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# sustainable Yale and beyond

Yale University Financial Report / 2007–2008

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## Links

Yale Office of Sustainability  
[www.yale.edu/sustainability](http://www.yale.edu/sustainability)

Student Taskforce for Environmental Partnership  
[www.yale.edu/step](http://www.yale.edu/step)

Yale Recycling  
[www.yale.edu/recycle](http://www.yale.edu/recycle)

Green Purchasing at Yale  
[www.yale.edu/procurement/green\\_purchase.html](http://www.yale.edu/procurement/green_purchase.html)

Yale Sustainable Food Project  
[www.yale.edu/sustainablefood](http://www.yale.edu/sustainablefood)

Greenhouse Gas Reduction Strategy  
[www.yale.edu/enviro/ docs/greenhouse\\_fin1.pdf](http://www.yale.edu/enviro/ docs/greenhouse_fin1.pdf)

## Highlights

<b>Five-Year Financial Overview</b> (\$ in millions)	Fiscal years				
	2008	2007	2006	2005	2004
<b>Operating Budget Bottom Line</b> (see page 23)	\$ ---	\$ ---	\$14.5	(\$14.5)	\$ ---

### Financial Position Highlights

(see page 30):

Total assets	\$33,864.8	\$32,165.3	\$27,711.6	\$22,505.7	\$19,772.4
Total liabilities	9,586.5	8,079.5	8,213.3	6,004.5	5,797.1
Total net assets	\$24,278.3	\$24,085.8	\$19,498.3	\$16,501.2	\$13,975.3

Endowment:

Net investments, at fair value	\$22,686.3	\$22,364.7	\$17,949.1	\$15,091.0	\$12,740.9
Total return on investments	4.5%	28.0%	22.9%	22.3%	19.4%
Spending from endowment	3.8%	3.8%	4.1%	4.5%	4.5%

Facilities:

Land, buildings and equipment, net of accumulated depreciation	\$3,199.6	\$2,746.4	\$2,486.9	\$2,263.2	\$2,095.2
Disbursements for building projects	568.9	373.3	265.1	259.3	202.1

Debt	\$3,067.2	\$1,954.6	\$1,954.3	\$1,582.9	\$1,572.7
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### Statement of Activity Highlights

(see page 31):

Operating revenue	\$2,347.5	\$2,121.2	\$1,971.0	\$1,835.6	\$1,677.9
Operating expenses	2,314.5	2,108.5	1,963.6	1,786.9	1,675.9
Increase in net assets from operating activities	\$33.0	\$12.7	\$7.4	\$48.7	\$2.0

<b>Five-Year Enrollment Statistics</b>	Fiscal years				
	2008	2007	2006	2005	2004
<b>Student Fees:</b>					
Yale College term bill	\$45,000	\$43,050	\$41,000	\$38,850	\$37,000

Freshmen Enrollment:

Class of:	'11	'10	'09	'08	'07
Freshmen applications	19,323	21,101	19,451	19,682	17,735
Freshmen admitted	1,911	1,878	1,880	1,958	2,014
Admissions rate	9.9%	8.9%	9.7%	9.9%	11.4%
Freshmen enrollment	1,320	1,315	1,321	1,308	1,353
Yield	70.6%	70.9%	71.3%	68.1%	67.9%

Total Enrollment:

Yale College	5,300	5,319	5,380	5,281	5,308
Graduate and professional schools	6,064	6,004	6,000	5,971	5,933

## Message from the Vice President for Finance and Administration

### **Reducing impact on the environment**

Over the past few years, Yale University has made significant progress towards reducing its impact on the environment in the areas of energy conservation, alternative energy sources, new transportation systems and incentives, reducing waste, purchasing “green” products, using local, fresh food in its dining halls, and adhering to high performance building standards. The University is committed to a level of investment in energy conservation and alternate energy sources that will lead, based on current projections, to a reduction in its greenhouse gas emissions by 2020 that will be 10% below its 1990 levels, or a 43% reduction from 2005 levels. By adopting this goal, Yale is one of the first universities in the country to commit to a long-term strategic energy plan. Collectively, these goals represent aspects of a growing global “sustainability” movement that seeks to benefit successive generations by reducing negative impacts on the environment through actions and decisions being made today. Many of these efforts are described in this report.

### **Sustainability at the heart of Yale**

More than many organizations, planning for future generations—and thinking in centuries, not decades, when planning—is closely linked to Yale’s mission. Beyond environmental goals, “sustainability” is embedded in the very heart of Yale, as is the understanding that the actions we take today will have consequences well beyond the lifetime of those making the decisions. This awareness of the impact on future generations is perhaps most evident in Yale’s endowment management practices and its campus construction programs, but this same awareness applies to all aspects of financial and administrative services. The University applies prudent management techniques to control spending and continues to make strategic investments in programs to further its mission of teaching and research while also meeting its fiduciary responsibilities.

### **Managing financial assets prudently**

This year, the University has again made great strides in managing its financial assets prudently, even as the economic environment posed particular challenges. Operating revenues exceeded operating expenses by \$34 million. The largest source of operating revenue was generated from the endowment, which represented 36% of total operating revenue. This year’s return on the endowment was 4.5%. The University capital program during the past fiscal year was a record \$570 million. The most significant expenditure, \$109 million, was the purchase of a 136-acre research campus from the Bayer Pharmaceuticals Corporation. This acquisition, which included recently-built research facilities, allows the University to greatly accelerate its research plans. Plans for the new West Campus include research programs ranging from the exploration of genetic variation and the molecular basis of cell biology to the causes of and possible cures for cancer, infectious diseases and disorders of brain function. In addition to this acquisition, the University continues to renovate and expand its research, classroom and student living spaces. Of particular note this year was the decision to add two new residential colleges for undergraduate students. This major new initiative anticipates adding approximately 800 new students to the undergraduate population by the year 2013. Steady investment in capital maintenance of existing buildings is also a key priority. Taken together, these enhancements to the campus infrastructure ensure that faculty, staff and students are provided with state-of-the-art research and learning environments.

**Improved financial  
aid policies**

The University has had a need-blind admission policy since 1966 and several extraordinary improvements to financial aid were announced earlier this year. In January 2008, the University changed its financial aid policies so that the average financial aid grant now covers 75% of tuition, room and board. As of September 2008, 56% of entering freshmen will receive some form of financial aid compared to 44% for the academic year ending June '08. Under the new policies, many Yale College students are able to avoid taking out loans completely. No contribution is required from families earning less than \$60,000, and the financial aid subsidies extend to families earning up to \$120,000 and above. These financial aid improvements are made possible through the generous donations of alumni and friends of the University as well as the responsible management of Yale's financial resources.

The "Yale Tomorrow" development campaign has now completed the fourth year of its seven-year plan and is almost two-thirds of the way to the recently increased goal of \$3.5 billion (the prior goal was \$3 billion). Fiscal Year 2008 set an all-time record for cash and in-kind donations of \$493 million which eclipsed the previous record of cash and in-kind donations of \$440 million. Such outstanding donor support is critical if the University is to achieve its strategic goals while also maintaining a balanced budget.

**Transforming financial,  
administrative and information  
technology services**

To sustain Yale's ambitions in teaching, learning and research, the division of Finance and Administration is identifying areas in which its processes, policies, and service quality can be improved. Rather than looking at operational areas in a piecemeal fashion, Finance and Administration seeks to transform the University's entire financial, administrative, and information technology services. Management training, career development, communications, transaction processing, internal controls, research, financial, and administrative systems are all under review. The goal is to create an environment in which Yale employees are able to reach their full potential, are recognized for their contributions, and are able to lead changes that result in tangible improvements in service delivery to the Yale community.

Those of us who work in Finance and Administration are well aware that, by investing wisely, managing strategically, and spending prudently, we are providing critical resources to the faculty and students so that great teaching and research can continue to thrive for many generations at Yale.



Shauna R. King  
*Vice President for Finance and Administration*

# sustainable Yale and beyond

“Our aspiration is to promote growing prosperity that is sustainable, in the sense that future generations will have no less opportunity to enjoy the fruits of the environment or the fruits of their own potential than we ourselves have enjoyed.”

— *Yale President Richard C. Levin*





*Top: Tom Downing, Yale senior energy manager, surrounded by solar photovoltaic cells on the roof of the Divinity School's Fisher Hall.*

*Left: Holly Parker, director of sustainable transportation systems at Yale, with one of the University's Zipcars.*

It is well documented that Yale University has embarked on an ambitious series of sustainability initiatives in recent years, from the establishment of environmentally preferable purchasing standards to the design of high-performance building and renovation projects. One of the best-known initiatives is the commitment to dramatically reduce Yale's carbon footprint in the next fifteen years.

Programs like these are found on many college campuses, where student passions and faculty research often drive the push for social change. What is unusual at Yale is the extent to which sustainability is being codified into University operations and the intent of the University's leadership to effect change globally. Because in the view of President Richard C. Levin and a dedicated group of administrators, staff, faculty and students leading the charge for sustainability, what happens at Yale doesn't stay at Yale: it is meant to ripple out into the world, providing positive examples of how to effect environmental and institutional change globally.

### Defining and achieving sustainability

**"Sustainability"** is often used as a synonym for "environmentalism," and while the two are related, they are not the same. Yale embraces the definition of sustainability set forth in the Bruntland Report produced by the U.N. World Commission on Environment and Development: "... development that seeks to meet the needs and aspirations of the present without compromising the ability to meet those of the future."

The challenge at hand is adapting and using this definition of sustainability as a framework for decision-making that balances economic viability with ecosystem health and human health. Yale is committed to integrating sustainability principles into the operations of the institution while contributing leading scholarship, research, and educational models.

As President Richard C. Levin said in a speech at the University of Copenhagen, "Our aspiration is to promote growing prosperity that is sustainable, in the sense that future generations will have no less opportunity to enjoy the fruits of the environment or the fruits of their own potential than we ourselves have enjoyed."



## The seeds of the campus environmental movement

*"It's not lost on the students that what we're doing is a decision the organization has made quite deliberately," President Levin says. "It's in our practice and in our education."*

Until about five years ago, Yale's sustainability profile was about the same as most universities'. Other than a well-established recycling program, environmentalism was largely confined to student clubs and courses taught in the School of Forestry and Environmental Studies. In 1998, the Yale Student Environmental Coalition produced a document called the Yale Green Plan, which urged closer attention to environmental issues in campus operations.

The Advisory Committee on Environmental Management (ACEM), formed in 2001, set the stage for environmental practices becoming a fundamental part of the University's operations. The committee, which included students, staff, and faculty, was charged with evaluating the campus's environmental practices and recommending long-term sustainability goals.

ACEM also recommended and eventually administered a Green Fund that provided seed money for pilot projects on campus, and urged the establishment of the Yale Office of Sustainability. In 2004, Julie Newman Ph.D. arrived as the Office of Sustainability's first director, charged with integrating sustainable principles into the operations and educational mission of the University. Today, she and her staff work across the institution on issues from procurement and energy use to waste management, water conservation, and sustainable construction, as well as being involved in regional, national, and international forums.

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### **What if you used to know everything "green" happening on campus and then you don't? You celebrate.**

For many years, if someone on campus wanted to do something about renewable energy, purchasing recycled products, or carpooling, they called C. J. May, Yale recycling coordinator since 1990. He was one of the few staff members interested in and knowledgeable about environmental problems and their solutions. Since 2000, that's changed. Sustainability is being taken up all over campus, and "there are so many initiatives, I can't keep up," says May. "And that's a good position to be in. Those problems are being

handled by people who can focus on them fully, and I can focus on my own area without trying to be an energy engineer."

In his own area of recycling, May is trying to dig deeply into waste stream analysis. It's not enough, he says, to go from plastic coffee stirrers to wooden ones. "Why not use a spoon?" He hopes to change a system in which it is easier for offices to send old furniture to the landfill than to offer it to other departments or to charities for reuse. May has also set his sights on food waste, and helped to create a pilot program to compost much of the two tons of food waste that comes from Dining Services every day.



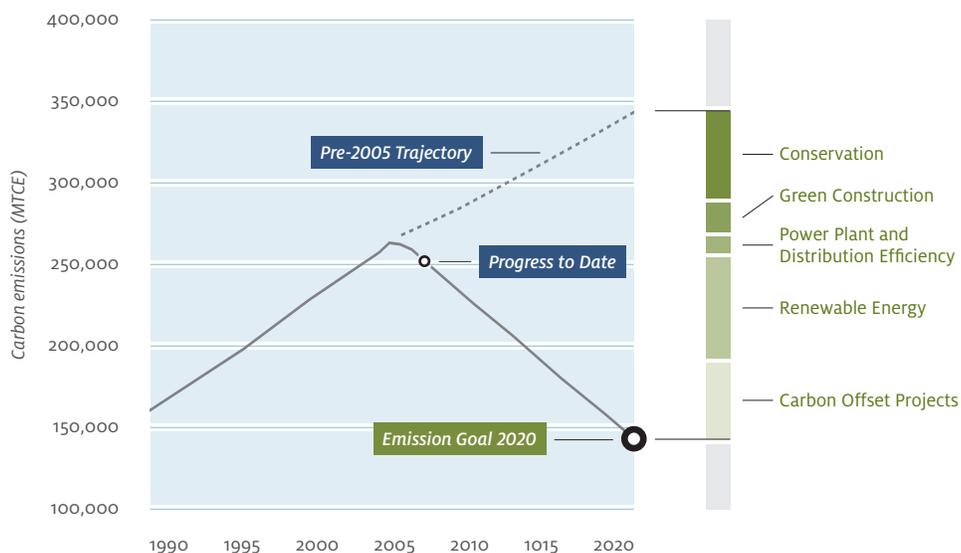
## Greenhouse gas commitment

*Yale's Central Power Plant has been reconfigured as an energy-efficient co-generation plant.*

Then in 2005, President Levin, along with provost Andrew Hamilton and vice president for finance and administration John E. Pepper, electrified the Yale community by announcing the University's commitment to reduce its greenhouse gas emissions to 10% below 1990 levels—or 43% below then-current levels—by 2020. By reducing emissions of carbon dioxide and other greenhouse gases, Yale hoped to address what Levin considers the most challenging issue facing the world: climate change.

The reduction, they said, would be accomplished through energy conservation, investment in on-site renewable energy projects, and carefully considered investment in offsite renewable energy projects. A commitment to reduce greenhouse gases implies the ability to measure existing and future emissions, and that is a challenge, according to John Bollier, associate vice president for facilities. Some campus emissions are relatively easily measured, including energy created on campus by Yale's two power plants and purchased electricity. Emissions from transportation—including air travel and commuting by car—are not as easily measured and were not included the University's initial greenhouse gas reduction goal, although they may be added in the future.

**Yale emissions reduction strategy**





## Reducing while growing

*The Daniel L. Malone Engineering Center, dedicated in 2005, received a gold LEED rating from the U.S. Green Building Council. It features wastewater recovery, daylight harvesting, and the use of locally purchased materials to minimize use of fossil fuels for shipping.*

Even greater than the challenge of measuring emissions comprehensively, says Bollier, is the inherent problem of reducing emissions while the campus is growing. During the same period in which the University has committed to reduce greenhouse gas emissions, it plans to increase its built footprint by 15%, and as it recently announced, Yale will increase the student body by the same percentage.

“The additional buildings are the challenge,” Bollier says. No buildings currently built on campus are carbon-neutral in terms of emissions, because of the energy requirements for cold winters and humid summers. So even a new “green” building is still *adding* to the University’s carbon footprint.

“So we have to look at existing buildings,” to help achieve the greenhouse gas reduction goal, Bollier says. That has been a successful endeavor. Improvements have been made in the steam supply and chilled water systems for these and other academic buildings, windows have been thermally improved, and insulation has been augmented.

On the conservation front, energy savings have been achieved by replacing incandescent bulbs with compact fluorescent bulbs in residential colleges, installing programmable occupancy sensors tied to lighting in 85 buildings, and retrofitting some labs with improved air change rates and heat recovery systems. Students have responded to the challenge by turning out lights and computers, resulting in a 10% reduction in energy use in the residential colleges in two years.

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### **How do you renovate a medical lab to U.S. Green Building Council LEED standards when LEED standards don't exist for labs? You help make the rules.**

When Virginia Chapman, director of facilities construction and renovation at Yale School of Medicine, was charged with overseeing renovations of the Sterling Hall of Medicine C-Wing’s laboratories, she was interested in making the project environmentally sensitive. She focused on using the U.S. Green Building Council’s LEED rating system (Leadership in Energy and Environmental Design), an industry-accepted national standard.

One drawback: LEED standards didn’t exist for laboratory renovations. With strict requirements for

powerful fume hoods to exhaust chemicals away from researchers, laboratories have unique energy requirements that work against sustainability goals.

Undeterred, Chapman successfully applied for a grant from Yale’s Green Fund to hire consultants to explore certification of a laboratory renovation by adapting the LEED standard for commercial interiors. Engineers calculated the minimum acceptable air change rate for labs, keeping workers safe but reducing energy use. Daylighting and environmentally friendly materials were used, and demolition debris was separated and largely recycled.

In 2006, the project received a gold LEED rating. Through persistence and creativity, Chapman’s team helped pave the way for standards for other laboratories on campus and elsewhere.

## Yale environmental principles

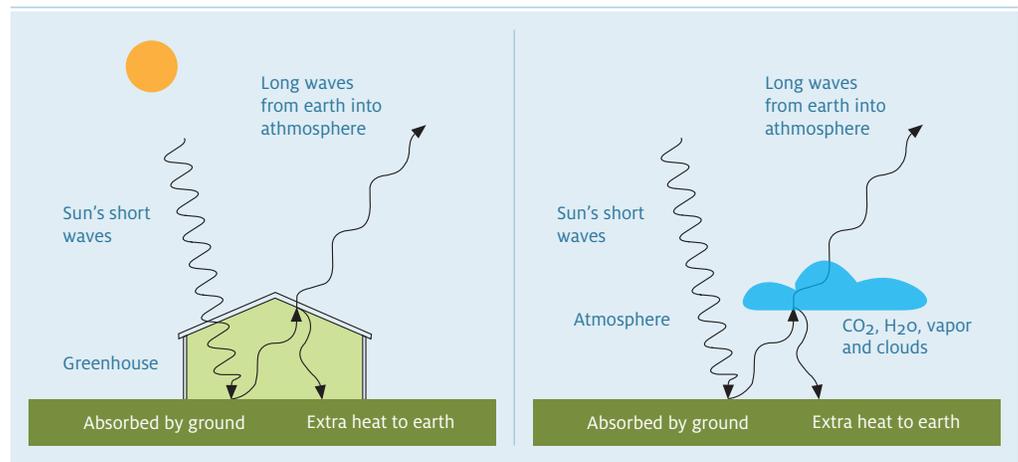
The University committed to these principles recommended by the Advisory Committee on Environmental Management (ACEM) in 2002:

- Managing its **operations and facilities** in a manner that protects and enhances the local and global environments, assesses the impact of its operations and facilities on the environment, sets quantitative goals
- Striving for **outstanding environmental performance** in the design, renovation, and construction of its facilities.
- Defining and moving toward **environmental sustainability** through wise use of resources, purchasing recycled products,
- Incorporating **environmental education, management, and training** into its objectives and practices.
- Striving for continuous **environmental improvement** across the entire range of its operations.

for environmental performance, and monitors its environmental progress.

conservation, reuse and recycling of materials and supplies, waste minimization, and energy management.

### The Greenhouse Analogy



## What is climate change? A review

“There is no longer any doubt we have a problem,” President Richard C. Levin told the Senate Committee on the Environment and Public Works in April, citing the work of the 2,500 leading scientists of the Intergovernmental Panel on Climate Change (IPCC) who determined “with very high confidence that the net effect of human activities since 1750 has been one of warming.”

### So how does this warming occur? Here is how scientists explain it:

Light from the sun travels 93 million miles to the earth’s surface, where it warms the land and oceans. They in turn radiate heat outwards; some of the heat escapes back into space, but some is impeded by gases in the atmosphere like carbon dioxide and methane. These atmospheric

gases act much like the glass of a greenhouse, allowing light in but preventing much of the resulting heat from escaping. It is a naturally occurring process that allows for life on earth: without a background level of atmospheric gases, the temperatures on earth would always be below freezing.

However, since the late nineteenth century, greenhouse gases that are byproducts of burning coal and petroleum-based products have accumulated rapidly in the atmosphere, trapping heat below. Although the earth has experienced fluctuations in temperature over time, the current level of acceleration is unprecedented in human history. The IPCC has concluded that human activities that increase greenhouse gas concentrations are “enhanc-

ing” the natural greenhouse effect, resulting in a changing climate. A warming earth will have impacts on sea level that could be disastrous for coastal communities, will change physiological processes in plants and animals that can alter agricultural practices and therefore global food production, and can redistribute diseases such as malaria to high-population areas. Scientists are also studying the impact of climate change on air and water quality, extreme weather events, and chronic health problems like asthma.

Scientists believe that it is not too late to reverse the trajectory of global warming, and steps taken by large organizations like Yale University to reduce emissions are critical, especially when they influence other organizations to take action.



## Introducing on-site renewables

*Scheduled for completion by the end of 2008, Kroon Hall, the new home of the School of Forestry and Environmental Studies, was designed for minimal environmental impact in materials, land use, and energy profile.*

Conservation can only take the campus so far in its aim to reduce emissions. In the end, says Bollier, “We need to change our fuel mix, because, ultimately, fossil fuels are not sustainable.” That transition is beginning: a solar photovoltaic array has been installed at the Divinity School, geothermal heat pumps are in several buildings under construction, and a micro-wind turbine array is being installed as a demonstration project on Science Hill. “Bridge technologies” are also being employed, such as fuel cells that use natural gas to produce electricity and heat with a substantial reduction in carbon emissions compared to the regional electric grid. A 250-kilowatt fuel cell, located behind the Peabody Museum, is connected to the University’s power grid, and other such fuel cells may eventually be located across the campus.

The centerpiece of campus efforts in renewable energy will be Kroon Hall, the new building for the School of Forestry and Environmental Studies, scheduled to open in December 2008. With geothermal heat pumps, a 100-kilowatt solar array, and passive solar features, it is expected to use 65% less energy than other comparable academic buildings and should be rated LEED platinum, the highest rating a building can achieve under U.S. Green Building Council standards.

Although Kroon Hall will be a beacon in sustainable design, the carbon-saving features come at a premium of about 5 to 6% of the project cost. That level of expenditure will not always be feasible. Every “green” project is evaluated on the basis of extra cost versus potential savings. “There is not a blank checkbook,” says Provost Andrew Hamilton. The fact is that the premium paid for Kroon is balanced by savings achieved elsewhere, and Yale has paid no more than a 1% of the operating budget for initiatives that have led to a dramatic 11% reduction in greenhouse gas emissions in the past three years while the campus size has grown by more than 3%. During this same period, emissions from campus buildings that existed in 2004 have been reduced by 16%.

“That’s not a big price,” said Levin at an April breakfast attended by 100 members of the Yale community interested in sustainability. Levin believes that most people would be willing to pay a tax of less than 1% to help save the planet.

### How do you solve parking congestion, save money, and improve air quality? Rethink commuting.

“It’s really very simple,” says Holly Parker, director of sustainable transportation. “Traffic congestion gets worse, gas is increasingly more expensive, and Yale has a finite amount of space for parking.” Addressing those problems, she believes, will encourage people to leave their cars at home, and benefits to the environment will follow.

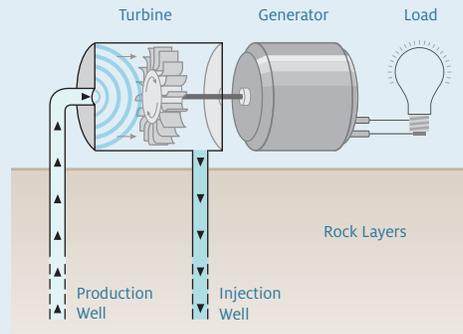
It is a challenge. Parker knows that people perceive driving to be more convenient than taking the train or bus and to be quicker and safer than walking or biking. The University will start resolving some transit-related

concerns through the development of an online comment tool ([www.yale.edu/to](http://www.yale.edu/to)) that all local transit providers have agreed to participate in.

The University is also revamping its own transit system, providing the Zipcar car sharing service to campus, and designing new bicycle and pedestrian facilities. This fall, the University will launch a campaign to make the Yale community more aware of the benefits—including discounted parking and free one-day parking permits for carpoolers, vanpoolers, and transit riders as well as a guaranteed ride home—that can be reaped from transit ridership and ridesharing, among other options.



## On-site renewables



Top: Ground-source heat pumps like this one will take advantage of the constant underground temperature of 55 degrees Fahrenheit to provide heat in the winter and cooling in the summer.

Left: the 250-kilowatt fuel cell behind Peabody Museum produces near-zero emissions electricity.

Right: Mirco turbines shown installed on the Prospect Street side of the Becton Engineering and Applied Science Center. Total output from the pictured ten-unit array is 10 kilowatts.



Yale Divinity School Dean Harold Attridge at the dedication of the solar photovoltaic panels on Fisher Hall.



Fisher Hall was chosen for the solar installation because the roof faces south and is relatively unobstructed by trees or other buildings. The system will generate about 17% of the building's electricity needs annually.



## Renewable energy credits—yes or no?

*Mature forests like this one can store large amounts of carbon, but even smaller-scale tree-planting projects in communities like New Haven can contribute to carbon-mitigation efforts.*

So far, all progress toward the greenhouse gas goal has been achieved without the purchase of renewable energy certificates (RECs) or credits, through which emissions are offset by paying for the production of renewable energy elsewhere.

Using renewable energy certificates to help the University reduce its emissions raises the issue of *additionality*. It is possible to pay into projects that convert methane from landfills into fuel or that use forests to store carbon. But it is not always clear that Yale's investment in such projects would provide additional reductions in carbon dioxide emissions and therefore truly reduce Yale's carbon footprint. In the case of landfill methane conversion, for instance, legislation that requires methane capture means that such projects would take place with or without Yale's participation.

Yale is much more interested in offsets that show true carbon savings and that are close to home. This year, students in an environment and business clinic co-taught by Bradford Gentry, co-director of the Center for Business and Environment at Yale (CBEY), and Maureen Burke, a lecturer in the School of Management, explored several options for Yale to implement projects that result in local offset emissions within the City of New Haven and across the state of Connecticut. Moving forward with this concept, the CBEY and the Yale Office of Sustainability will manage a test pilot program in which the Yale Community Carbon Fund (YCCF) will invest in local carbon offset projects within the City of New Haven by partnering with established community groups. As a part of this pilot program, the YCCF will support offset projects that provide local households with compact fluorescent light bulbs, low-flow shower heads, programmable thermostats, and community tree plantings in their neighborhoods.

### How do you know whether you're buying green products? Procurement makes it easy.

Computers haven't created the paperless office, but at Yale, they are helping to reduce the impact of paper purchases. Yale's new electronic procurement system has not only streamlined purchasing procedures but also furthered the University's sustainability goals, because embedded within it are recommendations for Environmentally Preferable Purchasing (EPP). Anyone using the e-procurement system can access recommendations on products like recycled paper, Energy Star appliances, EPEAT-certified computers, biodegrad-

able break room supplies, and Green Seal certified janitorial supplies. Products land on the EPP list only after suppliers respond to questions about the impacts and life cycles of their products.

According to Brenda Lee Naegel, associate director of communications for procurement, one of the biggest targets for green procurement is paper. The University's goal is for 95% of all copy paper to have recycled content, and her office has helped departments meet that goal by providing an online tracking system. "We made it transparent," she says. "And that's how you change behavior. If people can see the data and make better business decisions, that will also help the environment."

educate





## Planning for change

*Julie Newman Ph.D., director of the Yale Office of Sustainability, teaches an undergraduate class on "Sustainable Development and Institutional Change."*

Yale's reserved stance on renewable energy certificates illustrates a key quality needed by any institution trying to create or drive change on a long timescale. Julie Newman, director of the Yale Office of Sustainability, says that change is a constant in her work. Using bridge technologies, and in the process learning how to change as an institution, will prepare Yale to embrace new options as they become available.

One way in which Yale is institutionalizing change is by creating a comprehensive sustainability strategic plan that will provide guidance for defining and meeting short- and long-term goals and objectives. Newman is on a team led by associate provost for science and technology Bruce Carmichael that is developing this plan, to outline strategies for integrating sustainability principles into Yale's operations, curriculum, and campus culture with the intent of transforming the University into an international model and leader in campus sustainability.

While the objectives will be specific—providing transportation options that encourage people to leave cars at home, for example, and preparing students to respond to environmental challenges as citizens and professionals—the strategic plan will be sufficiently flexible to allow different pathways to meeting these goals.



*President Levin drives a fuel-efficient Toyota Prius hybrid.*

imagine



### **What happens when students draw the connection between a professor's research and their own lives? The Yale Sustainable Food Project.**

In 2000, a group of students began drawing a connection between Professor John Wargo's teaching and writing about pesticides in our food stream and what Yale was feeding them. Conversations with University leaders led to an experiment with organic and local food at Berkeley College and the development of the Yale Sustainable Food Project (YSFP) and the Yale Farm. Today, 40% of all menu offerings at the residential colleges are local or organic. "Students are returning to residential colleges for dinner," says YSFP co-director Melina Shannon-DiPietro. "That's very important given the colleges' role in the University."

Hosting workshops and guest speakers, providing farm internships, and facilitating undergraduate courses related to food and agriculture, the Yale Sustainable Food Project is central to campus wide conversations about food. According to co-director Joshua Viertel, that is huge. "I believe that food is a wonderful starting point for education about sustainability and environmental responsibility," he says. "The environmental footprint of Yale's operations is dwarfed by the footprint made by the leaders Yale produces. For that reason, we must prioritize sustainability in terms of its educational impact, not just what we do in operations."



## Leading the global charge

*Incoming freshmen participating in the Harvest pre-orientation program visit Chubby Bunny Farm, a family farm in north-western Connecticut.*

One notable aspect of the sustainability master plan is that it will take on worldwide as well as campus-wide challenges. That is in keeping with Yale's long tradition of leadership in social issues. Julie Newman says that Yale's problem solving and development of best practices in the environmental arena is not just for the betterment of the University but "part of our contribution to society. It's part of what it is to be a university, and a well-known institution."

Since Newman arrived at Yale in 2004, her leadership role has expanded from local to regional and international. She established and chairs the Northeast Campus Sustainability Consortium and has an organizational role in the Ivy Plus Sustainable Working Group and on a similar subcommittee of the International Alliance of Research Universities, an alliance of ten top international research universities.

In turn, Levin is becoming known as one of the world's leading ambassadors for environmental change. In his speech in Copenhagen, his participation in the World Economic Forum at Davos, his testimony in the U.S. Senate in April, and in other arenas, he has quietly insisted that reducing greenhouse gases is feasible, not prohibitively expensive, and absolutely urgent.

"If we were not a university, we would be big enough to be a Fortune 1000 company," Levin has said. As such, Yale can be a model of responsible environmental practice for other universities and business organizations.

But universities, and especially Yale, have another role besides promoting sustainability in their operations. As Levin told the audience in Copenhagen, universities have been "at the forefront of modeling the economic, social, and environmental impact of rising global temperatures and sea levels." Much of the scientific work on climate change took place at universities and "continues with increased focus and urgency." Academic research into alternative energy technologies and making carbon-based fuels more efficient will be critical in the changing world.

Perhaps the most important role for universities, says Levin, is "to educate students who will go on to be future leaders and influential citizens of the world." At Yale, that education doesn't only take place in the School of Forestry and Environmental Studies (F&ES), although the School is the cornerstone of environmental education on campus. Its interdisciplinary master's degree program has produced some of the leading environmentalists, from *Sand County Almanac* author Aldo Leopold to the president of the Natural Resources Defense Council, Frances Beinecke. With the inauguration of an undergraduate curriculum four years ago, F&ES now reaches large numbers of students in Yale College—those who are majors and those who take courses as electives—according to Dean James Gustave Speth.

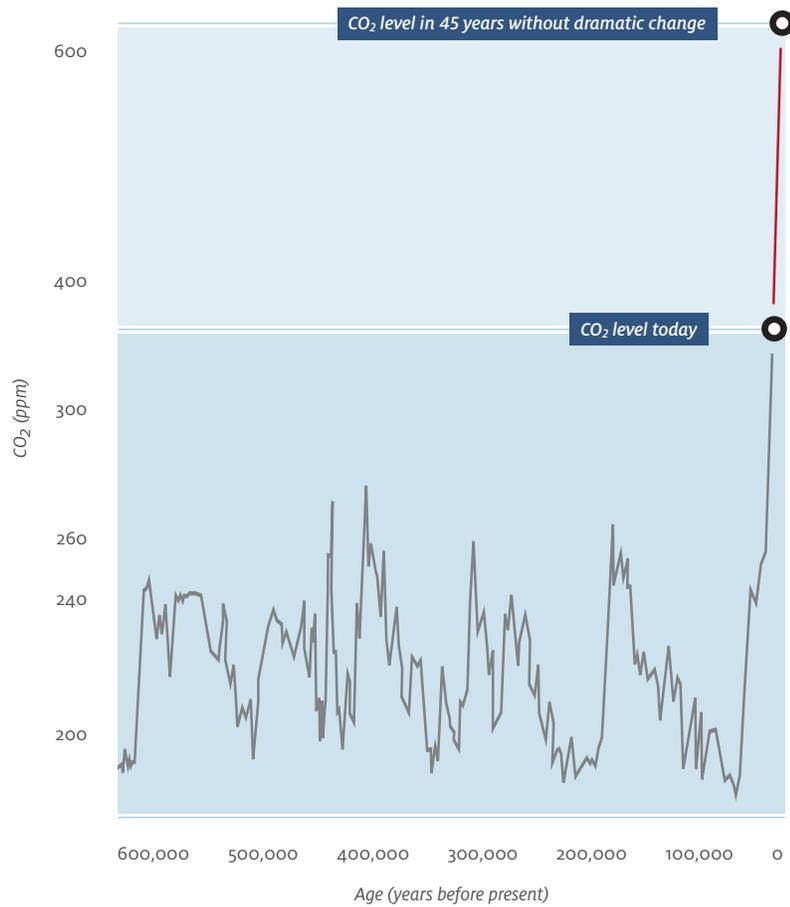
It's not just what students learn in the 60 or so undergraduate courses with significant sustainability content, in departments from chemistry to women's studies. Sustainability is now part of the ethos of the campus, and students will carry that with them. Levin says, "It's not lost on the students that what we're doing is a decision the organization has made quite deliberately. It's in our practice and in our education."



*The Yale Office of Sustainability's space was renovated with attention to energy, material life cycle, indoor air quality, and construction and waste recycling.*

CO<sub>2</sub> concentration measurement

*Atmospheric concentrations of carbon dioxide are closely linked with temperature, due to the greenhouse effect. Although fluctuations are normal, the current level of acceleration, linked by scientists to our use of fossil fuels, is unprecedented in human history.*



**What happens when you try to incorporate sustainability into the University’s cleaning procedures? You energize the entire custodial staff.**

For Robert Young, director of custodial services, it was not good enough to accept manufacturers’ claims that their cleaning products were “greener.” He wanted Yale to decide which products were best. So he and a team of custodial supervisors devised an independent review process resulting not only in the adoption of new products but in the development of new cleaning procedures.

They have adopted ammonia-free glass cleaners and hydrogen peroxide multipurpose cleaner to reduce

human health impacts, and switched to recycled paper towels and toilet tissue. Because they haven’t found effective eco-friendly disinfectants and floor finishes, they have established new procedures in which the traditional versions are used, but sparingly.

One side effect: “This has energized us,” says Young. “Our work is repetitive. Going green has made it more exciting.” In March, the custodial staff met to experiment with the new products that had been adopted and to tour one of the new LEED buildings on campus. “These tours helped make a connection between what they do every day and an important University initiative.”



James Gustave Speth



Michelle Addington



Mary Evelyn Tucker



Julie Zimmerman

## Sustainability in Academics: **Four Yale Leaders**

**James Gustave Speth**  
*Dean, School of Forestry  
and Environmental Studies*

The unveiling of LEED-platinum Kroon Hall this winter will be a highlight of Speth's nine-year tenure as dean. But Speth and others will argue that his greater achievement is the School's integration with other academic programs throughout the University. The School now offers joint master's degrees with most of Yale's other professional schools, including the Schools of Management, Architecture, and Law, and began offering an undergraduate major four years ago. "Over the last two years, we reached more than 850 students in Yale Col-

lege through our undergraduate teaching," Speth says.

Speth has positioned the School to reach out to constituencies beyond academia, through participation in conferences such as the recent Yale 2008 Conference of Governors on Climate Change and by launching *Yale Environment:360* ([www.e360.yale.edu](http://www.e360.yale.edu)), an online journal of opinion, reporting, and analysis. His own writing includes the recent book *The Bridge at the Edge of the World: Capitalism, the Environment, and Crossing from Crisis to Sustainability*.

**Michelle Addington**  
*Associate Professor  
of Architecture*

"We don't need to heat or cool a building," says Michelle Addington. "We need to heat or cool human bodies. We don't need to light a building; we need to provide enough light so that the human eye can detect contrast."

Addington believes that the only path to truly sustainable buildings is to unseat old ideas about buildings and efficiency. For instance, current standards call for even amounts of lighting throughout a building, but the human eye seeks contrast, not brightness. "We need much

less light than is specified in building codes," she says.

Addington is interested in using LED lighting to manipulate the contrast in a space. "Not only could we see better, but we would have energy savings of one or two orders of magnitude." Trained in nuclear engineering as well as architecture, she also deploys her knowledge of thermodynamics to rethink how buildings should be put together for optimal heating efficiency.

**Mary Evelyn Tucker**  
*Senior Lecturer and  
Senior Research Scholar, School of Forestry  
and Environmental Studies,  
Divinity School, and  
Religious Studies Department*

"Science and policy are necessary, but they're not sufficient to respond to the environmental problems we're facing," says Tucker, who is at the forefront of the emerging scholarly field of religion and ecology. With her husband, John Grim, she codirects the Forum on Religion and Ecology, an international project that explores the intersection of the world's religions with nature.

Tucker, whose specialty is Asian religions and Confucianism specifically, quotes the Chinese Vice-Minister

of the Environment, with whom she met in China, as saying that his country has environmental laws but not an ecological culture. "The cultural piece is the missing link," she says. "It has the potential to change minds and hearts. It is necessary to understand the different world religions," she says, "because we can't expect countries like India and China to draw on Western cultural and religious values as they grapple with their environmental concerns."

**Julie Zimmerman**  
*Assistant Professor of  
Green Engineering, Department  
of Chemical Engineering and  
School of Forestry and  
Environmental Studies*

"The approach of green chemistry and engineering is to design chemicals that are inherently benign rather than to do cleanup and remediation afterwards," says Zimmerman. Considering human and environmental health in the design phase is a "paradigm shift" that is possible in part because we have a better understanding of the mechanisms that have caused problems in the past.

Zimmerman is working on a portfolio of projects, from designing greener solvents for NASA to use in the

space shuttles (where chemicals exposed to 100% oxygen must also be inflammable) to creating biopolymers—plastics made out of natural materials such as shrimp shells. Her research on water quality and allocation in future scenarios of climate and population change reflects her deep interest in the effectiveness of policy in promoting sustainable solutions.



YALE TRANSIT

# financial results

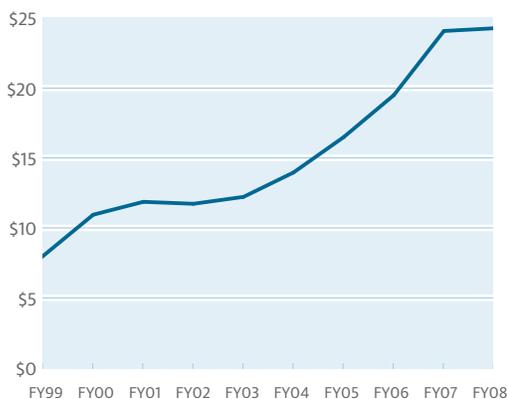
## Overview

Yale University continues to improve on its strong financial position after experiencing positive results for the year. At June 30, 2008, the University reported total consolidated assets of \$33.9 billion, consolidated liabilities of \$9.6 billion, and net assets of \$24.3 billion. Net assets increased by \$192.5 million during the year.

The University maintains a diverse operating revenue base, which allows protection against a downturn in any one source of revenue. Total operating revenue increased by 10.7% to \$2.3 billion. Endowment spending to operations accounted for approximately 73% of this growth. Total operating expenses increased by 9.8% to \$2.3 billion. The results from operations show an increase of \$33.1 million in operating net assets for the year.

### Net Assets

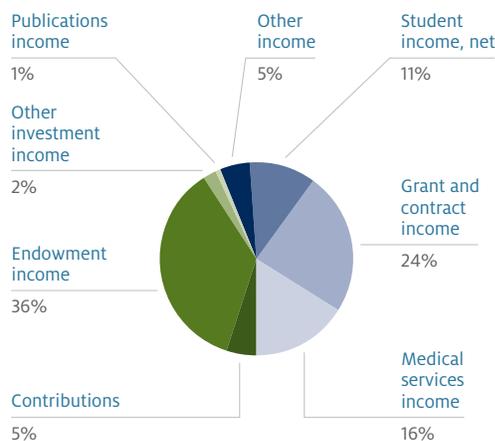
Ten-year trend (\$ in billions)



## Operating Revenue

As shown in the chart below, the University derives its operating revenue from five main sources: student income (net of certain scholarships and fellowships), grants and contracts, medical services, contributions, and Endowment income. Additional revenues are received from a variety of programs.

### Operating Revenue



### Student Income, Net

Student income, which includes revenue from tuition, fees, and room and board, net of certain scholarships and fellowships increased 3.6% during 2008 and amounted to \$245.2 million, or 11% of operating revenues. Of the total amount, tuition and fees accounted for \$348.4 million, a 3.9% increase over 2007. Revenue from room and board increased 4.3% to \$57.0 million. In accordance with generally accepted accounting principles, student income is presented net of certain scholarships and fellowships, which totaled \$160.2 million and \$153.3 million for 2008 and 2007, respectively.

During the 2007-2008 academic year, 11,364 students were enrolled at the University; 5,300 were undergraduate students attending programs at Yale College, and 6,064 were pursuing their studies at the Graduate School of Arts and Sciences and the ten professional schools. (Figures are based on full-time equivalents.)

Students enrolled in Yale College paid \$34,530 for tuition and \$10,470 for room and

board, bringing the total term bill to \$45,000 for the 2007-2008 academic year. The increase in the Yale College term bill was 4.5% over the 2006-2007 academic year. Students enrolled in the Graduate School of Arts and Sciences paid \$30,500 for tuition, a 4.1% increase over the 2006-2007 academic year.

The University maintains a policy of offering Yale College admission to qualified applicants without regard to family financial circumstances. This “need-blind” admission policy is supported with a commitment to meet in full the demonstrated financial need of all students throughout their undergraduate years.

During the 2007-2008 academic year, 2,324 undergraduates, representing 43.6% of eligible Yale College enrollment, received financial aid. In the Graduate School of Arts and Sciences, 2,478 students, or 97.7% of those eligible, received financial aid. In the professional schools, 2,874 students, or 85.3% of those eligible, received financial aid. In all, 7,676 University students, or 68.3% of total University eligible enrollment, received some form of University-administered student aid in the form of loans, gifts, or a combination of both loans and gifts.

### Grant and Contract Income

Grant and contract income experienced a 6.7% growth from \$526.3 million in 2007 to \$561.4 million in 2008. The Yale School of Medicine, which receives 79% of the University’s grant and contract income, reported an increase of 6.9% for 2008, while the remaining University sectors had an increase of 5.8%.

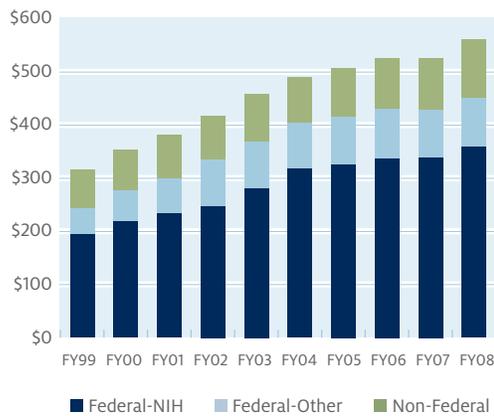
The federal government funded \$450.9 million, or 80% of 2008 grant and contract income, in support of Yale’s research and training programs. The largest federal sponsor was the National Institutes of Health (NIH), which provided revenues of \$358.6 million during 2008, an increase of 5.9% over the prior year. This increase occurred during a year in which the NIH had a budgeted increase of less than 1%. The University also receives significant research support from the National Science Foundation, the Department of Energy, the Department of Defense, and student aid awards from the Department of Education. Nonfederal sources, which include foundations, voluntary health agencies, corporations, and the State of Connecticut, provided an additional \$110.5 million in research, training, and other purposes during 2008.

In addition to funding the direct cost of sponsored programs, grant and contract awards generally include reimbursement for a portion of the costs related to research laboratories and other facilities, as well as administrative and support costs incurred for research and other sponsored activities. These reimbursements for facility and administrative costs amounted to \$136.1 million in 2008, which is an increase of 8.4% over the prior year. Recovery of facility and administrative costs allocable to federally sponsored programs is recorded at rates negotiated with the University’s cognizant agency, the Department of Health and Human Services. Yale’s current rate agreement is effective from July 1, 2006 through June 30, 2009.

The primary regulations governing federal grants and contracts are encompassed in Office of Management and Budget Circular A-21, *Cost Principles for Educational Institutions*, and Circular A-110, *Uniform Administrative Requirements for Grants and Agreements with Institutions of Higher Education, Hospitals, and Other Non-Profit Organizations*.

### Grant and Contract Income

Ten-year trend analysis (\$ in millions)



### Medical Services Income

Medical services income totaled \$373.3 million in fiscal 2008, an increase of 8.6% from 2007, and represented 16% of the University's operating revenue. The largest portion of this revenue stream is derived from patient care services provided by the School of Medicine's Yale Medical Group (YMG). Another growing component of medical services income is contracts with affiliated hospitals, including Yale-New Haven Hospital and the West Haven VA Medical Center.

Composed of more than 800 practicing physicians and representing approximately 150 specialties and subspecialties, YMG is one of the largest academic multi-specialty group practices in the United States. In fiscal 2008, the school expanded its liver transplant program, performing 34 transplants, including Connecticut's first split liver transplant, in which two recipients shared a single donor organ. Yale also brought new innovations to patient care in the fields of diabetes treatment, minimally invasive surgery, ankle replacement, tissue engineering, cancer care, and cardiovascular disease, among others. As one of the top recipients of funding from the National Institutes of Health, the medical school generates a constant flow of new scientific knowledge, much of which is translated into new therapies for the prevention and treatment of disease.

### Allocation of Endowment Spending

Each year a portion of accumulated Endowment investment returns is allocated to support operational activity. This important source of revenue represents 36% of total operating income this year and is the largest source of operating revenue for the University. The level of spending is computed in accordance with an Endowment spending policy that has the effect of smoothing year-to-year market swings. Endowment investment returns allocated to operating activities increased by 24.2% to \$850.0 million. Additional information on the Endowment spending policy is provided in the Endowment section of this report and in the footnotes to the financial statements.

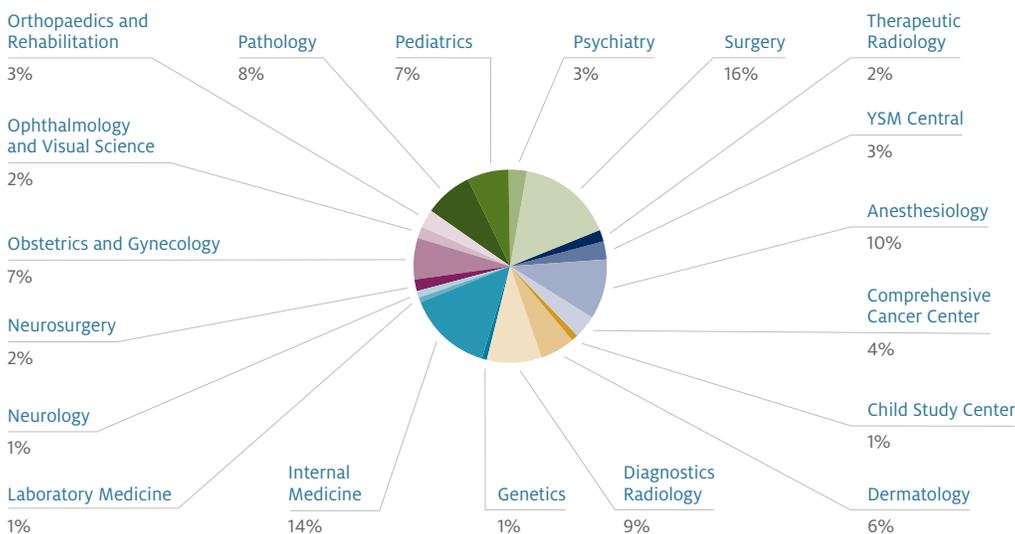
### Other Investment Income

Other investment income of \$53.6 million represents interest, dividends, and gains on non-Endowment investments. The decrease from the prior year is a result of lower returns in the long-term investments in which a portion of available cash is invested.

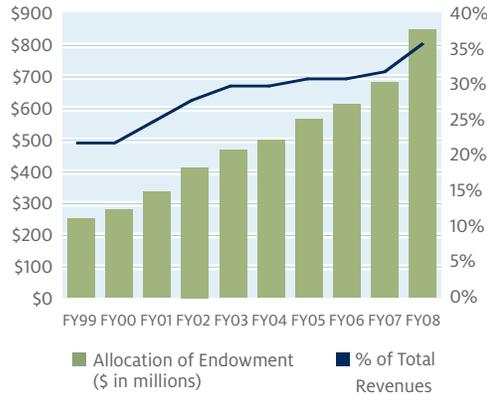
### Contributions

Contributions for operating, physical, and financial activities totaling \$370.1 million for 2008 are comparable to the 2007 results as the "Yale Tomorrow" campaign, with a goal of raising \$3.5 billion, continues.

**School of Medicine**  
*Clinical Income by Department*



**Allocation of Endowment Spending**  
as a percentage of total revenues,  
Ten-year trend analysis



**Publications and Other Income**

Publications income is primarily generated through Yale University Press (Press), a separately endowed department of the University. The Press published approximately 400 titles in 2008 and has approximately 5,000 titles in print. Many of these books are winners of prizes, including four Pulitzer Prizes. Its authors are academic and professional people from around the world. Revenue for the Press was \$33.5 million in 2008 and \$34.0 million in 2007.

Other income includes such items as royalty income, ticket sales, admission revenue, parking revenue, and application and enrollment fees.

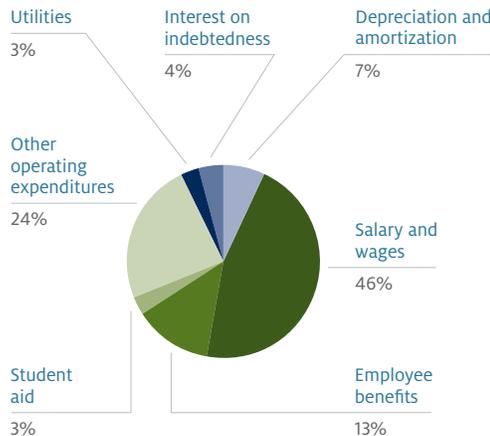
**Operating Expenses**

Operating expenses totaled \$2.3 billion, representing a 9.8% increase for the year. The largest component of expenses - salaries and wages and employee benefits - rose 9.5%. This category of expense represents 59% of total University operating costs. This increase was in line with the University's overall plans to maintain moderate growth and a competitive position with peer institutions. Faculty salaries, which make up 44.5% of total compensation, rose 8.4% in 2008. Compensation packages must be competitive in order to recruit and retain faculty of the highest caliber.

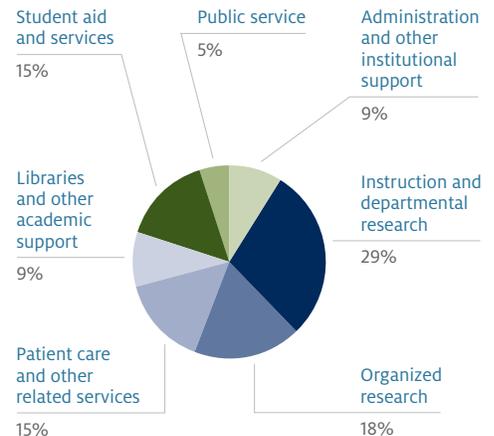
The cost of providing employee benefits, including various pension, postretirement health, and insurance plans in addition to social security and other statutory benefits, increased by approximately 6% to \$303.6 million.

Other operating expenditures include services, materials and supplies, and other expenses. These expenditures increased by approximately 9.8%. These costs include professional service fees and other service costs that are being invested to improve financial and administrative processes and information systems.

**Operating Expenses by Natural Classification**



**Operating Expenses by Functional Classification**



In accordance with generally accepted accounting principles, Yale reports its operating expenses by functional classification in the Statement of Activities. Expenses in each classification increased primarily as a result of the salary and wage increases mentioned previously.

The University spends 53% of its operating resources on academic activities including libraries as well as student aid and services. Organized research represents 18% and patient care 15% of spending. Organized research and patient care activities also support the academic and learning experiences at the University.

## Operating Budget

The University manages its operations to achieve long-term financial equilibrium. It is committed to sustaining both the programs and the capital assets (Endowment and facilities) supporting those programs over multiple generations. Endowment income, Yale's largest source of revenue, is allocated to the Operating Budget based on a spending policy that preserves the Endowment asset values for future generations, while providing a robust revenue stream for current programs. Similarly, the Operating Budget increasingly provides the funds needed, through the Capital Replacement Charge (CRC), to replenish the capital base necessary to ensure that buildings are maintained to support current programs.

The Statement of Activities in the audited financial statements is presented in accordance with generally accepted accounting principles (GAAP). GAAP recognizes revenue when earned and expenses when incurred. The Operating Budget is focused more on resources available and used in the fiscal period presented. The Budget does not include certain expenses that are paid out over the long term, such as unused vacation time, and certain revenue that will not be received within the next fiscal year, such as pledged contribution revenue. Another significant difference is that the Operating Budget treats the CRC as an expense rather than the historical cost depreciation expensed in the Statement of Activities. The University has been increasing the funding of the CRC since 1996. In fiscal 2008, Yale funded \$154 million of the CRC from the Operating Budget and departmental

## Faculty and Staff Compensation

The University employs approximately 3,020 faculty and 850 postdoctoral associates and other trainees. Additionally, there are approximately 3,970 managerial and professional staff, and 4,360 unionized clerical, technical, service, and maintenance personnel. The employment figures are based on full-time equivalents. Total salaries and wages and related employee benefits were \$1.3 billion in 2008.

funds and \$42 million from capital gifts. Another difference is that the GAAP financial statements do not present fund balance transfers between the operating, physical, and financial categories, as the Operating Budget does. Also, the operations of Yale Press are consolidated in the Statement of Activities, but are not part of the Operating Budget.

A summary of the differences between the Operating Budget presentation and the Statement of Activities is as follows:

	2008
Operating Budget Bottom Line	\$ -
Operating Budget use of	
fund balances	(14,081)
Revenue from pledge activity	19,869
Expenditures related to	
long-term liabilities	(31,214)
Capital funding in excess	
of depreciation	37,981
Yale Press operating results	1,456
Interest expense on interest	
rate swaps	4,770
Funding transfers	14,269
Increase in net assets from operations	
per the Statement of Activities	<u>\$33,050</u>

The Budget presents operating activity by funding source. The category "General Appropriations" includes the cost of education for the University. The category "Other" includes Endowments and gifts, sponsored research, patient care, and other activity. Endowment and gift activities are separated to facilitate and

monitor the University's fiduciary responsibility for compliance with donor intentions for restricted activity. Sponsored research includes the funding from federal, state, and non-governmental entities and the direct costs of the related

research. Other activity includes, among other things, health services provided by the Yale Medical Group as part of Yale's role in the Academic Health Center of Yale-New Haven Health Systems.

## Yale University Operating Budget Revenue and Expense for the year ended June 30, 2008 (\$ in thousands)

	General Appropriations	Other	Actual June 30, 2008	Budget June 30, 2008
<i>Revenue:</i>				
Tuition, room and board	\$ 395,673	\$ 9,726	\$ 405,399	\$ 402,316
Funded scholarships	(130,885)	(28,863)	(159,748)	(158,295)
<b>Net tuition, room and board</b>	<b>264,788</b>	<b>(19,137)</b>	<b>245,651</b>	<b>244,021</b>
Sponsored agreement income	136,129	425,315	561,444	563,582
Medical services income	32,732	340,596	373,328	351,484
Contributions	28,002	63,547	91,549	95,993
Allocation of Endowment spending	59,861	790,120	849,981	839,187
Unrestricted and recovery income	533,518	(533,518)	-	-
Other investment income	29,801	23,795	53,596	77,364
Other income	58,010	60,927	118,937	106,928
Transfers	43,149	(57,418)	(14,269)	(182)
<b>Total Revenue</b>	<b>1,185,990</b>	<b>1,094,227</b>	<b>2,280,217</b>	<b>2,278,377</b>
<i>Expenses:</i>				
Faculty salaries	169,316	298,732	468,048	455,760
Staff salaries and wages	368,737	214,329	583,066	581,367
<b>Total salaries and wages</b>	<b>538,053</b>	<b>513,061</b>	<b>1,051,114</b>	<b>1,037,127</b>
Employee benefits	134,605	154,120	288,725	301,668
Student stipends	21,528	36,045	57,573	58,939
Other expenses	421,713	376,510	798,223	761,855
Interest and capital replacement	242,918	17,722	260,640	262,304
Utilities	75,512	1,207	76,719	64,495
Internally provided services	(223,522)	(15,174)	(238,696)	(230,565)
<b>Total expenses</b>	<b>1,210,807</b>	<b>1,083,491</b>	<b>2,294,298</b>	<b>2,255,823</b>
<i>Operating results-budgeted activity</i>	(24,817)	10,736	(14,081)	22,554
Use of (add to) fund balances	24,817	(10,736)	14,081	(22,554)
<b>Operating Budget Bottom Line</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>

### **FY08 Operating Budget Results**

The University ended the year with a balanced budget as planned. The University budgeted to increase its fund balances by \$22.6 million but ended the fiscal year with a decrease in operating fund balances of \$14.1 million. Revenues were higher in tuition, room and board, medical services, allocation of Endowment spending, and other income. Grants and contracts revenue was slightly unfavorable to budget as the Medical School and the Faculty of Arts and Sciences experienced slower growth in research funding. The current climate for federal research funding is uncertain, and many investigators are seeing award renewals reduced from previous levels. Medical services income was favorable to budget because of continued efficiencies and growth in the Yale Medical Group. Contributions to the University's Operating Budget were under budget, but contributions to the University's Endowment were significantly higher than budget. The University is in the midst of a \$3.5 billion capital campaign with many donors directing their gifts to the Endowment to help the University respond to longer-term financial needs rather than current operating needs.

Overall, operating expenses were over budget by \$38 million. Salary expenses were \$14.0 million or 1.3% over budget. Continued growth in the Medical School's clinical practice has led to increased faculty hiring as well as hiring success in the Faculty of Arts and Sciences. Financial aid costs (funded scholarships and student stipends) were on budget. Other expenses were over budget by \$30 million net of internal recoveries. During FY08, the University acquired a large research facility site from Bayer Pharmaceuticals located in West Haven and Orange, Connecticut, approximately seven miles from Yale's New Haven Campus. The operating costs of this facility are included in the operating results of the University, but were not included in the FY08 budget because the acquisition occurred after the FY08 budget was completed. Interest and capital replacement costs were under budget because of increased capital gifts received during the fiscal year which were applied to the funding of the capital replacement cost. Utilities costs were higher than budget due to rising electricity rates, higher consumption due to weather conditions, and operation of the Bayer Pharmaceutical facility. Despite an increase in energy consumption in fiscal 2008 from a growing campus, the University's greenhouse gas emissions were slightly lower due to conservation measures and a decreased use of fuel oil in favor of natural gas.

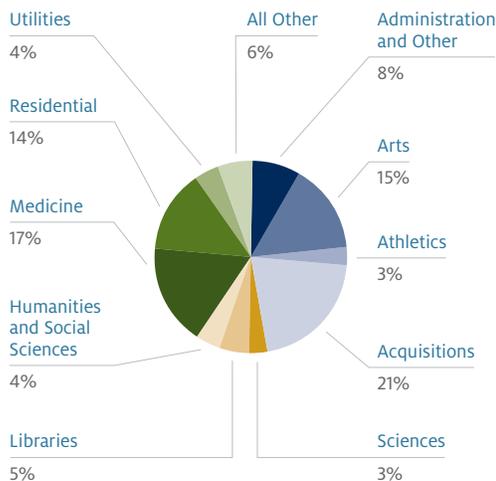
## Physical Capital

Capital spending on facilities in 2008 totaled \$568.9 million. This represents a 52% increase over the 2007 spending level and the highest level of spending in the University's history. This significant increase in capital spending reflects the University's commitment to renovating its existing facilities while adding strategic new facilities to meet teaching, research, and residential needs.

**Capital Spending by Year**  
(in 2008 dollars, in millions)



**Capital Spending by Campus Area**



The largest share of the University's capital spending in 2008, slightly less than one-fifth, was used to purchase West Campus from Bayer HealthCare. This 17-building, 136-acre pharmaceutical campus straddles the border of neighboring West Haven and Orange. The complex provides 520,000 square feet of new laboratory space, 345,000 square feet of office space and 750,000 square feet of warehouse and manufacturing space. The purchase means more than just more room for Yale. New lab space also enhances the University's research capabilities, particularly at the School of Medicine. Despite the purchase of the Bayer campus, Yale will continue with plans to add to its facilities in New Haven. As President Levin has stated, "The heart of the Yale campus will always remain in New Haven." Yale is currently developing plans for the best use of the facilities at the former Bayer complex.

Capital spending was also concentrated in the School of Medicine. The School of Medicine accounted for approximately 17% of the University's 2008 capital expenditures. The new Smilow Cancer Hospital accounted for almost one-third of the funds expended in this area. Other significant projects included completion of the Amistad Street Building laboratories, three major laboratory renovations, the Connecticut Mental Health Center addition, multiple capital maintenance projects, and three clinical facilities. The remaining expenditures related to renovations throughout the School.

Fifteen percent of the University's capital spending was for the renovation and construction of arts buildings. Similar to last year, two major projects accounted for most of the spending in this area. The York Street renovation and addition project (Rudolph Hall and the Loria Center) accounted for almost 80% of the spending in this category. The construction of 32-36 Edgewood Avenue (the new Gallery and Sculpture building) and the associated Howe Street Garage accounted for 11%. Over 7% of spending in this category was for music facilities.

Consistent with the University's goal to comprehensively renovate its undergraduate residential facilities, 14% of capital spending was used for this purpose. With the completion of Silliman College in time for the start of the 2007-2008 academic year, eight of the twelve residential colleges have been renovated: Berkeley, Branford, Davenport, Timothy Dwight, Pierson, Trumbull, Saybrook and Silliman. The remaining four colleges were in various stages of renovation at the end of 2008: the renovation of Jonathan Edwards was nearly complete; construction was underway on Calhoun College, and the Morse and Stiles College renovations were in design.

Consistent with the University's strategy of modernizing all areas of the campus, significant capital projects were underway in other areas of the University in 2008. Several important capital projects were completed during 2008; namely, the construction of 10 Sachem Street for the Department of Anthropology, the Bass Library, the Lewis Walpole Library in Farmington, Connecticut, and the Gallery and Sculpture Building. Among the largest expenditures outside of the residential colleges, the Medical School, and the arts were expenditures for the fit-out and renovation of Science Park 25 (the future home of Finance and Administration), the University Health Center building and garage, the Yale biology building, the Cullman-Heyman Tennis Center, the Peabody Museum exterior renovation project, and the Yale University Art Gallery Swartwout and Street renovation.

The University's ambitious renovation and building plans were funded by a combination of gifts, debt, and increasingly, funds from the Operating Budget. The University continues to rely heavily on the extraordinary generosity of its alumni/ae and friends. Gifts funded \$72 million of the capital spending in 2008. The University has been the beneficiary of an outstanding response from donors. The residential college renovations, the Yale University Art Gallery's Kahn & Swartwout buildings, the Forestry & Environmental Studies' new Kroon Hall, the Rudolph Hall (formerly the Art and Architecture Building) with its new Loria Center for the History of Art addition, the School of Management campus, the

Cullman-Heyman Tennis Center, the Smilow Cancer Hospital, the Ingalls Rink renovation and, in fact, nearly all of the University's recent major capital projects have been funded at least partially through gifts.

The major source of funding for the capital program is debt provided through the Connecticut Health and Educational Facilities Authority (CHEFA) which allows the University to borrow at tax-exempt rates. This funding source is critical to keeping the cost of funding at lower levels, allowing the University to maximize the use of its resources in the fulfillment of its mission of teaching and research. The University continues to draw on the \$600 million debt issued by CHEFA during the year to finance planned renovation and capital additions. The University again received the highest bond ratings available for the CHEFA Z issuance: AAA from Standard and Poor's and Aaa from Moody's.

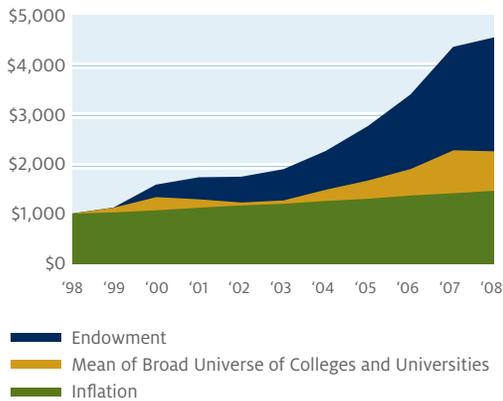
Continuing a multi-year plan toward funding all capital maintenance and renovation from the operating budget and capital gifts by 2010, the operating budget contributed \$154 million, or 79%, of the estimated \$196 million required annually to maintain the University's buildings. Capital gifts provided another \$42 million, or 21%, to meet this target.

As discussed in the University's 2008 Framework for Campus Planning, ([www.yale.edu/about/YALEFRMW.pdf](http://www.yale.edu/about/YALEFRMW.pdf)), the process of committing to become a sustainable university is complex and requires that the physical planning of campus be adjusted to better meet sustainability goals. The campus boasts one Leadership in Energy and Environmental Design (LEED) certified Platinum Building; one LEED certified Gold Building; one LEED certified Silver Building; and two LEED certified Gold laboratories at the Medical School. There are five more buildings in construction seeking certification from silver to platinum and three more in design seeking gold and platinum.

## Endowment

The Endowment provides the largest source of support for the academic programs of the University. To balance current and future needs, Yale employs investment and spending policies designed to preserve Endowment asset values while providing a substantial flow of income to the Operating Budget. At June 30, 2008, net assets in the Endowment totaled approximately \$22.9 billion, after the allocation of Endowment spending of \$850 million to the Operating Budget during the year.

**Growth of \$1,000 Invested in the Yale Endowment**  
1998 – 2008



### Investment Performance

For the fiscal year ended June 30, 2008, the Endowment achieved a 4.5% investment return. During the past decade, the Endowment earned an annualized 16.3% return, placing the University at the top of the universe of institutional funds. Yale's disciplined and diversified asset allocation policies combined with strong active management added substantial value to the Endowment.

Over the ten years ended June 30, 2008, Yale's superior investment returns added \$10.5 billion relative to a composite passive benchmark and \$12.9 billion relative to the mean return of a broad universe of colleges and universities.

### Endowment Spending

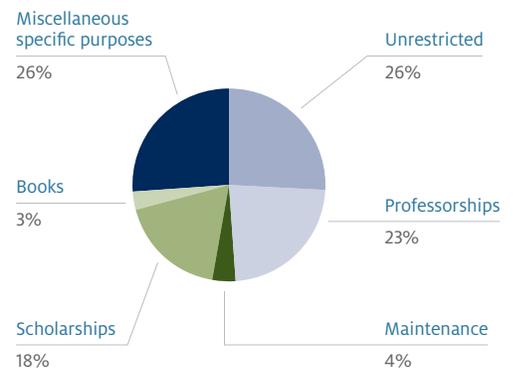
The Endowment spending policy, the means by which Endowment earnings are allocated to operations, balances the competing objectives of providing a stable flow of income to the Operating Budget and protecting the real value of the Endowment over time. The spending policy manages the trade-off between these two objec-

tives by using a long-term spending rate target combined with a smoothing rule, which adjusts spending in any given year gradually in response to changes in Endowment market value.

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

The Endowment provided income of \$850 million to current operations in 2008, representing 36% of the University's operating revenues. Ten years ago, Endowment distributions contributed approximately \$218 million, or 19% of the budget. Over the past decade, Endowment distributions have increased at an annualized rate of approximately 15%.

### Endowment Fund Allocation Fiscal Year 2008



### Asset Allocation

Asset allocation proves critical to successful Endowment performance. Yale's asset allocation policy combines tested theory and informed market judgment to balance investment risks with the need for high returns.

Both the need to provide resources for current operations and the desire to preserve the purchasing power of assets dictate investing for high returns, which leads the Endowment to be weighted toward equity. In addition, the Endowment's vulnerability to inflation directs the University away from fixed income and toward equity instruments. Hence, over 90% of the Endowment is invested in some form of equity, through domestic and international securities, real assets, and private equity.

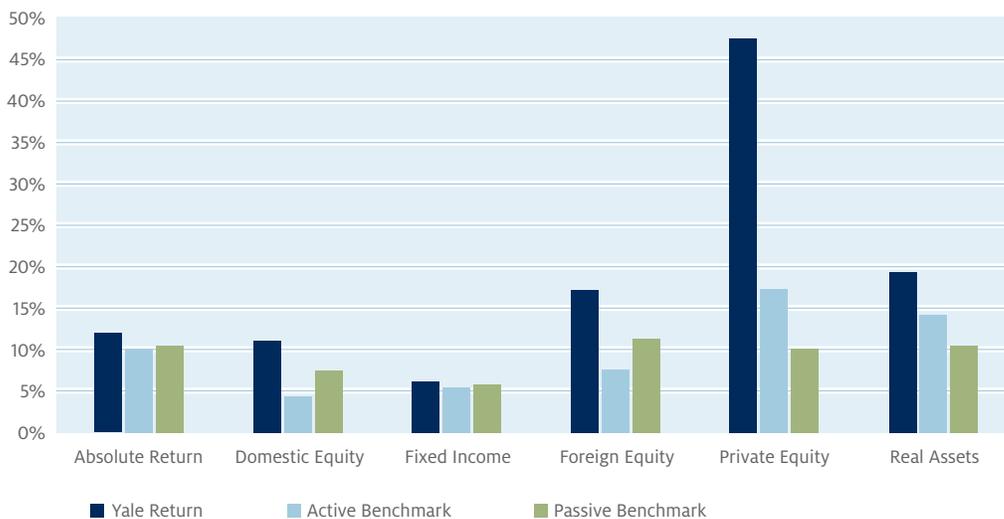
Over the past twenty years, Yale significantly reduced the Endowment's exposure to traditional domestic marketable securities, reallocating assets to nontraditional asset classes. At the end of fiscal year 1987, around four-fifths of the Endowment was committed to U.S. stocks, bonds, and cash. Today, domestic marketable securities account for less than one-fifth of the portfolio, and foreign equity, private equity, absolute return strategies, and real assets represent more than four-fifths of the Endowment.

The heavy allocation to nontraditional asset classes stems from the diversifying power they provide to the portfolio as a whole. Alternative assets, by their nature, tend to be less efficiently priced than traditional marketable securities, providing an opportunity to exploit market inefficiencies through active management. Today's portfolio has significantly higher expected returns and lower volatility than the 1987 portfolio.

Asset Class	June 30, 2008	Current Target
Absolute Return	25.1%	21.0%
Domestic Equity	10.1%	10.0%
Fixed Income	4.0%	4.0%
Foreign Equity	15.2%	15.0%
Private Equity	20.2%	21.0%
Real Assets	29.3%	29.0%
Cash	-3.9%	0.0%
<b>Total</b>	<b>100.0%</b>	<b>100.0%</b>

**Yale Endowment**

Asset classes versus benchmarks:  
annualized returns net of fees,  
ten years ended June 30, 2008



**Active Benchmarks**

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

**Passive Benchmarks**

Absolute Return: 1-year Constant Maturity Treasury + 6%  
Domestic Equity: Wilshire 5000  
Fixed Income: Lehman Brothers Treasury Index  
Foreign Equity: 40% MSCI EAFE Index, 40% MSCI EMF Index, 20% University Inflation + 8%  
Private Equity: University Inflation + 10%  
Real Assets: University Inflation + 6%



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### Report of Independent Auditors

To the President and Fellows of  
Yale University:

In our opinion, the accompanying statement of financial position and the related statements of activities and of cash flows present fairly, in all material respects, the financial position of Yale University (the "University") at June 30, 2008, and the changes in its net assets and its cash flows for the year then ended in conformity with accounting principles generally accepted in the United States of America. These financial statements are the responsibility of the University's management. Our responsibility is to express an opinion on these financial statements based on our audit. The prior year summarized comparative information has been derived from the University's 2007 financial statements, and in our report dated October 12, 2007, we expressed an unqualified opinion, which included a reference to the adoption of FASB Statement No. 158, *Employers' Accounting for Defined Benefit Pension and Other Postretirement Plans, an amendment of FASB Statements No. 87, 88, 106, and 132(R)* on those financial statements. We conducted our audit of these statements in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. We believe that our audit provides a reasonable basis for our opinion.

*PricewaterhouseCoopers LLP*

September 30, 2008

Yale University Statements of Financial Position

June 30, 2008 and 2007 (\$ in thousands)

	June 30, 2008	June 30, 2007
<b>Assets:</b>		
Cash and cash equivalents	\$ 187,761	\$ 239,837
Accounts receivable, net	150,636	157,445
Contributions receivable, net	481,617	442,927
Student loans receivable, net	52,585	53,179
Investments, at fair value	29,671,364	28,325,331
Other assets	121,212	200,233
Land, buildings and equipment, net of accumulated depreciation	3,199,648	2,746,373
<b>Total assets</b>	<b>\$33,864,823</b>	<b>\$32,165,325</b>
<b>Liabilities:</b>		
Accounts payable and accrued liabilities	\$ 281,902	\$ 254,955
Advances under grants and contracts and other deposits	80,690	78,012
Other liabilities	470,474	319,992
Liabilities under split-interest agreements	92,294	98,867
Bonds and notes payable	3,067,242	1,954,631
Liabilities associated with investments	5,557,739	5,336,800
Advances from Federal government for student loans	36,231	36,289
<b>Total liabilities</b>	<b>9,586,572</b>	<b>8,079,546</b>
<b>Net assets:</b>		
Unrestricted	11,717,190	11,728,783
Temporarily restricted	10,199,288	10,136,477
Permanently restricted	2,361,773	2,220,519
<b>Total net assets</b>	<b>24,278,251</b>	<b>24,085,779</b>
<b>Total liabilities and net assets</b>	<b>\$33,864,823</b>	<b>\$32,165,325</b>

**Detail of net assets:**

	Unrestricted	Temporarily Restricted	Permanently Restricted	June 30, 2008	June 30, 2007
Endowment and student loans	\$ 6,911,277	\$ 9,382,127	\$2,361,773	\$18,655,177	\$18,456,293
Funds functioning as endowment	3,940,027	288,966	-	4,228,993	4,106,999
Physical capital investment	731,303	327,230	-	1,058,533	984,447
Operating:					
Accumulated general budget deficit	(70,904)	-	-	(70,904)	(70,904)
Designated and restricted for specific purposes	205,487	200,965	-	406,452	608,944
	\$11,717,190	\$10,199,288	\$2,361,773	\$24,278,251	\$24,085,779

The accompanying notes are an integral part of these financial statements.

# Yale University Statement of Activities

for the year ended June 30, 2008 with summarized information for the year ended June 30, 2007 (\$ in thousands)

	Unrestricted	Temporarily Restricted	Permanently Restricted	2008	2007
<b>Operating</b>					
<i>Revenues and reclassifications:</i>					
Student income, net	\$ 245,242	\$ -	\$ -	\$ 245,242	\$ 236,774
Grant and contract income, primarily for research and training	561,444	-	-	561,444	526,339
Medical services income	373,328	-	-	373,328	343,758
Contributions	21,704	89,714	-	111,418	94,338
Allocation of Endowment spending from financial capital	248,776	601,205	-	849,981	684,482
Other investment income	53,596	-	-	53,596	99,258
Publications income	33,786	-	-	33,786	34,351
Other income	118,705	-	-	118,705	101,909
<b>Total revenues</b>	<b>1,656,581</b>	<b>690,919</b>	<b>-</b>	<b>2,347,500</b>	<b>2,121,209</b>
Net assets released from restrictions	657,386	(657,386)	-	-	-
<b>Total revenues and reclassifications</b>	<b>2,313,967</b>	<b>33,533</b>	<b>-</b>	<b>2,347,500</b>	<b>2,121,209</b>
<i>Expenses:</i>					
Instruction and departmental research	663,297	-	-	663,297	599,160
Organized research	415,093	-	-	415,093	383,524
Patient care and other related services	354,850	-	-	354,850	328,066
Libraries and other academic support	216,837	-	-	216,837	193,048
Student aid and services	340,662	-	-	340,662	311,789
Public service	121,340	-	-	121,340	113,456
Administration and other institutional support	202,371	-	-	202,371	179,471
<b>Total expenses</b>	<b>2,314,450</b>	<b>-</b>	<b>-</b>	<b>2,314,450</b>	<b>2,108,514</b>
<b>(Decrease) increase in net assets from operating activities</b>	<b>(483)</b>	<b>33,533</b>	<b>-</b>	<b>33,050</b>	<b>12,695</b>
<b>Non-operating</b>					
<i>Physical capital:</i>					
Contributions	-	26,308	-	26,308	67,961
Loss on interest rate swap contracts	(39,498)	-	-	(39,498)	(3,073)
Other increases	22,056	32,391	-	54,447	13,690
Net assets released from restrictions	31,056	(31,056)	-	-	-
<b>Increase in net assets from physical capital activities</b>	<b>13,614</b>	<b>27,643</b>	<b>-</b>	<b>41,257</b>	<b>78,578</b>
<i>Financial capital:</i>					
Contributions	1,098	118,072	113,198	232,368	219,735
Total Endowment return, net of management fees	300,318	642,024	1,522	943,864	4,924,556
Allocation of Endowment spending to operating	(248,776)	(601,205)	-	(849,981)	(684,482)
Change in funding status of defined benefit plans	(180,125)	-	-	(180,125)	-
Other (decreases) increases	(27,683)	(26,812)	26,534	(27,961)	(8,959)
Net assets released from restrictions	130,444	(130,444)	-	-	-
<b>(Decrease) increase in net assets from financial capital activities</b>	<b>(24,724)</b>	<b>1,635</b>	<b>141,254</b>	<b>118,165</b>	<b>4,450,850</b>
(Decrease) Increase in net assets before change in accounting principle	(11,593)	62,811	141,254	192,472	4,542,123
Change in accounting principle	-	-	-	-	45,382
<b>Total (decrease) increase in net assets</b>	<b>(11,593)</b>	<b>62,811</b>	<b>141,254</b>	<b>192,472</b>	<b>4,587,505</b>
Net assets, beginning of period	11,728,783	10,136,477	2,220,519	24,085,779	19,498,274
<b>Net assets, end of period</b>	<b>\$11,717,190</b>	<b>\$10,199,288</b>	<b>\$2,361,773</b>	<b>\$24,278,251</b>	<b>\$24,085,779</b>

The accompanying notes are an integral part of these financial statements.

Yale University Statements of Cash Flows  
for the years ended June 30, 2008 and 2007 (In thousands)

	2008	2007
<b>Operating activities:</b>		
Change in net assets	\$ 192,472	\$ 4,587,505
Adjustments to reconcile change in net assets to net cash provided by operating activities:		
Depreciation and amortization	164,794	148,980
Unrealized (gain) loss on other investments	(3,622)	2,148
Net Endowment investment gains	(406,372)	(4,361,950)
Contributions restricted for physical and financial capital	(258,676)	(287,696)
Other adjustments	(625)	16,909
Changes in assets and liabilities that provide (use) cash:		
Accounts receivable	6,809	(27,304)
Contributions receivable	(20,028)	4,153
Other operating assets	79,430	(139,283)
Accounts payable and accrued expenses	15,512	15,628
Advances under grants and contracts and other deposits	2,678	15,103
Other liabilities	150,482	148,593
<b>Net cash (used in) provided by operating activities</b>	<b>(77,146)</b>	<b>122,786</b>
<b>Investing activities:</b>		
Student loans repaid	6,340	8,651
Proceeds from sale of student loans	1,232	13,542
Student loans granted	(7,547)	(23,980)
Purchases related to capitalized software costs and other assets	(11,159)	(4,253)
Proceeds from sales and maturities of investments	12,199,827	11,101,252
Purchases of investments	(12,799,197)	(11,066,827)
Purchases of land, buildings and equipment	(597,093)	(390,373)
<b>Net cash used in investing activities</b>	<b>(1,207,597)</b>	<b>(361,988)</b>
<b>Financing activities:</b>		
Contributions restricted for physical and financial capital	120,910	114,267
Contributions received for split-interest agreements	8,389	5,528
Payments made under split-interest agreements	(10,750)	(10,294)
Proceeds from long-term debt	1,113,614	-
Repayments of long-term debt	(167)	(167)
Interest earned and advances from Federal government for student loans	671	3,178
<b>Net cash provided by financing activities</b>	<b>1,232,667</b>	<b>112,512</b>
Net decrease in cash and cash equivalents	(52,076)	(126,690)
Cash and cash equivalents at beginning of year	239,837	366,527
<b>Cash and cash equivalents at end of year</b>	<b>\$ 187,761</b>	<b>\$ 239,837</b>

The accompanying notes are an integral part of these financial statements.

# Yale University

## Notes to Financial Statements

### 1. Significant Accounting Policies

#### a. General

Yale University (“the University”) is a private, not-for-profit institution of higher education located in New Haven, Connecticut. The University has been granted tax exempt status under section 501(c)(3) of the Internal Revenue Code. The University provides educational services primarily for students and trainees at the undergraduate, graduate and postdoctoral levels, and performs research, training and other services under grants, contracts and other similar agreements with agencies of the Federal government and other sponsoring organizations. The University’s academic organization includes Yale College, the Graduate School of Arts and Sciences, ten professional schools and a variety of research institutions and museums. The largest professional school is the Yale School of Medicine, which conducts medical services in support of its teaching and research missions.

#### b. Basis of Presentation

The financial statements of Yale University include the accounts of all academic and administrative departments of the University, and affiliated organizations that are controlled by the University.

Financial statements of private, not-for-profit organizations measure aggregate net assets and net asset activity based on the absence or existence of donor-imposed restrictions. Net assets are reported as unrestricted, temporarily restricted and permanently restricted and serve as the foundation of the accompanying financial statements. Brief definitions of the three net asset classes are presented below:

*Unrestricted Net Assets* - Net assets derived from tuition and other institutional resources that are not subject to explicit donor-imposed restrictions. Unrestricted net assets also include a portion of the appreciation of Endowment investments when temporary restrictions expire. (See Note 11)

*Temporarily Restricted Net Assets* - Net assets that are subject to explicit donor-imposed restrictions on the expenditure of contributions or income and gains on contributed assets. When temporary restrictions expire due to the passage of time or the incurrence of expenditures that fulfill the donor-imposed restrictions, temporarily restricted net assets are reclassified to unrestricted net assets. Temporarily restricted net assets are established with restricted contributions from donors and restricted income generated from Endowments. Restrictions include support of specific schools or departments of the University, for professorships, research, faculty support, scholarships and fellowships, library and art museums, building construction and other purposes.

*Permanently Restricted Net Assets* - Net assets that are subject to explicit donor-imposed stipulations that they be maintained permanently by the University. Generally, the donors of these assets permit the University to use the returns on the related investments over time for general or specific purposes.

The University’s measure of operations as presented in the statement of activities includes income from tuition (net of certain scholarships and fellowships) and fees, grants and contracts, medical services, contributions for operating programs, the allocation of Endowment spending for operations and other revenues. Operating expenses are reported on the statement of activities by functional categories, after allocating costs for operation and maintenance of plant, interest on indebtedness and depreciation expense.

The University’s non-operating activity within the statement of activities includes physical capital and financial capital. The physical capital section includes contributions and other activities related to land, buildings and equipment that are not part of the University’s measure of operations. Similarly, the financial capital section includes contributions, investment returns and other activities related to Endowment and student loan net assets utilized for long-term investment purposes. Financial capital also encompasses expendable contributions and the related accumulated appreciation that have been designated to function as Endowment (i.e., funds functioning as Endowment) by the Yale Corporation.

Recognizing the critical importance of maintaining its physical capital over many generations, the University began in the mid-1990’s to allocate funds directly from the operating budget to a capital maintenance account. Significant effort has gone into estimating an annual equilibrium level funding target for internal purposes that would be reserved from annual operating funding sources to maintain Yale’s facilities in good condition on a consistent basis, thus avoiding deferred maintenance and the need to borrow to meet the ongoing costs of maintaining its facilities. While not an exact science, an estimate of the full capital replacement equilibrium level for 2008 is \$196 million (unaudited). In 2008, the University fully funded the capital replacement costs from operating funds and capital gifts and used \$221 million to fund renovations of its facilities. Total renovations for the year were \$293 million.

#### c. Cash and Cash Equivalents

Cash and cash equivalents are recorded at cost which approximates fair value and include institutional money market funds and similar temporary investments with maturities of three months or less at the time of purchase. Cash and cash equivalents awaiting investment are reported as investments and totaled \$210.6 million and \$286.7 million at June 30, 2008 and 2007, respectively. Cash and cash equivalents do not include cash balances held as collateral.

Supplemental disclosures of cash flow information include the following, in thousands of dollars:

	2008	2007
Cash paid during the year for:		
Interest	\$119,800	\$77,200
Noncash investing activities:		
Land, buildings and equipment purchases payable to vendor	\$ 65,824	\$54,389

Included in contributions restricted for physical and financial capital of \$258,676 for 2008 and \$287,696 for 2007 are contributions in the form of investments of \$110,715 and \$85,684, respectively.

#### d. Investments

The University's investments are recorded in the financial statements at fair value.

The value of publicly traded fixed income and equity securities is based upon quoted market prices and exchange rates, if applicable. The fair value of direct real estate investments is determined from periodic valuations prepared by independent appraisers.

Fair values for certain private equity, real asset (oil and gas, timber and real estate) and absolute return investments held through limited partnerships or commingled funds are estimated by the respective external investment managers, including general partners, if market values are not readily ascertainable. These valuations necessarily involve assumptions and methods that are reviewed by the University's Investments Office.

Investments are exposed to various risks, such as interest rate, market and credit risks. Due to the level of risk associated with certain investments, it is at least reasonably possible that changes in the values of investments will occur in the near term and that such changes could materially affect the amounts reported in the University's financial statements.

The University records the cost of managing its Endowment portfolio as a decrease in financial capital within the applicable net asset class in the statement of activities. Management fees consist of the internal costs of the Investments Office, outside custodian fees and asset based fees for external investment managers and general partners.

The University invests its Endowment investment portfolio and allocates the related earnings for expenditure in accordance with the total return concept. A distribution of Endowment return that is independent of the cash yield and appreciation of investments earned during the year is provided for program support. The University has adopted an Endowment spending policy designed specifically to stabilize annual spending levels and to preserve the real value of the Endowment portfolio over time. The spending policy attempts to achieve these two objectives by using a long-term targeted spending rate combined with a smoothing rule, which adjusts spending gradually to changes in the Endowment market value. An administrative charge is assessed against the funds when distributed.

The University uses a long-term targeted spending rate of 5.25%, with an 80/20 allocation of prior year spending to market value. The actual rate of spending for 2008 and 2007, when measured against the previous year's Endowment market value, was 3.80% and 3.81%, respectively. Actual spending rates have been lower than long-term targets in recent years due to strong investment returns.

In order to address the shortfall in actual spending compared to targeted spending the Trustees of the University have approved a modification to the spending calculation which adjusts for this difference. The spending rule adjustment will be implemented July 1, 2008. However, an additional distribution related to the shortfall in actual spending from 2002 through 2007 has been made in the current year. The amount of this distribution added to endowment spending in fiscal year ended June 2008 was \$66 million.

#### e. Derivatives

Derivative financial instruments in the investment portfolio include interest rate swaps, equity swaps, credit default swaps, commodity swap contracts and currency forward contracts and are recorded at fair value with the resulting gain or loss recognized in the statement of activities.

#### f. Land, Buildings and Equipment

Land, buildings and equipment are generally stated at cost. Buildings leased under capital leases are recorded at the lower of the net present value of the minimum lease payments or the fair value of the leased asset at the inception of the lease. Annual depreciation is calculated on a straight-line basis over useful lives, or over the lease term for capital leases, ranging from 15 to 50 years for buildings and improvements and 4 to 12 years for furnishings and equipment.

#### g. Other Assets

Capitalized software and bond issuance costs are included in other assets in the financial statements. Capitalized software costs are amortized on a straight line basis over the estimated useful lives of the software, ranging from 5 to 10 years. Bond issue costs are amortized over the term of the related debt.

#### h. Collections

Collections at Yale include works of art, literary works, historical treasures and artifacts that are maintained in the University's museums and libraries. These collections are protected and preserved for public exhibition, education, research and the furtherance of public service. Collections are not capitalized; purchases of collection items are recorded as operating expenses in the University's financial statements in the period in which the items are acquired.

#### **i. Split-Interest Agreements**

The University's split-interest agreements with donors consist primarily of charitable gift annuities, pooled income funds and irrevocable charitable remainder trusts for which the University serves as trustee. Assets are invested and payments are made to donors and/or other beneficiaries in accordance with the respective agreements.

Contribution revenues for charitable gift annuities and charitable remainder trusts are recognized at the dates the agreements are established. In addition, the present values of the estimated future payments to be made to the beneficiaries under these agreements are recorded as liabilities. For pooled income funds, contribution revenue is recognized upon establishment of the agreement at the fair value of the estimated future receipts, discounted for the estimated time period until culmination of the agreement. The discount rates used to calculate these liabilities approximate a risk-free rate.

#### **j. Beneficial Interest in Trust Assets**

The University is the beneficiary of certain perpetual trusts and charitable remainder trusts held and administered by others. The estimated fair values of trust assets are recognized as assets and as gift revenue when reported to the University.

#### **k. Tuition and Fees**

Tuition and fees revenue, which is included in student income on the statement of activities, is generated from an enrolled student population of approximately 11,360. The undergraduate population of approximately 5,300 is a diverse group attracted from across the United States and from many foreign countries. Foreign students account for approximately 8 percent of the undergraduate population. Net tuition revenue from undergraduate enrollment represents approximately 62 percent of total net tuition revenue in 2008.

The University maintains a policy of offering qualified applicants admission to Yale College without regard to financial circumstance as well as meeting in full the demonstrated financial need of those admitted. Student need in all programs throughout the University is generally fulfilled through a combination of scholarships and fellowships, loans and employment during the academic year. Tuition and fees have been reduced by certain scholarships and fellowships in the amounts of \$160.2 million and \$153.3 million in 2008 and 2007, respectively.

#### **l. Contributions**

Unconditional promises to give that are expected to be collected within one year are recorded at their net realizable value. Amounts expected to be collected in future years are recorded at the present value of estimated future cash flows. The discounts on those contributions are computed using a risk-free interest rate applicable to the year in which the promise is received. Amortization of the discount is included in contribution revenue. Conditional promises to give are not included as support until such time as the conditions are substantially met. A facilities and administrative charge is assessed against current use gifts when received.

#### **m. Grant and Contract Income**

The University receives grant and contract income from governmental and private sources. In 2008 and 2007, grant and contract income received from the Federal government totaled \$450.9 million and \$427.6 million, respectively. The University recognizes revenue associated with the direct costs of sponsored programs as the related costs are incurred. Recovery of facilities and administrative costs of Federally sponsored programs is at rates negotiated with the University's cognizant agency, the Department of Health and Human Services. The University and the Federal government are currently operating under an agreement that establishes facilities and administrative cost reimbursement rates under Federal grants and contracts through June 30, 2009.

#### **n. Medical Services Income**

The University has agreements with third-party payers, including health maintenance organizations, that provide payment for medical services at amounts different from standard rates established by the University. Medical services income is reported net of contractual allowances from third-party payers and others for services rendered, and further adjusted for estimates of uncollectible amounts.

#### **o. Net Assets Released from Restrictions**

Reclassification of net assets is based upon the satisfaction of the purpose for which the net assets were restricted or the completion of a time stipulation. Contributions and net investment returns earned, which are restricted, are reported as temporarily restricted support and reclassified to unrestricted when any donor-imposed restrictions are satisfied. Restricted net assets associated with physical capital assets are reclassified to unrestricted net assets when the capital asset is placed in service.

#### **p. Use of Estimates**

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and judgments that affect the reported amounts of assets and liabilities and disclosures of contingencies at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period.

Significant estimates made by management include the valuation of investments, the estimated net realizable value of receivables, estimated asset retirement obligations, and the actuarially determined employee benefit and self-insurance liabilities. Actual results could differ from those estimates.

#### **q. Income Taxes**

The University adopted the provisions of Financial Accounting Standards Board (FASB) Interpretation No. 48, *Accounting for Uncertainty in Income Taxes*, an interpretation of FASB Statement No. 109, (FIN 48), on July 1, 2007. Management's analysis has determined that there were no significant uncertain tax positions taken requiring recognition as liabilities as a result of the implementation of FIN 48.

#### r. Implementation of Accounting Standards

FASB has issued Staff Position 117-1, *Endowments of Not-for-Profit Organizations: Net Asset Classification of Funds Subject to an Enacted Version of the Uniform Prudent Management of Institutional Funds Act, and Enhanced Disclosures for all Endowment Funds*. The staff position provides guidance on the net asset classification of donor-restricted endowment funds for a not-for-profit organization that is subject to an enacted version of the Uniform Prudent Management of Institutional Funds Act of 2006 (UPMIFA) and expands disclosures about an organization's endowment. The staff position is effective for the University's fiscal year ending June 30, 2009.

Management is currently evaluating the impact of this pronouncement, including the amount of the reclassification of unrestricted to temporarily restricted net assets.

#### s. Summarized 2007 Financial Information

The accompanying 2008 financial statements include comparative summarized financial information for the year ended June 30, 2007. Such information does not include sufficient detail by net asset class to constitute a presentation in conformity with accounting principles generally accepted in the United States of America. Accordingly, such information should be read in conjunction with the University's financial statements for the year ended June 30, 2007, from which the summarized financial information was derived.

## 2. Investments

As described in Note 1d, investments are recorded at fair value. The fair values of the University's investments by major type and related liabilities as of June 30, in thousands of dollars, are as follows:

	2008	2007
Investments, at fair value:		
Cash	\$ 1,006,268	\$ 1,014,462
Bonds	1,493,566	1,086,186
Common stock	4,017,154	4,451,359
Equity investments	17,534,418	15,178,029
Other investments	497,404	393,046
Assets held in trust	320,924	298,618
Consolidated investment company assets	4,801,630	5,903,631
Total investments, at fair value	29,671,364	28,325,331
Liabilities associated with investments:		
Securities sold, not yet purchased	1,297,410	1,039,238
Reverse repurchase agreements	600,544	179,692
Other liabilities	556,573	276,614
Consolidated investment company liabilities	3,103,212	3,841,256
Total liabilities associated with investments	5,557,739	5,336,800
Commercial paper (See Note 9)	499,318	-
Net investments, at fair value	\$23,614,307	\$22,988,531

Consolidated investment company assets hold fixed income and equity securities. Consolidated investment company liabilities are comprised of securities sold, not yet purchased, securities sold under agreements to repurchase, and other liabilities. Based on the legal structure of these entities, their liabilities are not legal obligations of the University and will be settled utilizing the assets of the investment company.

The University is required to provide collateral for securities sold, not yet purchased and repurchase agreements. Fixed income securities of \$2.4 billion were provided at June 30, 2008 to collateralize these positions initiated by the University and by its consolidated companies. University policy with respect to reverse repurchase agreements, including those initiated by consolidated investment companies, is to take possession of the underlying assets. Fixed income securities were obtained in the amount of \$1.5 billion at June 30, 2008 as collateral for these positions. The market values of the underlying assets are reviewed daily to ensure that the amounts are adequately collateralized and, when warranted, additional collateral is obtained or provided. Nearly all underlying assets and collateral are permitted to be sold or repledged.

During the year the University borrowed \$500 million under its Taxable Commercial Note Program to fund investment purchases.

The University Endowment maintains a diversified investment portfolio with a strong orientation to equity investments and strategies designed to take advantage of market inefficiencies.

The University's investment objectives are guided by its asset allocation policy and are achieved in partnership with external investment managers operating through a variety of investment vehicles, including separate accounts, limited partnerships and commingled funds. Net Endowment investments are presented below by asset class as of June 30, in thousands of dollars:

	2008	2007
Endowment investments:		
Absolute return	\$ 5,714,088	\$ 5,220,171
Domestic equities	2,295,238	2,257,636
Fixed-income	(316,169)	1,134,990
International equities	3,467,748	3,161,720
Private equities	4,595,752	4,235,979
Real assets	6,687,651	6,093,492
Other	241,974	260,729
<b>Total Endowment investments</b>	<b>22,686,282</b>	<b>22,364,717</b>
Non-Endowment investments	928,025	623,814
<b>Net Investments, at fair value</b>	<b>\$23,614,307</b>	<b>\$22,988,531</b>

The Endowment portfolio includes beneficial interests in outside trusts of \$142.9 million and \$153.4 million at June 30, 2008 and 2007, respectively. Non-Endowment investments include CHEFA proceeds available for approved construction and campus renovation projects of \$371.3 million and \$23.4 million at June 30, 2008 and 2007, respectively.

The following investments held under split-interest agreements are included in the Endowment portfolio in the schedule above, in thousands of dollars:

	2008	2007
Charitable gift annuities	\$ 128,639	\$ 131,117
Pooled income funds	21,666	24,536
Charitable remainder trusts	99,079	107,348
	<b>\$249,384</b>	<b>\$263,001</b>

The University may employ derivatives and other strategies to (1) hedge against market risks, (2) arbitrage mispricings of related securities and (3) replicate long or short positions more cost effectively. Accordingly, derivatives in the investment portfolio may include currency forward contracts, interest rate, currency and commodity swaps, call and put options, debt and equity futures contracts, equity swaps and other investment vehicles in certain circumstances. Yale does not invest in derivatives for speculation.

Yale derivative positions directly held and those held by consolidated investment companies include interest rate swap, equity swap, credit default swap, commodity swap contracts and currency forward contracts. The fair value of these derivatives was \$158.8 million at June 30, 2008. A gain of \$86.6 million related to these transactions is included within total Endowment return in the Statement of Activities. Derivatives held by limited partnerships and commingled investment trusts in which Yale invests pose no off-balance sheet risk to the University due to the limited liability structure of the investments.

Certain investment transactions, including derivative financial instruments, necessarily involve counterparty credit exposure. Such exposure is monitored regularly by the University's Investments Office in accordance with established credit policies and other relevant criteria. Collateral provided by Yale and its consolidated investment companies related to derivative transactions amounted to \$381.2 million at June 30, 2008.

At June 30, 2008, approximately 80 percent of the University's investments portfolio was invested in limited partnerships or limited liability companies. The total return for fiscal year ended June 30, 2008 related to these entities was \$1.3 billion. Under the terms of certain limited partnership and limited liability company agreements for private equity and real estate investments, the University is obligated to remit additional funding periodically as capital calls are exercised. At June 30, 2008, the University had uncalled commitments of approximately \$8.7 billion. Such commitments are generally called over a period of years and contain fixed expiration dates or other termination clauses.

The University has various sources of internal liquidity at its disposal, including cash, cash equivalents and marketable debt and equity securities. If called upon at June 30, 2008, management estimates that it could have liquidated approximately \$4.6 billion (unaudited) to meet short-term needs.

A summary of the University's total investment return as reported in the statement of activities is presented below, in thousands of dollars:

	2008	2007
Investment income	\$ 537,492	\$ 562,606
Realized and unrealized gains, net of investment management fees	406,372	4,361,950
Return on the Endowment	943,864	4,924,556
Other investment income	53,596	99,258
<b>Total return on investments</b>	<b>\$997,460</b>	<b>\$5,023,814</b>

Endowment investment returns totaling \$850.0 million and \$684.5 million were allocated to operating activities in 2008 and 2007, respectively, using the spending policy described in Note 1d.

### 3. Accounts Receivable

Accounts receivable were outstanding from the following sources at June 30, in thousands of dollars:

	2008	2007
Medical services	\$ 48,242	\$ 38,895
Grants and contracts	59,478	66,545
Investment income receivable	11,770	16,250
Affiliated organizations	27,975	29,506
Yale University Press receivables	6,291	6,480
Other	18,684	20,352
	172,440	178,028
Less: Allowance for doubtful accounts	(21,804)	(20,583)
	\$150,636	\$157,445

Medical services receivables are net of an allowance for contractual adjustments of \$40.7 million and \$34.9 million at June 30, 2008 and 2007, respectively.

The University and Yale-New Haven Hospital (“the Hospital”) are parties to an affiliation agreement that establishes guidelines for the operation of activities between these two separate organizations. These guidelines set forth each organization’s responsibility under the common goal of delivering comprehensive patient care services. Under the terms of the arrangement, the Hospital is responsible for providing a clinical setting and clinical support for the University to carry out its teaching and research missions. The University provides professional services from faculty of the Yale School of Medicine and a variety of other administrative and clinical services.

The net receivable from the Hospital and its related entities amounted to \$22.2 million and \$23.6 million at June 30, 2008 and 2007, respectively. Balances are settled in the ordinary course of business.

### 4. Contributions Receivable

Contributions receivable consist of the following unconditional promises to give as of June 30, in thousands of dollars:

	2008	2007
Purpose:		
Endowment	\$326,508	\$ 322,472
Capital purposes	134,612	149,135
Operating programs	135,773	115,639
Gross unconditional promises to give	596,893	587,246
Less: Discount	(49,697)	(58,052)
Allowance for uncollectible accounts	(65,579)	(86,267)
Net unconditional promises to give	\$ 481,617	\$ 442,927

Amounts due in:

Less than one year	\$152,252	\$161,362
One to five years	410,264	372,872
More than five years	34,377	53,012
	\$596,893	\$587,246

Discount rates used to calculate the present value of contributions receivable ranged from .98 percent to 6.37 percent at June 30, 2008 and June 30, 2007.

### 5. Student Notes Receivable

Student notes and interest receivable at June 30, in thousands of dollars, include:

	2008	2007
Perkins Loan Program	\$ 33,548	\$ 33,335
Yale Student Loan Program	18,449	18,049
Other student loans	4,117	5,285
	56,114	56,669
Less: Allowance for doubtful accounts	(3,529)	(3,490)
	\$ 52,585	\$ 53,179

Student notes receivable include donor-restricted and Federally-sponsored student loans with mandated interest rates and repayment terms subject to significant restrictions as to their transfer and disposition. Yale Student Loans are made with University funds to meet demonstrated needs in excess of all other sources of student loan borrowings. Interest accrues at fixed rates upon loan disbursement.

Amounts received from the Federal government to fund a portion of the Perkins student loans are ultimately refundable to the Federal government and have been reported as refundable advances in the statement of financial position. The fair value of student loan instruments could not be determined without incurring excessive costs.

## 6. Other Assets

Other assets at June 30, in thousands of dollars, include:

	2008	2007
Software costs, net of accumulated amortization	\$ 23,982	\$ 25,785
Inventories	20,109	14,993
Bond issue costs, net of accumulated amortization	8,267	6,057
Other notes receivable	3,882	2,684
Deferred expenses	13,237	10,885
Employee benefit assets	51,735	139,829
	<u>\$121,212</u>	<u>\$200,233</u>

Amortization expense included in operating expenses amounted to \$10.8 million and \$12.1 million in 2008 and 2007, respectively.

Upon adoption of Statement of Financial Accounting Standard No. 158, *Employers' Accounting for Defined Benefit Pension and Other Postretirement Plans* (SFAS 158) in 2007, the University recognized a prepaid asset of \$139.8 million representing the funded status of the University defined benefit Staff Pension Plan. At June 30, 2008 the funded status of the plan was \$51.7 million.

## 7. Land, Buildings and Equipment

Land, buildings and equipment at June 30, less accumulated depreciation, in thousands of dollars, are as follows:

	2008	2007
Land and real estate improvements	\$ 78,965	\$ 77,424
Buildings	3,495,017	3,081,464
Buildings under capital leases	61,665	61,665
Equipment	430,493	405,692
	4,066,140	3,626,245
Less: Accumulated depreciation and amortization	(1,428,475)	(1,295,381)
	2,637,665	2,330,864
Construction in progress	561,983	415,509
	<u>\$ 3,199,648</u>	<u>\$ 2,746,373</u>

Depreciation expense included in operating expenses amounted to \$151.9 million and \$135.3 million in 2008 and 2007, respectively. Amortization expense on capital lease assets amounted to \$2.2 million in both 2008 and 2007.

## 8. Other Liabilities

Other liabilities consist of obligations of the University that will be paid over a longer period of time and consist of the following:

	2008	2007
Employee benefit obligations	\$ 337,185	\$ 229,147
Compensated absences	56,052	48,614
Financial aid grant obligations	20,469	19,393
Asset retirement obligations	28,500	18,500
Yale New Haven Hospital obligation	23,418	-
Other	4,850	4,338
	<u>\$470,474</u>	<u>\$319,992</u>

Upon adoption of SFAS 158 in 2007, the University recognized \$120 million of employee benefit obligations representing the unfunded status of certain defined benefit plans. At June 30, 2008 the unfunded status was \$305.7 million. (See Note 11)

During 2008 the University entered into a joint fundraising agreement with Yale New Haven Hospital ("the Hospital") to raise funds for the construction of a new Cancer Center in New Haven. Under the agreement, contributions received are to be split evenly between the entities with an ultimate fundraising goal of \$100 million. The liability recorded above represents the portion of contributions receivable due to the Hospital under this arrangement.

## 9. Debt Obligations

Bonds, notes and capital lease obligations outstanding at June 30, in thousands of dollars, include:

	Effective Interest Rate	Year of Maturity	Outstanding Balance	2008	2007
Connecticut Health and Educational Facilities Authority (CHEFA) tax-exempt bonds					
Series S	2.76%	2027	\$ 135,865	\$ 135,865	
Series T-1	4.70%	2029	125,000	125,000	
Series T-2	2.67%	2029	125,000	125,000	
Series U	2.70%	2033	250,000	250,000	
Series V	2.49%	2036	200,000	200,000	
Series W	5.13%	2027	88,058	87,980	
Series X	3.51%	2037/2042	350,000	350,000	
Series Y	3.91%	2035	310,041	310,412	
Series Z	4.93%	2042	613,985	-	
Total CHEFA bonds			2,197,949	1,584,257	
Medium-term notes	7.38%	2096	124,539	124,527	
Taxable commercial paper	3.50%	2008	680,516	180,918	
Capital leases - buildings	5.75%	2032/2048	60,453	60,974	
Other notes payable	7.85%	2020	3,785	3,955	
			<u>\$3,067,242</u>	<u>\$1,954,631</u>	

On October 4, 2007, the University entered into a long term loan agreement with CHEFA to borrow \$600 million for approved capital projects. CHEFA Series Z bonds consist of 1) \$400 million Series Z-1 bonds at a fixed interest rate of 5%; 2) \$100 million Series Z-2 bonds at a fixed interest rate of 5.05%; and 3) \$100 million Series Z-3 bonds at a fixed interest rate of 5.05%. Series Z-1, Z-2 and Z-3 bonds mature on July 1, 2042. Series Z-1 bonds are subject to an optional redemption in July 2016. Series Z-2 and Z-3 bonds are subject to an optional redemption in July 2017. The original premium associated with this issuance is \$14 million, which is being amortized over the life of the bond.

CHEFA Series Y bonds consist of 1) \$200 million Series Y-1 bonds at a fixed interest rate of 5%; 2) \$50 million Series Y-2 variable rate bonds, currently bearing interest at a daily rate; and 3) \$50 million Series Y-3 variable rate bonds, currently bearing interest at a daily rate. Series Y-1, Y-2 and Y-3 bonds mature on July 1, 2035. Series Y-1 bonds are subject to an optional redemption in July 2015. Series Y-2 and Y-3 bonds may be converted to other variable rate modes or to a fixed rate at the discretion of the University. The original premium associated with this issuance is \$11 million, which is being amortized over the life of the bond.

CHEFA Series X bonds consist of 1) \$100 million Series X-1 bonds at a fixed interest rate of 5%, which mature on July 1, 2042, and are subject to an optional redemption on July 1, 2013; 2) \$125 million Series X-2 variable rate bonds, currently bearing interest at a weekly rate; and 3) \$125 million Series X-3 variable rate bonds, bearing interest at a daily rate, which were converted to a fixed interest rate of 4.85% on May 1, 2008. Series X-2 and X-3 bonds mature on July 1, 2037. Series X-2 bonds may be converted to other variable rate modes or to a fixed rate at the discretion of the University. Series X-3 bonds are subject to an optional redemption in July 2017.

CHEFA Series W bonds bear interest at a fixed interest rate of 5.125%. Series W bonds mature on July 1, 2027, and are subject to an optional redemption in July of 2009. The original discount associated with this issuance is \$1,924,680, which is being amortized over the life of the bond.

CHEFA Series V bonds bear interest at a daily rate and mature on July 1, 2036. The bonds may be converted from a daily rate period to other variable rate modes or to a fixed rate mode at the discretion of the University.

CHEFA Series U bonds and one-half of Series T bear interest at a weekly rate. The bonds may be converted from the weekly rate period to other variable-rate modes or to a fixed-rate mode at the discretion of the University. On May 1, 2008, the University converted half of CHEFA Series T from a daily mode to a fixed interest rate of 4.7%. Series T-1 bonds are subject to an optional redemption in July 2017.

CHEFA Series S bonds bear interest at a money market municipal rate and are outstanding for varying interest rate periods of 270 days or less. The bonds may be converted from the money market mode to other variable rate modes or to a fixed rate mode at the discretion of the University.

Medium-term notes in the amount of \$124.5 million are recorded net of a discount of \$461 thousand at June 30, 2008. The notes mature in the year 2096, with a call provision in the year 2026. The bonds bear interest at a fixed rate of 7.38%.

Commercial paper consists of notes issued in the short-term taxable market, and is sold at a discount from par. The maturities of individual notes are issued in ranges from one day to no more than one year, and fall on average in a range of thirty to sixty days. In April 2007 the Yale Corporation approved the expansion of the Yale University Commercial Note program to a limit of \$1 billion to finance approved programs as the need arises. During 2008 the University issued \$500 million of additional Commercial Paper Notes to bring the balance outstanding at June 30, 2008 to \$680,516.

Certain lease agreements entered into by the University qualify as capital leases with obligations of \$60.4 million and \$61.0 million at June 30, 2008 and 2007, respectively. The agreements call for the University to lease the buildings through 2032 and 2048.

Total interest expense incurred on indebtedness was \$97.1 million and \$77.2 million in 2008 and 2007, respectively. Interest capitalized to land, buildings and equipment totaled \$9.6 million and \$10.2 million in 2008 and 2007, respectively.

Scheduled maturities of the facilities debt obligations, in thousands of dollars, are as follows:

2009	\$681,306
2010	890
2011	997
2012	1,112
2013	1,234
2014-2027	259,179
Thereafter	2,122,524

The series Y-2 and Y-3, X-2, V, U, S, and one-half of the T bonds are subject to tender by bondholders. To the extent that tendered bonds cannot be remarketed, the University is required to repurchase the bonds. The University has internal liquidity to satisfy obligations under these debt provisions.

In addition, the University has revolving credit agreements available totaling \$600 million to provide alternative liquidity to support Yale's variable rate demand notes.

### Interest Rate Swaps

The University has entered into interest rate swap agreements to manage the interest cost and risk associated with its variable rate debt portfolios. Under the terms of these agreements, the University pays fixed rates, ranging from 4.51% to 6.54%, determined at inception, and receives the 3-month LIBOR on the respective notional principal amounts. The following schedule presents swap agreements in force related to this strategy at June 30, in thousands of dollars:

	2008	2007
Notional amount of contract	\$450,000	\$490,000
Fair value of swap contract	\$ (33,357)	\$ 1,371
Net loss on swap contracts	\$ 39,498	\$ 3,073

### Fair Value

The fair value of the University's fixed rate bonds, \$1.39 billion at June 30, 2008, is estimated based on quoted market prices for the same or similar issues. The carrying value of commercial paper, variable rate bonds and notes payable approximates fair value because of the variable nature of the interest rates and the short-term maturity of these instruments.

## 10. Pension Plans – Defined Contribution

The University maintains the Yale University Retirement Annuity Plan as a contributory plan for faculty and certain staff employees. Participants may direct employee and employer contributions to the Teachers' Insurance and Annuity Association (TIAA) and College Retirement Equities Fund (CREF), as well as other investment options. Pension expense for this plan was \$59.9 million and \$55.5 million in 2008 and 2007, respectively.

## 11. Pension and Postretirement Plans – Defined Benefit

The University has a noncontributory, defined benefit pension plan for staff employees as well as a defined benefit faculty retirement incentive plan. The staff pension plan provides payments based on years of participation and the employee's highest annual rate of earnings during the last five years of employment. The faculty plan provides a lump sum payment, based on service and the last three years salary, for tenured faculty who retire at certain ages.

In addition, the University provides postretirement benefits including health benefits and life insurance based on years of service and a pay-out of unused sick time. While the University's subsidy of the cost of comprehensive health care benefits and life insurance differs among retiree groups, substantially all employees who meet minimum age and service requirements and retire from the University are eligible for these benefits. Non faculty employees are paid 50% of unused sick time upon retirement from active status.

The following table sets forth the pension and postretirement plans' funded status that are reported in the statement of financial position at June 30, in thousands of dollars:

Plans' Funded Status	Pension		Postretirement	
	2008	2007	2008	2007
Change in benefit obligation:				
Benefit obligation, beginning of year	\$ 671,947	\$ 609,875	\$ 482,352	\$ 484,865
Service cost, excluding assumed administration expenses	26,866	24,307	20,323	19,191
Interest cost	38,102	35,219	27,311	25,324
Benefit payments	(24,128)	(21,363)	(17,616)	(15,113)
Assumption changes	88,077	12,523	91,625	3,041
Amendments	-	6,676	-	599
Actuarial loss	3,537	4,710	2,065	(35,555)
Benefit obligation, end of year	\$ 804,401	\$ 671,947	\$ 606,060	\$ 482,352
Change in plan assets:				
Market value, beginning of year	\$ 803,404	\$ 664,464	\$ 289,629	\$ 227,137
Actual return on plan assets	57,939	151,379	12,407	55,530
University contributions	9,748	9,875	26,723	22,507
Benefits and expenses paid	(25,120)	(22,314)	(18,207)	(15,545)
Market value, end of year	\$ 845,971	\$ 803,404	\$ 310,552	\$ 289,629
Funded Status	\$ 41,570	\$ 131,457	\$(295,508)	\$(192,723)

The University has recognized the difference between accrued benefit costs of its defined benefit plans and the funded status at June 30, 2008 as an adjustment to unrestricted net assets presented as other decreases in the financial capital section of the statement of activities. The components of this adjustment include:

	Pension	Postretirement	Total
Unrecognized net actuarial loss	\$ 93,358	\$103,266	\$196,624
Amortization of actuarial gain (loss)	2,676	(5,247)	(2,571)
Amortization of prior service cost	(8,779)	(1,432)	(10,211)
Transition obligation	-	(3,717)	(3,717)
	\$ 87,255	\$ 92,870	\$ 180,125

Amounts recorded as an adjustment at June 30, 2008 that are expected to be amortized into operating activity during fiscal year 2009 include:

	Pension	Postretirement	Total
Net actuarial loss (gain)	\$ ( 944)	\$ 8,890	\$ 7,946
Prior service cost	8,779	1,432	10,211
Transition obligation	-	3,717	3,717
	\$ 7,835	\$ 14,039	\$21,874

The University uses a June 30th measurement date for its defined benefit plans.

The benefit obligation disclosed above represents the actuarial present value of future payments to plan participants for services rendered prior to that date, based on the pension benefit formula. In calculating the value, the participants' compensation levels are projected to retirement.

The accumulated benefit obligation for the pension plan was \$609.8 million at June 30, 2008 and \$533.7 million at June 30, 2007. The accumulated benefit obligation differs from the benefit obligation above in that it includes no assumptions about future compensation levels. It represents the actuarial present value of future payments to plan participants using current and past compensation levels.

The University reduced the discount rate assumption from 5.75% to 5.0% at June 30, 2008 resulting in an increase of \$86.7 million to the pension benefit obligation and a \$57.6 million increase to post-retirement benefit obligations. In addition the University extended the health care cost trend rate so that the ultimate rate was reached in 2015 resulting in an increase of \$32.6 million to the postretirement benefit obligation.

### Plan Assets

The investment objective for the pension and retiree health plans seeks a positive long-term total return after inflation to meet the University's current and future plan obligations. Asset allocations for both plans combine tested theory and informed market judgment to balance investment risks with the need for high returns.

Plan asset allocations by category at June 30 are as follows:

	Pension		Retiree Health	
	2008	2007	2008	2007
Absolute return	24.1%	24.1%	22.6%	24.1%
Domestic equity	14.5%	14.7%	19.9%	22.4%
Fixed income	14.0%	15.0%	0.0%	0.0%
Foreign equity	14.5%	14.9%	13.7%	15.5%
Private equity	10.7%	10.3%	8.3%	7.1%
Real assets	24.2%	19.0%	34.8%	27.7%
Cash	(2.0%)	2.0%	0.7%	3.2%

The pension and retiree health long-term rate of return assumption is determined by adding expected inflation to expected long-term real returns of various asset classes, taking into account expected volatility and correlation between the returns of various asset classes.

### Contributions

Annual contributions for the pension and retiree health plans are determined by the University considering calculations prepared by the plan's actuary as well as other factors. Expected contributions in fiscal 2009 to the Pension Plan are \$0.9 million and \$28.8 million for the retiree health plan.

### Benefit Payments

The following estimated benefit payments, which reflect expected future service, are expected to be paid out of the plans, in thousands of dollars:

Fiscal year	Pension	Postretirement
2009	\$25,700	\$20,600
2010	27,700	22,600
2011	29,900	24,400
2012	32,400	26,200
2013	35,200	27,900
2014-2018	225,800	167,100

The University receives a Medicare part D subsidy from the federal government as reimbursement for certain retiree health benefits paid to plan participants. The subsidy is approximately 6% of retiree health benefits and was approximately \$1.2 million for fiscal 2008.

### Benefit Obligations

Assumptions used in determining the year end obligation of the pension and postretirement plans are:

	2008	2007
Weighted-average discount rate	5.00%	5.75%
Increase in future compensation levels	4.55%	4.55%
Projected health care cost trend rate	8.70%	9.20%
Ultimate trend rate	5.00%	5.00%
Year ultimate trend rate is achieved	2015	2013

The health care cost trend rate assumption has a significant effect on the amounts reported. For the fiscal year ended June 2008, a one percent change in the health care cost trend rate would cause the postretirement benefit obligation at June 30, 2008 to change by approximately 12 percent and would also cause the sum of the service cost and interest cost components of postretirement expense to change by approximately 15 percent.

### Net Periodic Benefit Cost

Net periodic benefit cost for the plans includes the following components, in thousands of dollars:

	Pension		Postretirement	
Net periodic benefit cost for the fiscal year ended	2008	2007	2008	2007
Service cost	\$ 27,816	\$ 25,157	\$ 20,923	\$ 19,516
Interest cost	38,102	35,219	27,311	25,324
Expected return on plan assets	(59,641)	(51,818)	(21,992)	(18,610)
Net amortization				
Transition obligation	-	-	3,717	3,717
Prior service cost	8,779	8,833	1,432	1,432
Net (gain) loss	(2,676)	(544)	5,247	6,234
Net periodic benefit cost	\$ 12,380	\$ 16,847	\$ 36,638	\$ 37,613

Assumptions used in determining the net periodic benefit costs of the pension and postretirement plans are:

	2008	2007
Weighted-average discount rate	5.75%	5.75%
Expected long-term rate of return	9.00%	9.00%
Compensation increase	4.55%	4.54%
Health care cost increase	9.20%	10.20%
Ultimate trend rate	5.00%	5.00%
Year ultimate trend rate is achieved	2013	2013

## 12. Commitments and Contingencies

The University is involved in various legal actions arising in the normal course of activities and is also subject to periodic audits and inquiries by various regulatory agencies. Although the ultimate outcome is not determinable at this time, management, after taking into consideration advice of legal counsel, believes that the resolution of these pending matters should not have a material adverse effect, individually or in the aggregate, upon the University's financial position, activities or cash flows.

In June 2006, the University received subpoenas from the Department of Health and Human Services, the Department of Defense and the National Science Foundation for documents and information relating to financial management of grants supporting scientific research. Similar administrative subpoenas were subsequently received, in 2007, from the Department of Energy and the National Aeronautics and Space Administration. Settlement discussions are proceeding and the final aspects are in the process of being negotiated. The settlement is not expected to have a material impact on the University's financial statements. During the investigation, the University has continued its intensive program of improvements to its systems of grant management and accounting.

Minimum lease commitments at June 30, 2008 under agreements to lease space, in thousands of dollars, are as follows:

	Operating Lease Payments	Capital Lease Payments
2009	\$ 8,368	\$ 9,270
2010	5,168	8,476
2011	3,819	7,988
2012	2,939	7,491
2013	1,497	6,780
Thereafter	4,912	131,970
	26,703	171,975
Executory costs	-	(47,799)
Interest on capital leases	-	(63,723)
	\$26,703	\$ 60,453

The University has outstanding commitments on contracts to construct campus facilities in the amount of \$326 million at June 30, 2008. Funding for these projects is expected to come from capital replacement reserves, gifts and future borrowing.

The University has entered into certain agreements to guarantee the debt and financial commitments of others. Under these agreements if the original debt holder defaults on their obligations the University may be required to satisfy all or part of the remaining obligation. The total amount of these guarantees is approximately \$8.1 million at June 30, 2008.

## 13. Subsequent Events

Subsequent to June 30, 2008 the University issued an additional \$310 million under its Commercial Note program. The debt matures within 12 months and bears interest at variable rates.

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