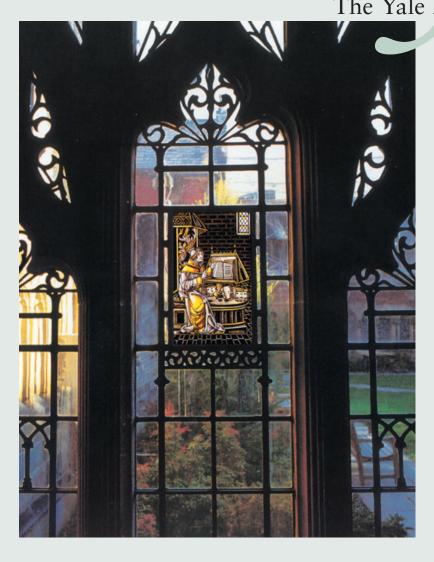
The Yale Endowment

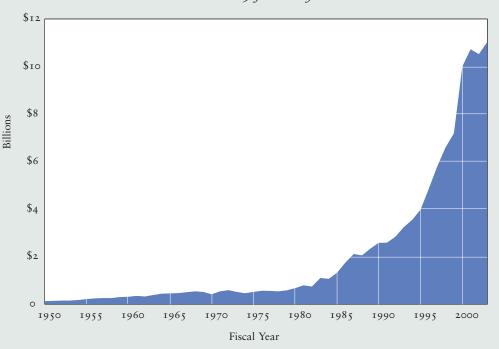


# **Endowment Highlights**

Fiscal Year

	2003	2002	2001	2000	1999
Market Value (in millions) Return	\$11,034.6 8.8%	, , ,	\$10,725.1 9.2%	\$10,084.9 41.0%	\$7,185.6 12.2%
Spending (in millions)	\$ 470.1	\$ 409.3	\$ 337.5	\$ 280.8	\$ 254.2
Operating Budget Revenues (in millions)	1,553.7	1,466.6	1,352.9	1,263.5	1,252.1
Endowment Percentage	30.3%	27.9%	24.9%	22.2%	20.3%
Asset Allocation (as of June 30	p)				
Domestic Equity	14.9%	15.4%	15.5%	14.2%	15.1%
Absolute Return	25.1	26.5	22.9	19.5	21.8
Foreign Equity	14.6	12.8	10.6	9.0	II.I
Private Equity	14.9	14.4	18.2	25.0	23.0
Real Assets	20.9	20.5	16.8	14.9	17.9
Fixed Income	7.4	10.0	9.8	9.4	9.6
Cash	2.1	0.3	6.2	8.1	1.5

## Endowment Market Value 1950-2003



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Front cover:
A window in Sterling Memorial Library with a view of the Selin Courtyard

*Right:* Arches in the Hall of Graduate Studies

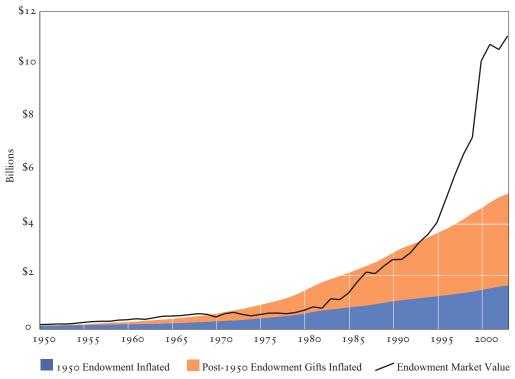
## Introduction

During fiscal year 2003, the Endowment returned 8.8 percent in an environment in which domestic equity markets were flat and most endowments failed to earn more than a few percentage points of investment return. Strong active management in equities produced solid returns, and, with the exception of private equity, the Endowment's alternative asset classes shone. Fiscal 2003's strong results continue a remarkable fifteen-year streak of positive returns for the Endowment.

Over the past ten years, the Endowment grew from \$3.2 billion to \$11.0 billion. With annual net investment returns of 16.0 percent, the Endowment's performance exceeded its benchmark and outpaced institutional fund indices. The Yale Endowment's results over the past two decades are no less remarkable, as investment returns of 15.1 percent per annum produced a 2003 Endowment value of nearly ten times that of 1983. Yale's 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 \$119 million to \$470 million, an annual growth rate of nearly 15 percent. On a relative basis, Endowment contributions expanded from 14 percent of total revenues in fiscal 1993 to 30 percent in fiscal 2003. Next year, spending will approximate \$500 million, or 32 percent of projected revenues. During the decade Yale's spending and investment policies 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 1950–2003



#### The Yale Endowment

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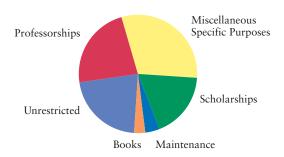
Totaling \$11.0 billion on June 30, 2003, the Yale Endowment is an investment pool composed of thousands of funds with a variety of designated purposes and restrictions. Approximately four-fifths of funds constitute true endowment, gifts restricted by donors to provide long-term funding for designated purposes. The remaining one-fifth represent quasi-endowment, monies which 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 (31 percent). The remaining funds (21 percent) are unrestricted. Twenty-seven percent of the Endowment benefits the overall University, with remaining funds focused on specific units including the Faculty of Arts and Sciences (38 percent), the professional schools (21 percent), the library (8 percent), and other entities (6 percent).

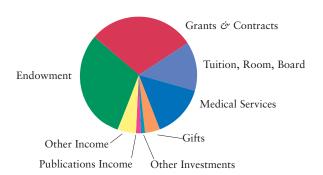
Although distinct in purpose or restriction, Endowment funds are commingled in an investment pool and tracked with unit accounting much like a large mutual fund. Endowment gifts of cash, securities, or property are valued and exchanged for units that represent a claim on a portion of the whole investment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

In fiscal 2003, the Endowment provided \$470 million, or 30 percent, of the University's \$1,554 million current fund income. Other major sources of revenues were grants and contracts of \$458 million (29 percent), medical services of \$230 million (15 percent), net tuition, room, and board of \$210 million (14 percent), gifts of \$64 million (4 percent), other investment income of \$17 million (1 percent), publications income of \$24 million (2 percent), and other income of \$80 million (5 percent).

# Endowment Fund Allocation Fiscal Year 2003



## Operating Budget Revenue Fiscal Year 2003



## Investment Policy

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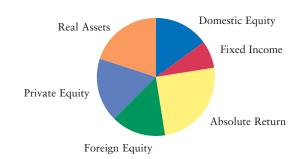
Yale's portfolio is structured using a combination of academic theory and informed market judgment. The theoretical framework relies on mean-variance analysis, an approach developed by Nobel laureates James Tobin and Harry Markowitz. In fact, both Tobin and Markowitz conducted work on this important 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 the sensitivity of the 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. Finally, quantitative measures have difficulty incorporating factors such as market liquidity or the influence of significant, low-probability events.

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

Asset Class	June 2003	Current Target
Domestic Equity	14.9%	15.0%
Fixed Income	7.4	7.5
Foreign Equity	14.6	15.0
Absolute Return	25.I	25.0
Private Equity	14.9	17.5
Real Assets	20.9	20.0
Cash	2.I	0.0

Yale Endowment Target Asset Allocation June 30, 2003



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 11.7 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 11.1 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 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, 92.5 percent of the Endowment is targeted for investment in some form of equity, through holdings of domestic and international securities, real assets, and private equity.

Over the past fifteen years, Yale has reduced dramatically the Endowment's dependence on domestic marketable securities by reallocating assets to nontraditional asset classes. In 1988, nearly three-quarters of the Endowment was committed to U.S. stocks, bonds, and cash. Today, target allocations call for 22.5 percent in domestic marketable securities, while the diversifying assets of foreign equity, private equity, absolute return strategies, and real assets dominate the Endowment, representing 77.5 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 1988 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.

## Asset Class Characteristics

## Domestic Equity

## Fixed Income

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.

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 endowments and other U.S. institutional portfolios, domestic equities represent a large, liquid, and heavily researched market. While the average educational institution invests over 40 percent of assets in domestic equities, Yale's target allocation to this asset class is only 15.0 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 market indices 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. Managers searching for out-offavor securities often find stocks that are cheap in relation to current fundamental measures such as book value, earnings, or cash flow. Yale's managers tend to emphasize small-capitalization stocks, as they are less efficiently priced and offer greater opportunities to add value through active management. Recognizing the difficulty of outperforming the market on a consistent basis, Yale searches for managers with high integrity, sound investment philosophies, strong track records, superior organizations, and sustainable competitive advantages.

Fixed income assets generate stable flows of income, providing greater certainty of nominal cash flow than any other Endowment asset class. The bond portfolio has a low covariance with other asset classes, and provides a hedge against financial accidents or periods of unanticipated deflation. While educational institutions maintain a substantial allocation to fixed income instruments and cash, averaging 24.5 percent, Yale's target allocation to fixed income constitutes only 7.5 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 comprising the Endowment. In addition, the government bond market is arguably the most efficiently priced asset class, offering few opportunities to add significant value through active management. Based on skepticism of 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 in its management of the bond portfolio. Willingness to accept illiquidity leads to superior investment results without impairing the portfolio protection characteristics of high-quality fixed income.

Foreign Equity

Investments in overseas markets give the Endowment exposure to the global economy, providing diversification along with opportunities to earn above-market returns through active management. Emerging markets, with their rapidly growing economies, are particularly intriguing, causing Yale to target one-half of its foreign portfolio to developing countries. Yale's foreign equity target allocation of 15.0 percent stands slightly above the average endowment's allocation of 13.8 percent. Expected real returns for emerging equities are 8.0 percent with a risk level of 25.0 percent, while developed equities are expected to return 6.0 percent with risk of 20.0 percent. The portfolio is evaluated 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 Free Index.

Yale's investment approach to foreign equities emphasizes active management designed to uncover attractive opportunities and exploit market inefficiencies. As in the domestic equity portfolio, Yale favors managers with strong bottom-up fundamental research capabilities. Capital allocation to individual managers takes into consideration the country allocation of the foreign equity portfolio, the degree of confidence Yale possesses in a manager, and the appropriate asset size for a particular strategy. In addition, Yale attempts to exploit compelling undervaluations in countries, sectors, and styles by allocating additional capital and, perhaps, by hiring new managers to take advantage of the opportunities.

## Yale's Endowment and the University's Debt

Yale's \$11 billion Endowment allows the University to issue debt at attractive rates and on competitive terms. A strong credit position, combined with the ability to issue tax-exempt obligations, provides extremely cost effective funding for Yale's capital programs. In recent years, proceeds from debt financing supported renovations of Sterling Divinity Quadrangle, Sprague Hall, Vanderbilt Hall, and Timothy Dwight College, as well as construction of the Anlyan Center at the Medical School. Projects in the pipeline include further renovations of residential colleges and construction of a new Chemistry Research Building on Science Hill. In keeping with the level of innovation brought to bear on the management of its Endowment over the years, Yale has been a leader in managing its debt and taking advantage of opportunities in the taxable and taxexempt debt markets.

The market value of Yale's debt as of June 30, 2003 totaled \$1.7 billion. As measured by standard benchmarks such as debt as a percentage of the operating budget and debt to Endowment value, the University remains modestly leveraged. In recognition of Yale's superb educational program and its strong financial position, the University's debt boasts ratings of Aaa from Moody's Investors Service and AAA from Standard & Poor's. Only fourteen private colleges and universities and a handful of American corporations share this elite credit status.

Yale's liability management strategy mirrors its asset management strategy, emphasizing the concept of portfolio diversification. In a well-diversified portfolio of assets, investors control issuespecific risk, such that owners of portfolios bear primarily market risk. Investors mitigate security-specific deviations by holding a range of securities that do not fluctuate in a similar fashion, so that the variability of the portfolio is significantly less than the variability of its individual components.

In structuring a portfolio of liabilities, Yale seeks to reduce the level of current and future interest expense and to mitigate the impact of interest rate variability on the operating budget and on the market value of debt. Issuing debt along a spectrum of maturities, from overnight to one hundred years, provides a range of instruments that Yale can deploy to manage its liability portfolio.

## Yale's Leadership and Innovation in the Capital Markets

#### **Self-Liquidity**

In 1988, Yale became the first tax-exempt institution to provide its own liquidity to support the issuance of variable-rate debt. The liquidity commitment backed a pledge to repurchase the University's bonds in the unlikely event they were tendered by bondholders and the remarketing agents were unable to remarket the bonds. Previously, variable-rate issuers purchased an external liquidity facility or line of credit to satisfy market concerns regarding failed remarketing. Yale convinced the rating agencies that it had sufficient liquidity and financial sophistication to raise the funds necessary in a timely fashion to cover any tendered bonds that were not remarketed successfully, thereby saving the cost of an external facility.

#### Key Financial Ratios for Large AAA Private Colleges and Universities

	Yale	Median for Large AAA Private Colleges and Universities
Total Resources	\$11.5 billion	\$5.9 billion
Unrestricted Resources to Debt (Measures coverage of direct debt by the most liquid financial resources.)	3.9x	4.3x
Unrestricted Resources to Operations (Measures coverage of annual operating expenses by the most liquid financial resources.)	4.0X	2.IX
Actual Debt Service to Operations (Measures the actual debt service burden on the annual operating budget.)	3.4%	3.4%

Note: Data from Private Colleges and Universities Outlook 2003/04 by Moody's Investor Service. Median numbers are based on FY2002 data.

#### Multi-modal Structure

In 1988, Yale structured a \$90 million bond issue with more-than-usual flexibility in setting term to maturity, providing the University with a tool to manage interest rate exposure after the original date of issuance. The multi-modal documents negotiated by Yale established a convenient mechanism that allowed changes in the interest rate mode of the bonds across the term-to-maturity spectrum from daily rates to commercial paper rates to longer-term fixed rates.

#### Century Bond

In April 1996, Yale became the first University to sell bonds with an original term to maturity of 100 years, issuing \$125 million of 7.375% notes priced at a spread of only 70 basis points over the 30-year U.S. Treasury bond. The bonds were issued with a 30-year call option, which added between zero and two basis points to the cost.

#### **Undervalued Call Option**

Because tax-exempt bond investors care more about yield and duration than about call provisions, Yale structures its fixedrate debt offerings to obtain aggressive call features for little cost. For example, in 1992 Yale issued \$87.6 million of 6.00% fixed-rate bonds due in 2030, callable after ten years at 102. Following a decade-long, substantial decline in interest rates, in 2002 the University issued \$89.5 million of 5.125% bonds to refinance the 1992 issue, saving an estimated \$7.5 million in interest costs for Yale. The 2002 bonds contained a seven-year par call, which cost an estimated 13 basis points relative to a theoretical value of 40 basis points, providing a potential opportunity for the University to reduce interest expense in

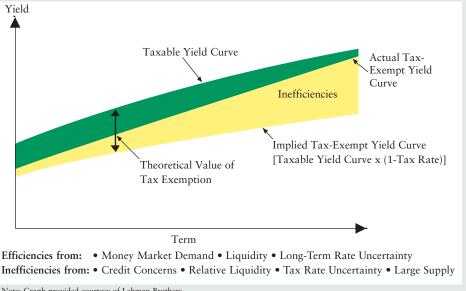
#### Interest Rate Swap

Systematic differences in the shape of taxable and tax-exempt yield curves present opportunities for Yale to reduce funding costs. Since short-term taxable and tax-exempt rate differentials consistently exhibit larger proportional spreads than long-term taxable and tax-exempt rate differentials (see accompanying chart), taxexempt borrowers achieve superior market terms at the short end of the maturity spectrum. By borrowing in the area of greatest comparative advantage (shortterm tax-exempt) and employing taxable interest rate swaps to control interest rate exposure, Yale creates synthetic fixed-rate liabilities on extremely attractive terms.

The University pioneered the use of taxable interest rate swaps to fix floatingrate tax-exempt liabilities with its 1988 issuance of CHEFA Series LMNO.

Yale's innovative debt management practices benefit the University specifically by providing funds for capital projects on attractive terms and assist tax-exempt institutions generally by broadening and improving the range of financing opportunities available to the not-for-profit community. The University's Investment Office brings financial sophistication to the problem of liability management, while Yale's Endowment plays a critical, albeit indirect, role in providing the financial strength that underpins the University's credit in the marketplace.

#### The Short End of the Tax-Exempt Yield Curve Offers the Greatest Relative Value



Note: Graph provided courtesy of Lehman Brothers.

#### Absolute Return

In July 1990, Yale became the first institutional investor to pursue absolute return strategies as a distinct asset class, beginning with a target allocation of 15.0 percent. Designed to provide significant diversification to the Endowment, absolute return investments seek to generate high long-term real returns by exploiting market inefficiencies. Approximately half of the portfolio is dedicated to event-driven strategies, which rely on a very specific corporate event, such as a merger, spin-off, or bankruptcy restructuring, to achieve a target price. The other half of the portfolio contains value-driven strategies, which involve hedged positions in assets or securities that diverge from underlying economic value. Today, the absolute return portfolio is targeted to be 25.0 percent of the Endowment. In contrast, the average educational institution allocates only 13.4 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.

Unlike traditional marketable securities, absolute return investments provide returns largely independent of overall market moves. Over the past ten years, the portfolio exceeded expectations, returning 12.2 percent per year with essentially no correlation to domestic stock and bond markets.

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 alongside Yale, enabling the University to avoid many of the pitfalls of the principal-agent relationship.

## 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 17.5 percent and its actual allocation of 14.9 percent both far exceed the 5.1 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 29.1 percent.

Yale's private equity program, one of the first of its kind, is regarded as among the best in the institutional investment community. The University is frequently cited as a role model by other investors pursuing this asset class. Since inception in 1973, private equity investments have generated a 30.7 percent annualized return to the University. 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. Yale avoids funds sponsored by financial institutions due to the conflicts of interest and staff instability inherent in such situations.

#### 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 20.0 percent long-term policy allocation significantly exceeds the average endowment's commitment of 3.1 percent. Expected real returns are 6.0 percent with risk of 15.0 percent.

The real assets portfolio plays a meaningful role in the Endowment as a powerful diversifying tool and a generator of strong returns. 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. Pricing inefficiencies in the asset class and opportunities to add value allow superior managers to generate excess returns over a market cycle. Since inception in 1978, the portfolio has returned 14.7 percent per annum.

The illiquid nature of real assets combined with the expensive and time-consuming process of completing transactions create a high hurdle for casual investors. Real assets provide talented investment groups with the opportunity to generate strong returns through savvy acquisitions and managerial expertise. A critical component of Yale's investment strategy is to create strong, long-term partnerships between the Investments Office and its investment managers.

## Asset Allocations

	Yale University	Educational Institution Mean
Domestic Equity	14.9%	40.1%
Fixed Income	7.4	21.0
Foreign Equity	14.6	13.8
Absolute Return	25.1	13.4
Private Equity	14.9	5.I
Real Assets	20.9	3.I
Cash	<b>2.</b> I	3.5

Data as of June 30, 2003.

## Real Assets

Real assets investments involve physical structures, tangible assets, or tradable goods. Yale's history of financial exposure to real assets dates back to the early eighteenth century, when gifts of farmland from King George III and the Colony of Connecticut, as well as from friends of the College such as Major James Fitch, Reverend Richard Salter, and Bishop George Berkeley, provided important sources of annual income, both in cash and in kind in the form of provisions such as pork and peppercorns. Yale leased out these farms, located far from the College in rural towns, for periods as long as 999 years. Even today Yale collects modest amounts of income on many of these properties.

The advent of the contemporary real assets portfolio dates to the 1950s, when Yale made its first oil and gas investment and when the University began to acquire direct interests in commercial real estate ventures. Today the University maintains an active real assets investment program in three core areas: real estate, oil and gas, and timberland. As of June 30, 2003, Yale devoted more than one-fifth of the Endowment to investments in real assets.

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

At present, the pricing of real assets opportunities appears attractive, particularly relative to other asset classes. In real estate, for example, given the wide spread between property yields and interest rates, high-quality assets generate leveraged returns in the low double digits. In oil and gas, disciplined firms put money to work with prospective double-digit returns, assuming that future oil and gas prices match current forward market prices. In timber, acquisitions generate similar low double-digit returns, assuming flat real future prices for wood and wood products.

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, longterm 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 requires 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

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

> U.S. Bank Plaza, an office building located in Sacramento, CA managed by Yale's partner, The Shorenstein Company.

management business. Yale played a lead investor role for sixteen real assets managers since 1990, all but one of which still manage assets for the University's portfolio today.

Yale focuses its real assets portfolio on pure equity investments. Over the long term, equity investments provide far higher return potential than mortgages and other debt instruments. Moreover, debt instruments do not provide investors with control of assets, leaving the fate of the investment in the hands of others.

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

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 supplyconstrained areas, or areas where it is difficult for others to construct competing assets. 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 add enormous value, supporting the notions that real estate is not a commodity and that values can vary tremendously even between neighboring properties.

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

In the oil and gas portfolio, Yale emphasizes the low-risk purchase of high-quality proven reserves. In finding managers that evaluate and operate assets more efficiently than large oil and gas companies, Yale generates substantial returns without depending on higher-risk exploration strategies. A portion of the energy portfolio is allocated to private equity 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 company.

When investing in timberland, Yale concentrates on the purchase and sustainable management of natural forests in the United States. While generally slower growing than plantation forests, natural forests tend to be priced less efficiently and to offer more opportunities for skilled managers to add value through silvicultural activities, selective harvests, and wood merchandising. Like value stocks in the marketable securities world, slower growing forests sometimes can be purchased for overly discounted prices because of lack of interest by other investors.



A Mark II Unitorque pump, located in a Wyoming oilfield managed by one of the University's energy partnerships.

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. The University makes substantial bets in geographic areas or property types when great opportunities exist. Yale's favored strategy is usually among the most disfavored by institutional investors. For example, Yale invested in land, office properties, and hotels in the early 1990s when many

investors were too shaken by the bust of the late 1980s to commit capital to any form of real estate. More recently, Yale stepped up commitments to community shopping centers in the late 1990s when other investors thought the Internet and Wal-Mart were poised to drive traditional retail centers out of business. Similarly, adding timber investments to the Endowment in 1996 and expanding commitments to oil and gas in the late 1990s increased the University's exposure to real assets during a period when most investors were focused elsewhere. For its contrarian investment stances. Yale has been rewarded with excellent performance.

Yale's real assets investments provided strong investment performance and important diversification to the Endowment. Over the ten years ending June 30, 2003, the portfolio returned an annualized rate of return of 15.1 percent, surpassing the benchmark return of 9.7 percent. This solid performance generated \$511 million in value added relative to the portfolio's benchmark. Correlations over the last ten years between real assets and Yale's other asset classes have been extremely low, ranging between a low of -0.14 with the foreign equity asset class and a high of 0.18 with the private equity asset class.



A stand of larch trees, commonly known as tamarack, located in the Northwestern United States, held in one of Yale's timber partnerships.

## **Spending Policy**

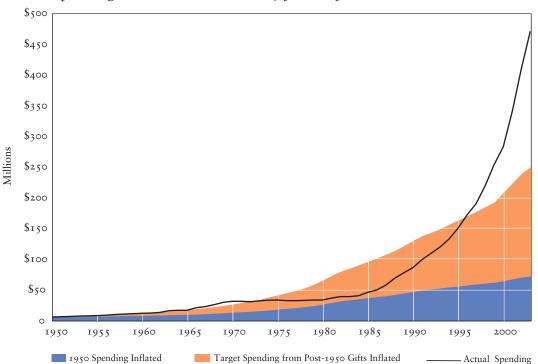


The spending rule is at the heart of fiscal discipline for an endowed institution. Spending policies define an institution's compromise between the conflicting goals of providing substantial, sustainable support for current operations and preserving purchasing power of Endowment assets. The spending 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 of 5 percent 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 prior spending adjusted for inflation (70 percent weight) and the amount that would have been spent using 5 percent of current Endowment market value (30 percent weight).

#### Spending Growth vs. Inflation 1950–2003



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 rate of 5 percent of Endowment, the rule ensures that spending levels will be sensitive to fluctuating Endowment levels, providing stability in long-term purchasing power.

Spending from the Endowment increased at a hearty pace during the past decade despite the conservative nature of Yale's spending policy, with distributions rising from \$119 million in fiscal 1993 to \$470 million in fiscal 2003. Consequently, Endowment spending plays an ever-greater role in the budget, having risen from 14 percent of expenditures in 1993 to 30 percent in 2003.



Advanced writing workshop, taught by Lecturer Fred Strebeigh, Yale College

## The Global University: Endowment Support for International Programs

After World War II, world events caused Yale and other educational institutions to adopt an increasingly international outlook. Endowed funds played a crucial role in the development of global programs at Yale, supporting institutions such as the Yale Center for International and Area Studies (YCIAS), the World Fellows Program, and the Yale-China Association, as well as professorships, seminars, and study-abroad courses.

The Yale Center for International and Area Studies (YCIAS) is the major campus organization for the coordination of international programs and curricula. Housed in Luce Hall, the Center: (1) provides opportunities for scholarly research and intellectual innovation; (2) encourages faculty-student interchange; (3) brings international education and training to teaching professionals, the media, businesses, and the Yale community at large; (4) sponsors more than 500 lectures, conferences, workshops, and other activities each year; and (5) produces a range of academic publications. The YCIAS programs rely heavily on endowment support, such as the cornerstone 1966 fund established by the Ford Foundation Fund for International, Area, and Comparative Studies that supports eight professorships and provides funds for various operations at the Center.

The Yale World Fellows Program, launched just two years ago, already enjoys growing endowment support from a variety of funds, including the World Fellows Program Fund, established by Mr. and Mrs. Robert C. Ng, and the Glenn H. and Linda Vester Greenberg Fund for World Fellows. The Program brings eighteen mid-career leaders from around the world to Yale each fall to study critical issues facing the global community. Recent World Fellows have been CEOs, members of parliament, government ministers, NGO leaders, military officers, public health experts, and journalists. While at Yale, Fellows attend an intensive World Fellows Seminar taught by some of Yale's most distinguished professors. Participants share their diverse professional and cultural perspectives with the larger Yale community, serving as guest lecturers in academic departments and as guest speakers at Yale forums and roundtables. In 2003 alone, World Fellows gave more than fifty talks and presentations on topics ranging from the devastation wrought by Africa's small arms trade to the plight of Asia's urban poor.

World Fellows represents only the most

recent endowment-supported program to bring international figures to the Yale campus. The George Herbert Walker, Jr. Lecture Fund, for instance, made possible visits to Yale by such figures as former U.S. Secretary of State Madeleine Albright, former U.N. Secretary General Boutros Boutros-Ghali, former Senator George Mitchell, and former Treasury Secretary James Baker III.

The Yale-China Association, which last year celebrated its one hundredth anniversary, sponsors numerous scholarly exchange programs, enjoying support from several endowed funds. In 1994, Mrs. Katharine Lyman left a bequest to Yale University, part of which she designated to benefit the Yale-China Association. Income from this fund, which currently represents about 17 percent of Yale-China's annual operating budget, plays a crucial role in providing the flexibility and creativity necessary to engage the Yale community with Chinese society in meaningful ways. Since the gift was made, Yale-China established numerous new programs, most notably a service internship program for Yale students to work in China during the summer, a fellowship program that allows young American lawyers to teach law in Chinese universities, and an AIDS training program for Chinese health care workers.

The personal interests and commitment of Yale alumni play an instrumental role in expanding the University's international capabilities. The Yale College Class of 1920 included a young man of modest means who had been born in China to a family of American missionaries. That alumnus, Henry R. Luce, went on to achieve prominence as the co-founder of *Time*, *Life*, and other successful

magazines. His background and his studies gave him a strong interest in international affairs, reflected in memorials to Luce on Yale's campus today. YCIAS occupies Luce Hall, a building given to Yale in 1996 by the Henry Luce Foundation. His name is further commemorated by endowments such as the Henry R. Luce Directorship of YCIAS and the Luce Hall Maintenance Endowment, an unusual fund which sets aside income each year for the care and upkeep of the YCIAS building.

Another alumnus, Joseph C. Fox, graduated from Yale in 1938 and set out for Cambridge, England, for a year's advanced study. "The year of independent research and study in England," Mr. Fox stated, "broadened my understanding of world affairs and served as the catalyst for a career in international investment banking and an active interest in contributing to world peace." To celebrate his 50th Yale College reunion, Mr. Fox, a former partner at Kidder, Peabody & Co., established the Fox International Fellowships for student exchanges between Yale and leading universities in China, England, France, Germany, Japan, Mexico, and Russia. In the current academic year, the YCIAS-administered program supports twenty-three graduate and undergraduate students from Yale and seven non-American universities. Students are selected on the basis of their potential to become leaders in their fields, in their nations, and in the global community.

The Georg Walter Leitner Program in International and Comparative Political Economy, made possible by a generous gift in 2001 from James Leitner, is one of the many funds that sponsor research by Yale undergraduates, graduate students,



Luce Hall, built with support from the Henry R. Luce Foundation, houses the Yale Center for International and Area Studies.



Former U.S. Secretary of State Madeleine Albright gave an address at Yale under the auspices of the Yale Center for International and Area Studies, thanks to support from the George Herbert Walker, Jr. Lecture Fund. She was welcomed by Gustav Ranis, the Henry R. Luce Director of YCIAS and Frank Altschul Professor of International Economics.

and faculty on topics in international and comparative political economy. Located at YCIAS and directed by Professor Frances McCall Rosenbluth, the program organizes conferences and workshops, brings short-term visitors to Yale, and publishes research by Yale faculty and students in a Working Papers series. Beyond its ongoing series of papers and lectures, the Leitner program sponsored two conferences in the spring of 2003: Electoral Microfoundations of Economic Policy Making, which brought together political scientists and economists specializing in institutional analysis to consider the effects of different electoral rules in wealthy democracies; and Laboratory in Comparative Ethnic Processes, which treated the subject of the consequences of ethnic conflict.

Large organizations, in addition to individuals, have played a meaningful role in providing endowment support for international programs. An endowment created by the Coca-Cola Foundation in 1992, jointly administered by Yale's School of Management, the Law School, and YCIAS, sponsors: (1) a seminar in international political economy led by prominent U.S. and international specialists; (2) overseas projects for graduate and professional school students, in areas such as industrial privatization and environmental regulations, legal barriers to women's business activities in the third world, food trade policy and agricultural productivity; (3) faculty research support, especially in collaboration with foreign scholars; and (4) a program to invite senior practitioners with global experience to spend time on the Yale campus.

Yale's curriculum, which now offers seventy-eight foreign languages, increasingly reflects the interdisciplinary approach required to understand global issues. Yale's Endowment plays a critical role in providing resources for faculty positions in international studies, with twelve endowed funds at Yale supporting twenty faculty members. Such endowed funds include the Juan T. Trippe Professorship Fund (for international business administration), the Sumitomo Iunior Faculty Fund (for Japanese studies), the Heinz African Studies Fund, the Leitner International Interdisciplinary Professorship (for international relations), and the William K. Lanman Professorship for International Studies. A wealth of short-term faculty support, provided by funds such as the Henry Hart Rice Endowed Visiting Lectureship Fund, enhances Yale's curriculum in global studies.

Endowment support for international exchanges allows hundreds of Yale students to undertake study and research nearly anywhere in the world. The Jonathan Tristan Perlroth (B.A. 1993) Memorial Fund, created in 1994 by the honoree's friends and family, provides grants to juniors and seniors for travel outside the United States. The Les Aspin Summer Fellowship (1998), given by the Class of 1960, supports summer projects on national security and international affairs for rising juniors and seniors. Each year, over 100 students, about 10 percent of the Yale College juniors, participate in one of Yale's full-credit Study Abroad

programs. An additional 10 percent of students in each Yale graduating class have gone abroad during their undergraduate years, independently of formal junior-year programs.

Students from other countries attend Yale in increasing numbers, as the University becomes more global in every respect. In 2001, President Richard C. Levin implemented a change in financial aid policy for Yale College that extended support to foreign students. The policy change and subsequent new endowment gifts resulted in a tripling of financial aid dollars going to international students and a rise in their number. Currently about 8 percent of Yale undergraduates come from abroad, compared to 6 percent before 2001. The entire student body (including Yale College, the Graduate School, and the ten professional schools) at latest count draws 16 percent of students from outside the United States, representing a total of 1,775 foreign students from 101 different countries.

"Globalization is not a choice; it is a fact of life," YCIAS states in its latest annual report, echoing a policy enunciated by President Richard C. Levin as he articulated his vision for the University's fourth century. The President made a commitment nearly a decade ago to "Yale's intention to become a truly global institution." Today, thanks to its generous donors, whether individuals, corporations, or foundations, the University counts on a remarkable level of support from endowments to achieve that goal.



Leaders in business, government, and other fields from eighteen nations visit the Yale campus each year through the Yale World Fellows Program. The 2003 World Fellows shown at a recent reception came from Australia, Canada, Chile, Colombia, Egypt, Germany, India, Iraq, Indonesia, Mexico, the Netherlands, Nigeria, People's Republic of China, Slovakia, South Africa, Uganda, United Kingdom, and Zimbabwe.

## **Investment Performance**

5

Performance by Asset Class

Yale has produced excellent investment returns. Over the ten-year period ending June 30, 2003, the Endowment earned an annualized 16.0 percent return, net of fees, placing it in the top one percent of large institutional investors. Endowment outperformance is attributable to 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, 2003, Yale added \$4.7 billion relative to its composite benchmark and an estimated \$5.2 billion relative to the average return of a broad universe of college and university endowments.

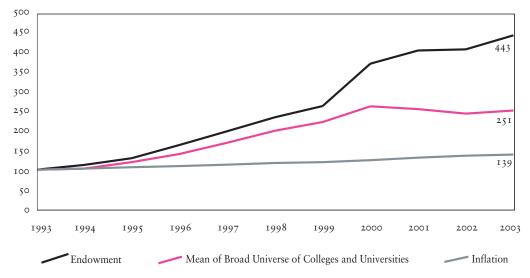
Yale's long-term asset class performance continues to be strong. In the past ten years every asset class posted superior returns, in all cases significantly outperforming benchmark levels.

For the decade ending June 30, 2003, the domestic equity portfolio returned an annualized 15.5 percent, outperforming the Wilshire 5000 by 5.9 percent per year and the Russell Median Manager return by 4.9 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 7.8 percent over the past decade, outpacing the Lehman Brothers Treasury Index by 0.6 percent per year and the Russell Median Manager return by 0.8 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 12.2 percent, exceeding its passive benchmark of the One-Year Constant Maturity Treasury plus 6 percent by 0.7 percent per year and its active benchmark of hedge fund manager returns by

Relative Investment Performance of the Yale Endowment 1993–2003 (1993=100)



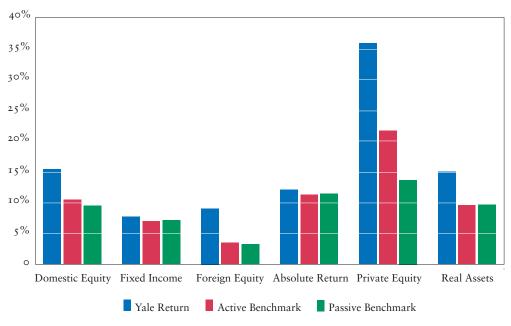
o.8 percent per year. For the ten-year period, absolute return results exhibited essentially no correlation to traditional marketable securities.

The foreign equity portfolio generated an annual return of 9.1 percent over the ten-year period, outperforming its composite benchmark by 5.8 percent per year and the Russell Median Manager return by 5.6 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 effective active management. Private equity earned 36.0 percent annually over the last ten years, outperforming its passive benchmark of University inflation plus 10 percent by 22.2 percent per year and the return of a pool of private equity managers compiled by Cambridge Associates by 14.0 percent per year. Since inception in 1973, the private equity program has earned an astounding 30.7 percent per annum.

Real assets generated a 15.1 percent annualized return over the ten-year period, outperforming the passive benchmark of University inflation plus 6.0 percent by 5.3 percent per year and an active benchmark of real assets manager returns by 5.4 percent per year. Yale's outperformance is due to the successful exploitation of market inefficiencies and timely pursuit of contrarian investment strategies.

# Asset Class Returns Relative to Benchmarks 1993–2003



#### 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 EMF Index
Absolute Return: 1-year Constant Maturity Treasury +6%
Private Equity: University Inflation +10%
Real Assets: University Inflation +6%

## The Yale University Art and Library Collections

Visitors to Yale's galleries and libraries immediately recognize that the University possesses treasures of inestimable value. Acquired over centuries, these collections edify and educate both serious scholars and casual observers. Philanthropists contribute to Yale's bounty in two important ways: by giving artwork or other objects to Yale and by contributing funds for acquisitions. Early gifts in kind established most of Yale's art and library collections, and later gifts of funds financed further growth. Today, current use funds provide monies for near-term purchases and endowed funds serve as a permanent resource, generating income that will finance additions to the Yale collections far in the future.

#### Yale University Art Gallery

The Yale University Art Gallery, the oldest art museum affiliated with an American university, developed from the collection of one hundred original paintings and miniatures that artist John Trumbull gave to the institution in 1832. Endowed funds now provide monies for most acquisitions of the Gallery's works of art. In 1929 a gift of \$100,000 established the first endowment for acquisitions, the Maitland F. Griggs (B.A. 1896) Fund. In the past seventy-plus years, the Griggs Fund and fifteen other endowed acquisition funds enabled the purchase of more than 2,300 works for the Yale collection, including some of the most important works of art owned by the University. Endowment funds support acquisitions of works of art

in every field of the Gallery's encyclopedic international collections, and the Gallery continues to receive new endowments to refresh the University's collections.

Some endowment funds purchase works only in specific media. The Everett V. Meeks (B.A. 1901) Fund, named in honor of the distinguished Dean of the Yale School of the Fine Arts from 1922 to 1947, supports the acquisition of works on paper over fifty years old. The mainstay of acquisitions in this field, the Fund financed more than 1,130 works by artists ranging from Albrecht Dürer, Andrea Mantegna, Rembrandt van Rijn, and Jacob Jordaens, to John Trumbull, Ferdinand Delacroix, and Edouard Manet.

Figure 1 shows a Jacob Jordaens drawing of a goat in colored chalks and washes, acquired through the Meeks Fund. Although today scholars most often associate Rubens and Van Dyck with the Flemish golden age, Jordaens was actually the most sought-after painter in Antwerp in the mid-seventeenth century. Detailed observation, rich coloring, and total composition—the figure of the goat fills the entire space—lend a sense of completion to a drawing that functioned primarily as a study for later commissioned works.

Other acquisition endowments focus on specific time periods rather than specific media. The Ruth Elizabeth White Fund provides support for the acquisition of ancient Greek, Roman, and Etruscan art. The Janet and Simeon Braguin Fund, the Gallery's single largest acquisition endowment, acquires works by living American artists over forty. Since its inception in 1999, it funded the purchase of more than 130 paintings, sculptures, photographs, prints, and drawings by a wide range of major artists.

Several major acquisition endowments, unrestricted as to field or medium, permit purchases in any area and provide maximum flexibility for the Gallery to respond to acquisition opportunities. The Stephen Carlton Clark (B.A. 1903) Fund, begun with a \$1 million bequest in 1961 from the great donor of paintings to Yale, financed the purchase of outstanding works of Japanese, Chinese, African, European, ancient Mediterranean, and American art. In 1973, the Clark Fund supported the purchase of fifty-four exceptional Maya, Aztec, and other works of art from the ancient Americas, providing the heart of the Gallery's collection in this style.

The Yale Art Gallery acquired the terracotta in Figure 2, a Nayarit Ball Game with Spectators (100 B.C.—A.D. 250), with monies from the Clark Fund. Ancient Mesoamericans played games with rubber balls from around 1200 B.C. until the time of the Spanish conquest. Based on the myth of the divine Hero Twins, the Mesoamerican ballgame contained profound cosmic symbolism. More than just a sport, the ball game represented a true ritual of life and death, staged in an elaborate ball court setting. In this rare model, villagers crowd around the edge of a ball court to watch the game

within. Men wearing breechcloths and belts and women in skirts wrap their arms around children and each other. This model, placed inside a tomb, perhaps commemorated a ballgame in which the deceased took part. The ballgame constitutes one of the key themes in the teaching of the art of the ancient Americas.





Far left

Figure 1: *Goat*, c. 1628-41, by Jacob Jordaens, colored chalks and washes. Everett V. Meeks (B.A. 1901) Fund, Yale University Art Gallery.

Left:

Figure 2: Nayarit Ball Game with Spectators, 100 B.C.-A.D. 250, terracotta. The Stephen Carlton Clark (B.A. 1903) Fund, Yale University Art Gallery.



#### Left:

Figure 3: Manuscript map of North America, c. late 1630s, pen and ink and watercolor on parchment. Paul Mellon Fund, Yale Center for British Art.

#### Below:

Figure 4: The Thistlethwayte Family, by Thomas Hudson, c. 1758, oil on canvas. Paul Mellon Fund, Yale Center for British Art

#### Yale Center for British Art

In 1966 Paul Mellon (B.A. 1929), one of the University's most generous donors, gave the building, the works of art, and the endowment that established the Yale Center for British Art. Thanks to that gift, the University significantly added to the scope and richness of its art collections as well as its architecture. The Center houses the most comprehensive collection of British art outside the United Kingdom, documenting the development of British art, life, and thought from the Elizabethan period to the present. In addition to masterpieces by Hogarth, Gainsborough, Reynolds, Stubbs, Constable, Turner, and other artists, its holdings include some 50,000 prints and drawings, plus 20,000 rare books and manuscripts and a reference library.

Upon his death in 1999, as part of an extraordinarily generous bequest to the University, Mr. Mellon left \$15 million to endow a fund that allows the Yale Center for British Art to purchase works that will enhance its collections. In his honor, on the occasion of the Center's twenty-fifth anniversary, the Center acquired important objects for each major collection.

One of the new works, the map of North America, shown in Figure 3, complements the important collection of maps given to the Yale Center for British Art and the Beinecke by Mr. Mellon. The map, in pen and ink and watercolor on parchment, was drawn in London by a member of the Thames School of chartmakers, probably sometime in the late 163 os. Likely prepared in conjunction with a proposal to establish a permanent colony in "Carolana," the name the English used for the region south of Virginia prior to 1663, the map depicts all

of North America and shows an immense body of water just beyond the Appalachians. It helped to promote the idea that any successful colony in "Carolana" would have access to ports on this sea and thus to trade with China and the Far East.

The new acquisitions have also enhanced the Center's collection of approximately 2,000 paintings. A stunning addition to the specialized collection of eighteenth-century family and group portraits, commonly called "conversation pieces," is Thomas

Hudson's *The Thistlethwayte Family*, shown in Figure 4. Hudson's oil painting on canvas (c. 1758) is a life-size depiction of Alexander Thistlethwayte, his wife Sarah, and their two daughters Catharine and Anne. The son of a gentleman, Thistlethwayte represented Hampshire as a Member of Parliament. Showing the eldest daughter in pink, a color frequently worn by young women at the time of their betrothal, the painting may well have been commissioned to celebrate Catharine's impending marriage to Thomas Milbourne.





Figure 5: Imprint from the Siku Quanshu (Complete Library of the Four Branches of Literature), an eighteenth-century collection of some 80,000 texts, in digital format. Ford Foundation Fund and Edward W. Southworth Fund, Yale University Library.

#### Yale University Library

According to legend, the Yale Library, which now numbers about II million volumes, originated in 1701 as a gift of some forty books from the personal libraries of the College's founders. The Library, now a centrally managed and closely entwined federation of twenty-two libraries, funds its acquisitions in two principal ways. About two-thirds of the collections-and-content budget stems from endowed funds and about one-third stems from current use funds. The Yale Library also receives numerous gifts of books and other materials from donors each year.

Of all the collections at Yale, the Library boasts the earliest endowed funds for purposes of acquisition. The first such fund dates back to 1763, when Jared Eliot (B.A. 1706) and Thomas Ruggles (B.A. 1723) gave a combined gift of \$10 to the Library. A more recent acquisition fund, the Barney T. Young (B.A. 1955) Fund for Military History, created in 1999, focuses on books on a particular subject and includes provisions for maintenance and assurance of access to collections.

Today, in addition to books, the Library collects electronic files, film, videos, microforms, and other media. One unusual addition to the Library collection, attributable to the Arthur D. Krom Fund for manuscript and library acquisitions, is the acquisition of two video archives purchased from Globalvision, a New York based media production firm, that were the basis for televisions series on human rights and South Africa. Each of the archives has about 2,500 videos and offers a wealth of information in a relatively new format for Yale's archival collections. Another recent acquisition, purchased jointly through a Beinecke acquisitions endowment and the Lewis P. Curtis (B.A. 1923, PH.D. 1926) Memorial Fund, is a

stunning microform archive of more than one million original documents of Winston Churchill.

The Library boasts a recent acquisition of extensive files on New Haven real estate from the firm of White Brothers, Clark, Hall & Peck. Stored in more than 2,000 boxes, the collection details broad regional and national trends from the 1840s to the 1960s, providing a resource of great importance to students of New Haven history. Funds for the purchase of these documents came from the Library's Arthur D. Krom Fund, as well as from resources of the Law School and the Beinecke Rare Book and Manuscript Library.

The Siku Quanshu collection is an online resource containing electronic copies of 80,000 Classical Chinese texts, financed in part by Ford Foundation funds for the Council for East Asia studies, and in part by the Edward W. Southworth Fund, a 1903 endowment for library acquisitions. Yale makes the collection available to fifteen other major American universities. The archive adds considerably to Yale's holdings in Chinese literature and draws on electronic formats to give researchers access to material formerly very difficult to study. While many archives contain only bibliographic references to and descriptions of documents, this collection offers copies of the documents themselves. Figure 5 shows part of the title page of the collection.

The modern-day diversity of the Library's formats does not eclipse the continuing importance of books to its collections. Thanks to funding from the Faber Birren Fund, established in 1975 specifically for acquisitions by the Art and Architecture library, Yale recently purchased the rare, two-volume Wiener Farbenkabinet oder vollstaendiges



Figure 6: A page from the Wiener Farbenkabinet (Viennese Color Collection) illustrating forty-eight shades of one variety of blue. The two-volume work, a numbered compendium of nearly four thousand hand-painted color samples, was published in Prague and Vienna in 1794. Faber Birren Fund, Yale Arts Library.

Musterbuch aller Natur-, Grund-, und Zusammensetzungfarben, or "Viennese Collection or Complete Book of Samples of all Natural, Basic, and Combined Colors." Published in Vienna and Prague by Verlag der Schoenfeldschen Handlung in 1794, the work boasts 79 plates, one of which is shown in Figure 6, containing a total of 3,792 hand-painted color samples in graduated hues, each named and numbered, with the exact formula for replicating each color appearing on the opposing page. Originally produced as a color manual for artists, craftsmen, dyers, and printers, the book has enduring value for art historians, conservators, and anyone with an interest in the study of color.



Figure 7: Two pages from a Bolognese fourteenth-century copy of John Cassian's Collationes, a collection of biographies of the founders of ascetic monasticism. Beinecke family funds, Beinecke Rare Book and Manuscript Library.

#### Beinecke Rare Book and Manuscript Library

The Beinecke houses the principal rare books and literary manuscripts of Yale University and serves as a center for research for students, faculty, and other readers. Containing about 500,000 volumes and several million manuscripts, the collection originated through gifts-inkind, and resides in the building erected in 1963 to meet the special needs of these extraordinary treasures. The building and its endowment represent the gift of the families of Edwin J. Beinecke (B.A. 1907), Frederick W. Beinecke (B.S. 1909), and Walter Beinecke (B.A. 1910). The Beinecke receives support from a number of endowments dedicated to its five major collections: the General Collection of Rare Books and Manuscripts, the Collection of American Literature, the Collection of Western Americana, the German Literature Collection, and the Osborn Collection of English Literary and Historical Manuscripts.

The Beinecke's acquisitions in recent years show stunning diversity and include a number of important works that range from a New Mexico family archive, mostly in Spanish and dated from 1775 through 1900, to the Diaries and Correspondence of Zane Grey and his wife Dolly, to a collection of fifteenth-century printed editions of Aristotle, to a seventh or eighth century B.C.E. Book of the Dead from Egypt, to an archive of Israeli poet Yehuda Amichai, to a first edition of Virginia Woolf's novel *Mrs. Dalloway*.

In 2002 the Beinecke acquired the majority of the medieval manuscripts in the library of B.S. Cron of Kew, Surrey, a well-known collector of historical documents. Shown in Figure 7 are two pages from a Bolognese fourteenthcentury copy of John Cassian's Collationes, a collection of biographies of the founders of ascetic monasticism. The illustrations contain idealized portraits of these monks, depicted with a combination of iconographical elements of ancient philosophers and Old Testament prophets. The manuscripts in this collection are especially noteworthy given their elegance, their age, and their provenance.

Endowment support allowed the Beinecke to acquire the Peter E. Palmquist Collection, one of the finest collections on the history and practice of photography ever assembled in private hands. The collection's more than 100,000 vintage photographs range from pioneer daguerreotypes to recent images taken by Western women photographers. Figure 8, a clear-glass ambrotype with brown velvet backing dated about 1855, depicts five women of the Peralta family of Oakland, California.

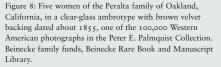






Figure 9: Geared mechanism for lifting well water, engraving from *The Diverse and Complex Machines*, a 1588 work by Agostino Ramelli annotated with handwritten commentary by Thomas Arundell. Elizabethan Club Endowment Fund (1911), Elizabethan Club.

#### Elizabethan Club

Founded in 1911, the Elizabethan Club resides today in a house at 459 College Street, a gift from alumnus Alexander Smith Cochran (B.A. 1896) as a haven for faculty and students interested in English literature and literary conversation. In addition to his own collection of Shakespeare first editions, Cochran left an endowment to support the Elizabethan Club. This fund, along with a fiftieth anniversary gift from members in 1961 and many other endowment gifts, helps support the activities of the Club and the occasional acquisition of new works for the Club's library, which serves as a research collection serviced through the Beinecke Library.

One recent acquisition is a richly illustrated sixteenth-century volume on mechanics by Agostino Ramelli, purchased for the collection in 1999. The Club's copy of Le Diverse e Artificiose Machine (The Diverse and Complex Machines), dated 1588 and containing 194 engravings, was owned by the famous soldier of fortune, Thomas Arundell, known as "The Valiant" for his exploits against the Turks in Hungary while serving the Holy Roman Emperor. The volume contains Arundell's proposed improvements and alternative applications for the machines, one of which appears in Figure 9.

# Management and Oversight



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

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, Inc.

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

Henry F. McCance '64 President Greylock Management Jane L. Mendillo '80, '84 M.B.A. Chief Investment Officer Wellesley College

William I. Miller '78 Chairman Irwin Financial Corporation

Theodore P. Shen '66 Former Chairman DLJ Capital Markets

John L. Thornton '80 M.P.P.M. Former President and Co-Chief Operating Officer Goldman Sachs International

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

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 sixteen professionals.

## Investments Office

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

Dean J. Takahashi '80, '83 M.P.P.M. 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 Senior Associate

Robert F. Wallace '02 Senior Associate

Celeste P. Benson Senior Portfolio Manager

Shuba V. Raghavan Senior Research Associate

Kimberly B. Sargent '00 Senior Financial Analyst

David B. Slifka '01 Senior Financial Analyst

Jay L. Kang '02 Financial Analyst

Daniel G. Kilpatrick '03 Financial Analyst







Circle of Kano Mitsunobu, 1561/5-1602/8, *The Twenty-four Paragons of Filial Piety*. Pair of six-fold screens, ink, color, gold, silver, and gold leaf on paper. The Leonard C. Hanna, Jr. (B.A. 1913) Fund, Yale University Art Gallery.

#### 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 7-13

Average educational institution asset allocations from Cambridge Associates.

#### Page 18

The Endowment's annual return for the ten years ending June 30, 2003 ranks in the top one percent of institutional funds as measured by the SEI Large Plan Universe.

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