benchmark to “hug,” demonstrate less efficiency than fixed income and equity securities with a range of 7.1 percent between top and bottom quartiles.

Real estate, with its high level of current income, constitutes the most efficient private investment class, with a range of 9.3 percent between top and

bottom quartiles. The radical break comes when moving to venture capital and leveraged buyouts. For the ten-year period, leveraged buyouts and venture capital exhibit extreme 13.7 percent and 43.2 percent per annum spreads.

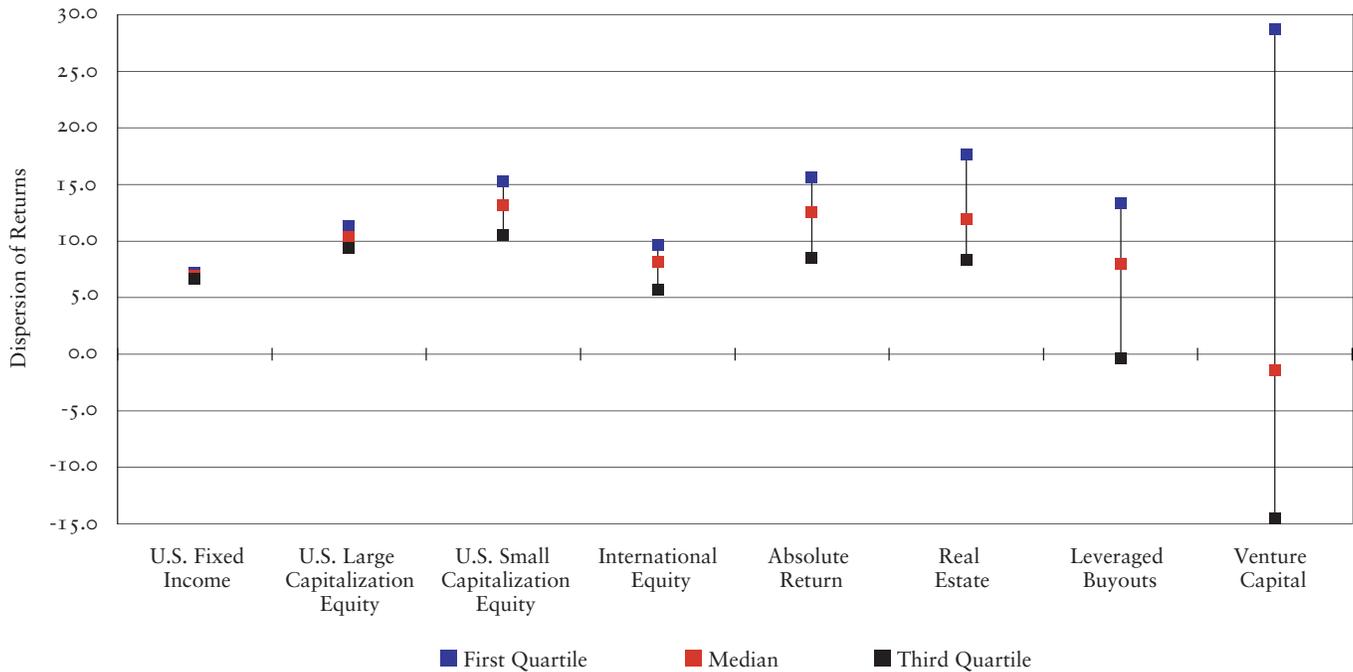
Selecting top quartile managers in private markets leads to much greater reward than identifying top managers in public markets. In the extreme case, over the past decade, choosing a first quartile fixed income manager added only 0.3 percent per annum relative to the median result. In contrast, the first quartile venture capitalist added 30.1 percent per annum relative to the median, providing a much greater contribution to portfolio results. 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, making occasional carefully controlled security selec-

tion 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 0.7 percent per annum excess return over the past decade. In contrast, Yale’s private equity positions boast a 39.5 percent per annum return over the last ten years, far exceeding the 21.9 percent per annum results of a pool of private equity managers compiled by Cambridge Associates. While both the bond portfolio and 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, 2005



Sources: Data for marketable securities are from Russell/Mellon. The absolute return, real estate, leveraged buyout, and venture capital data are from Cambridge Associates. Real Estate, leveraged buyout, and venture capital represent returns on funds formed between 1995 and 1999, excluding more recent returns so that immature investments will not influence results.

# 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. Eleven individuals currently sit on the Committee.

## Investment Committee

### Current Members



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



Charles D. Ellis '59  
*Chairman  
Former Managing Partner  
Greenwich Associates*



G. Leonard Baker '64  
*Managing Director  
Sutter Hill Ventures*



Joshua Bekenstein '80  
*Managing Director  
Bain Capital*



Roland W. Betts '68  
*Chairman  
Chelsea Piers Management*



James Leitner '75  
*President  
Falcon Investment  
Management*



Henry F. McCance '64  
*President  
Greylock Management*



Jane L. Mendillo '80,  
'84 MBA  
*Chief Investment Officer  
Wellesley College*



William I. Miller '78  
*Chairman  
Irwin Financial Corporation*



Theodore P. Shen '66  
*Former Chairman  
DLJ Capital Markets*



Douglas A. Warner III '68  
*Former Chairman of the Board  
J.P. Morgan Chase*

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 professionals.

## *Investments Office Staff*

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

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

Seth D. Alexander '95  
*Director*

Alexander C. Banker  
*Director*

Alan S. Forman  
*Director*

Timothy R. Sullivan '86  
*Director*

Kenneth R. Miller '71  
*Associate General Counsel*

Michael E. Finnerty  
*Associate Director*

Randy Kim '98, '04 MBA  
*Associate Director*

Peter H. Ammon '05 MBA,  
'05 MA  
*Senior Associate*

David B. Slifka '01  
*Senior Associate*

Celeste P. Benson  
*Senior Portfolio Manager*

Anne Martin  
*Senior Research Consultant*

Shuba V. Raghavan  
*Senior Research Associate*

Jay L. Kang '02  
*Senior Financial Analyst*

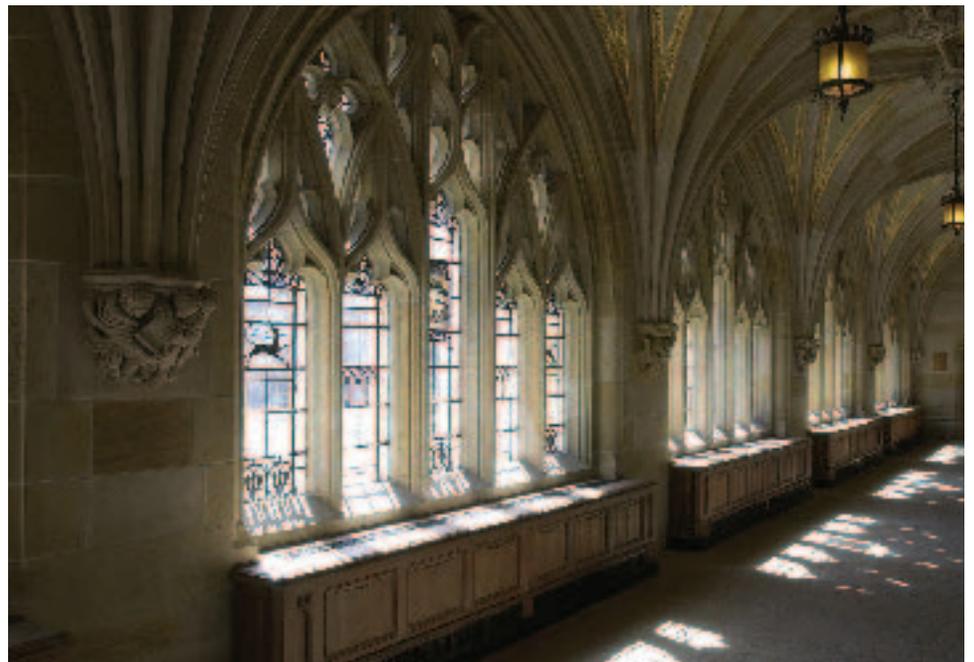
Daniel G. Kilpatrick '03  
*Senior Financial Analyst*

Carrie A. Abildgaard  
*Financial Analyst*

Dennis Hong '05  
*Financial Analyst*

Nicholas T. Shalek '05  
*Financial Analyst*

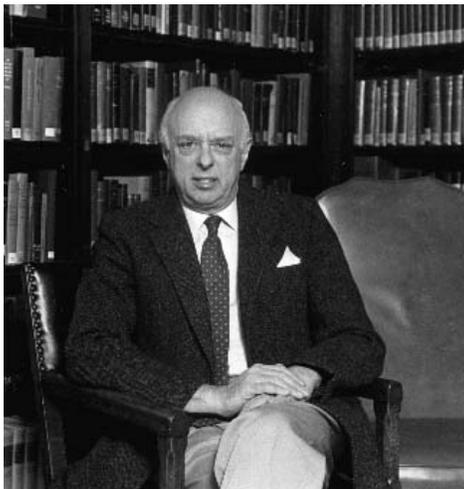
Xiaoning Wu '04  
*Financial Analyst*



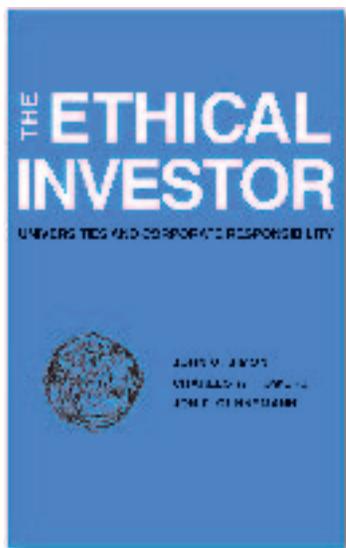
The Exhibit Corridor, Sterling Memorial Library.

## Ethical Investing Policy

# 7



Professor John Simon, Yale Law School, with Charles Powers and Jon Gunnemann, published *The Ethical Investor* in 1972, making Yale, according to the *New York Times*, “the first major university to resolve this issue by abandoning the role of passive institutional investor.”



*The Ethical Investor*, first published by Yale University Press in 1972, served as a blueprint for the ethical policies of a number of universities.

Yale was one of the first institutions to address formally the ethical responsibilities of institutional investors. In 1969 Professors John Simon, James Tobin, William Brainard, and Charles Lindbloom along with Yale graduate students Charles Powers and Jon Gunnemann conducted a seminar entitled “Yale’s Investments,” which explored the ethical, economic, and legal implications of institutional investments. As a result of the seminar, Simon, Powers, and Gunnemann wrote *The Ethical Investor: Universities and Corporate Responsibility*. Published in March 1972 by Yale University Press, the book established criteria and procedures by which a university could respond to requests from members of its community to consider factors in addition to economic return when making investment decisions and exercising rights as a shareholder. It remains the definitive work in its field.

The Yale Corporation adopted the guidelines outlined in *The Ethical Investor* in April 1972 and Yale became, according to the *New York Times*, “the first major university to resolve this issue by abandoning the role of passive institutional investor.” The book subsequently served as a blueprint for the ethical policies of a number of universities.

In the academic year following the publication of *The Ethical Investor*, Yale established the Advisory Committee on Investor Responsibility (ACIR). The inaugural committee addressed social responsibility issues ranging from company investment in South Africa to defense contracting, political lobbying, and environmental safety. Later, the Yale Corporation formed the Corporation Committee on Investor Responsibility (CCIR).

The CCIR is composed of Fellows of the Corporation. It recommends policy to the full Corporation and is charged with implementing the approved policy. In discharging its responsibility, the CCIR is assisted by the ACIR. The ACIR is composed of two students (one undergraduate and one graduate), two alumni, two faculty, and two staff members. The ACIR performs the practical work of policy implementation for the CCIR. Two of the ACIR’s principal tasks are to advise the CCIR on the voting of corporate proxies dealing with ethical issues and to communicate with companies that might not be in compliance with Yale’s ethical policy on investments.

## *Guidelines for the Voting of Shares*

The Yale Corporation has adopted the “Suggested Guidelines for the Consideration of Factors Other than Maximum Return in the Management of the University’s Investments” contained in *The Ethical Investor*. The concept of social injury rests at the heart of the policy’s approach to voting and divestment procedures as recommended by the guidelines, which, in relevant part, provide that:

“Social injury is the injurious impact which the activities of a company are found to have on consumers, employees, or other persons, particularly including activities which violate, or frustrate the enforcement of, rules of domestic or international law intended to protect individuals against deprivation of health, safety, or basic freedoms; for the purposes of these Guidelines, social injury shall not consist of doing business with other companies which are themselves engaged in socially injurious activities.

“The University will not vote its shares on any resolution which advances a position on a social or political question unrelated to the conduct of the company’s business or the disposition of its assets.

“The University will vote for a proposition which seeks to eliminate or reduce the social injury caused by a company’s activities, and will vote against a proposition which seeks to prevent such elimination or reduction, where a finding has been made that the activities which are the subject of the proposition cause social injury. This paragraph will not apply to any proposition which seeks to eliminate or reduce social injury by means which are found to be ineffective or unreasonable.”

In 1989 the CCIR advised the ACIR that shareholder action may be taken only in response to issues that involve “substantial social injury” and that are “susceptible to competent evaluation by the University under criteria reflecting broad moral consensus within the academic community.” Votes in favor of proxy resolutions “should be preceded by a determination that the issue is one on which it is appropriate for the University to take a formal position as a shareholder.”

## Past Actions Regarding Major Issues

### *South Africa*

In 1978 the Yale Corporation adopted a policy on investing in South Africa. Emphasizing Yale's deeply held opposition to apartheid, the policy addressed the University's belief that it had "an ethical duty to contribute to the process of peaceful change" in the country. Recognizing that the most effective method of achieving enduring change was through active participation, Yale initiated dialogues with each U.S.-based company operating in South Africa in which the University was a shareholder. The focus of these efforts was to promote management's adherence to the principles of fair and equitable employment practices and the elimination of segregation.

To assess portfolio companies' level of compliance with Yale's ethical investing policy, the University sent a ten-member delegation to South Africa in 1986. Composed of Yale Corporation fellows, faculty, administrators, and students, the delegation visited U.S. and South African companies to assess their roles in the apartheid system. The delegation also met with representatives from three South African universities to discuss actions that might be undertaken to improve and strengthen black education. The fact-finding mission allowed Yale to apply more effective, constructive pressure to align corporate activity with ethical imperatives.

Through its efforts as a shareholder, Yale made significant progress in advancing its message to corporations. In those situations in which it became apparent that a company's actions would continue to be incompatible with University policy, Yale sold shares. From 1978 through 1994, Yale divested shares of seventeen companies operating in South Africa, representing a total market value of approximately \$23 million. In February 1994, recognizing the positive changes occurring in the country, the Yale Corporation lifted all investment restrictions.

### *Tobacco*



Tobacco advertisement, poster circa 1900.  
Tobacco & Textile Museum.

Throughout the 1990s, the Corporation thoroughly reviewed the holding of tobacco-related stocks. As a result of the reviews, in 1994 the Corporation established guidelines on voting of tobacco proxies. These instructions were supplemented in 1996, when the CCIR directed the ACIR to vote in favor of well-constructed proxy resolutions that:

- (a) call upon tobacco companies to place health warnings about the dangers of addiction, disease, and death caused by smoking on all advertising and promotional items for tobacco products distributed throughout the world;
- (b) request companies to cease advertising tobacco products to minors, including all uses of the company's brand names and associated symbols for sponsorships;
- (c) request tobacco companies to support enforcement mechanisms at all governmental levels to prevent illegal sales of tobacco products to minors;
- (d) request tobacco companies to take actions designed to reduce the health risks to minors;

(e) call upon tobacco companies to report publicly accurate information relating to the ingredients of their products that have probable adverse health effects.

The Corporation voting guidelines stem, in part, from an ACIR report that found the possibility of social injury in the marketing and distribution of tobacco products, not in their manufacture. As a result, the University chooses to engage tobacco companies in dialogue, hoping to change objectionable policies and procedures.

## *Ethical Oversight of Private Investments*

In the 2001-2002 academic year the ACIR and the Yale Investments Office took up the issue of ethical oversight of private investments. Applying existing policies to private holdings posed a challenge, because the shareholder resolution activity of the ACIR had no analog in private investment holdings. In the realm of private assets, where corporate control rests in a highly concentrated investment group, shareholder resolutions do not exist.

To address this issue, the Yale Investments Office, in consultation with the ACIR, developed a framework to address ethical issues relating to private investments. In particular, ethical investing policies recommended by the ACIR and adopted by the Yale Corporation are to be applied to both marketable securities and private investments. The University's response to ethical issues in private investments would differ in some respects from the response for publicly traded securities, because of the nature of the investment structures and potential remedies. Oversight of policy implementation would remain with the CCIR for both marketable and private positions.

The Yale Corporation has articulated the following policy with regard to private investments:

“When the Yale Corporation, upon recommendation of the Corporation Committee on Investor Responsibility after its consultation with the Advisory Committee on Investor Responsibility, adopts policies regarding ethical investing, those policies will apply to both public and private investments. In the event that the Corporation concludes that Yale’s private investment managers have engaged in socially injurious activity, the University will fashion an appropriate remedy including use of voice, disassociation from the offending investment manager, and, as a last resort, disposition of the tainted partnership interests.”

## 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); Yale Office of Institutional Research; and Yale Department of Capital Budget Management.

Data on other universities: *U.S. News and World Report*, "America's Best Colleges," August 29, 2005.

Pages 10-24

Educational institution asset allocations from Cambridge Associates.

Page 34

The Endowment's annual return for the ten years ending June 30, 2005 ranks in the top one percent of institutional funds as measured by the SEI Large Plan Universe.

Page 36

Degree of Investment Opportunity, based on David F. Swensen, *Pioneering Portfolio Management: An Unconventional Approach to Institutional Investment* (New York: Free Press, 2000).

Pages 40-43

Ethical Investing Policy, based on John G. Simon, Charles W. Powers, and Jon P. Gunnemann, *The Ethical Investor: Universities and Corporate Responsibility* (New Haven: Yale University Press, 1972).

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Portrait of William C. Leffingwell (1765-1834), B.A. 1786, M.A. 1789, Yale University Art Gallery, gift of Lucius Wooster Leffingwell, B.A. 1814, M.A. 1825.  
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Meryl Streep and Ralph Redpath, by William Baker, 1974, Yale School of Drama.  
*The Piano Lesson*, photo, Sterling Memorial Library Manuscripts and Archives.  
Lloyd Richards and August Wilson, Yale Repertory Theatre.

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*The Ethical Investor*, Yale University Press

All other photographs  
Michael Marsland

*Design*

Strong Cohen

*Opposite:*

Gateway to Old Campus from Elm Street, near Yale Station.



