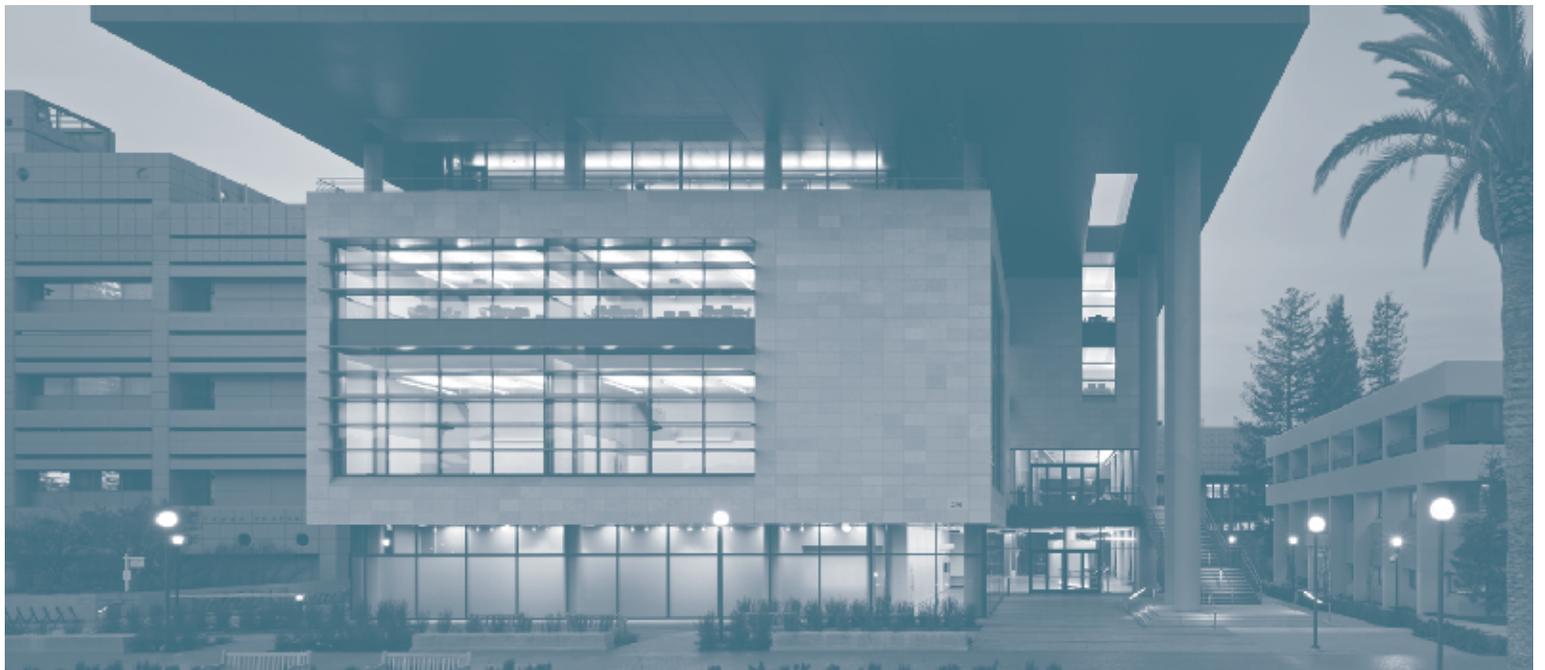




**2010**

STANFORD UNIVERSITY  
ANNUAL REPORT  
TRANSFORMING PLACES & SPACES





# 2010

## STANFORD UNIVERSITY

### ANNUAL REPORT

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# Positioning for the Future

BY PRESIDENT JOHN HENNESSY

This year marks the end of the first decade of the century, and just as Stanford's first 15 years were spent in what David Starr Jordan famously characterized as the university's "second stone age," this year saw the construction of a number of new buildings. This construction boom led to the opening of six new academic buildings in the past year with a number of additional ones scheduled for the next few years.

These new facilities will replace outmoded buildings dating back to the 1950s and 1960s in engineering, medicine and the sciences and will help Stanford realign its design to the original plan developed by renowned architect Frederick Law Olmsted at the founding of the university. More important, these buildings carry Stanford forward to a bold new future.

One of the most important roles of the research university, especially Stanford, is to serve as the incubator for innovation, and at the new Jen-Hsun Huang Engineering Center, the faculty selected inspirational quotes to feature throughout the building. Among them, John Gardner's advice seems particularly apt as we go forward: "We may learn something about the renewal of societies if we look at the kind of individuals who contribute most to the outcome — the innovators."

Among the most important new directions at Stanford over the past few years has been a set of multidisciplinary initiatives — in human health, environmental sustainability and international peace and security — all areas that present significant problems in this century. To support these efforts, we launched The Stanford Challenge. Now in its fifth and final year, The Stanford Challenge is an investment in the ingenuity of the Stanford faculty and students for the long-term benefit of society.

Our multidisciplinary initiatives were designed as experiments to cultivate the imaginations of our faculty, researchers and students. These early initiatives offered a framework to guide their work, and seed money facilitated the process. As the initiatives evolved, some deviated from initial guidelines, but all served their purpose: They gave people the freedom to think differently about problems and to consider new ways of collaboration in research and teaching.

As we began the process of rejuvenating older portions of the Engineering and Medicine buildings and grounds, we determined that our new facilities should be designed to embrace and enhance these new multidisciplinary efforts. And, naturally, revolutionary advances require cutting-edge facilities. For example, the new Lorry I. Lokey Stem Cell Building brings together faculty from many departments in the School of Medicine focused on both the fundamental biology of stem cells and the critical area of regenerative biology. It is also the largest laboratory for stem cell research at any U.S. university.

The new Li Ka Shing Center for Learning and Knowledge (LKSC) serves as the home for the School of Medicine as well as providing desperately needed teaching and student facilities. One of the highlights of the building is the new surgical simulation suite, providing a method to train surgeons using highly realistic mannequins and simulation systems. Together, the LKSC, the Lokey Stem Cell Building and the Clark Center, which houses several interdisciplinary activities including Bio-X and Bioengineering, enable the School of Medicine to present a new front on Campus Drive, one designed to encourage collaboration with Biology, Chemistry, Physics and Engineering all directly across Campus Drive.

"We are positioning the university for a future of possibility..." - JOHN HENNESSY



Although I have focused on some exciting new facilities in this introduction, the core of the university and its excellence still depends on people, primarily the faculty and students. As detailed in the accompanying sections, our faculty, researchers and students have taken the initiatives in new directions, demonstrating proof of concept by advancing technologies, pioneering new fields and developing new approaches to teaching and learning. We must ensure that we maintain the best faculty and have the resources to fully support student financial aid during the five to ten years it will take to rebuild our endowment in the aftermath of the 2008-09 market crash.

One hundred and fifteen years ago, Stanford's first president, David Starr Jordan, exhorted the Pioneer Class:

"The best-spent money of the present is that which is used for the future. ... The university stands for the future."

This is the foundation upon which we stand. We are positioning the university for a future of possibility: equipping it to do groundbreaking research and teaching and extending Stanford's legacy of excellence well into the decades to come.

# Transforming Places & Spaces

POSITIONING THE UNIVERSITY PHYSICALLY FOR THE WORK OF THE FUTURE

**S**tanford University is well positioned to do the work of this century, as a result of unprecedented and transformative campus development, much of which was completed in the past year. Although the challenging global economy affected some capital projects and every project was examined for ways to save on expenses, completing these facilities and resources remained a priority. Pioneering advances in knowledge and the education of students require facilities to enable that work.

Stanford University is renowned for its sense of place. When Jane and Leland Stanford hired Frederick Law Olmsted to plan the new campus more than a century ago, they had a clear vision for the university: It was to be both a memorial for their son and a university that would serve generations of young people and inspire them to make a difference far into the future.

The Olmsted master plan was forward-looking: It showed a formal, palm-lined entry leading to a Main Quad, banked by a series of quads to be developed in the future. Today, the red-tiled sandstone buildings on the Main Quad still stand, and the strong axes and quadrangles of the original plan provide an organizing principle around which the university is developing academic precincts to encourage multidisciplinary collaboration in this century.

With 38 major projects completed and a number of other facilities in various stages of construction, 2010 has been distinguished by the campus' transformation. Some of the year's new spaces are detailed below.

## ON THE EAST END OF CAMPUS

The John A. and Cynthia Fry Gunn Building is the new home of the Stanford Institute for Economic Policy Research. Located at the intersection of Galvez Street and Memorial Way, next to the Landau Economics Build-

ing, the Gunn Building is situated to become the premier training ground for young economists.

The new center for the Graduate School of Business is being constructed a few blocks from the Gunn Building and will anchor the east end of campus. Scheduled to open in 2011, the Knight Management Center consists of eight buildings surrounding three outdoor areas. Its flexible teaching and meeting spaces will provide a strong base for the business curriculum and support partnerships with the rest of the university.

## ENTERING CAMPUS FROM EL CAMINO REAL

The new Stanford Visitor Center on the corner of Galvez Street and Campus Drive East opened its doors in February and is expected to serve more than 100,000 visitors annually. Formerly the home of the Track House Sport Shop—which has moved to a nearby building and is now known as the Stanford Athletics Shop—the red brick building was renovated to welcome visitors and educate them about the university through a variety of means, including interactive kiosks.

The view of the Science and Engineering Quadrangle from the Jen-Hsun Huang Engineering Building. (Cindy Pearson)



The Bing Concert Hall is being constructed off Palm Drive next to Frost Amphitheater on the original site of the men's gymnasium felled in the 1906 earthquake. Designed by a distinguished team that includes Ennead Architects (formerly the Polshek Partnership), designers of the renovated Cantor Arts Center as well as New York's Carnegie Hall, and Yasuhisa Toyota of Nagata Acoustics, whose work includes the Walt Disney Concert Hall in Los Angeles, the Bing Concert Hall will feature a terraced "vineyard design" as well as indoor and outdoor spaces to encourage gatherings before and after performances.

#### **WEST OF THE MAIN QUAD**

The original Olmsted plan called for a series of quads. The Science and Engineering Quad extends the east-west axis and links the Main Quad with the Clark Center to the north, facilitating collaborations among people from different parts of campus.

The Jen-Hsun Huang Engineering Building, dedicated in September 2010, anchors the southeast corner of the Science and Engineering Quad and will encourage Stanford's engineering faculty and students to work more closely with colleagues in environmental studies, nanoscience, bioengineering and chemistry, as well as the medical campus. The Huang Building is the new hub for the School of Engineering and houses faculty and students from the Department of Management Science and Engineering, the Institute for Computational and Mathematical Engineering and the Stanford Technology Ventures Program.

#### **ON THE MEDICAL CAMPUS**

To mark its second century, the School of Medicine developed a master plan, featuring a Discovery Walk that serves as an organizing principle and connects all of the school's buildings, including the new Li Ka Shing Center for Learning and Knowledge, to the Clark Center and will eventually lead to the Biology and Chemistry district.

The Li Ka Shing Center for Learning and Knowledge opened in mid-year and is expected to transform medical education. It advances a new model for educating clinicians and scientists, by bringing together latest practices with state-of-the-art technology such as robotics and virtual reality.

The Lorry I. Lokey Stem Cell Research Building, completed in the fall, is the home of the Stanford Institute for Stem Cell Biology and Regenerative Medicine. Stanford researchers participated in the planning of the 200,000 square-foot facility, which has 33 research labs and more than 500 research benches. The laboratories are designed as integrated "neighborhoods" incorporating both public spaces for collaborative work and quiet spaces for reflection.

#### **IN THE SOUTHEAST CORNER OF CAMPUS**

The Munger Graduate Residence consists of five buildings located near the Law School and provides a living-and-learning environment for graduate students in all disciplines that enables the multidisciplinary work being

The Jen-Hsun Huang Engineering Building (Linda Cicero)



done campus-wide. The William H. Rehnquist Courtyard, located in the center of the Munger Residence, provides additional opportunities for interaction.

Construction of the Munger Graduate Residence enabled the university to renovate the previously graduate student residences, Crothers and Crothers Memorial, to provide housing for 375 undergraduates.

The new Law School academic building is in the planning stages and will occupy the site of what was Kresge Auditorium, just behind the Crown Quadrangle. Crown was built 35 years ago, and the increased number of law faculty and clinics, as well as collaborations with different programs and centers throughout the university, requires additional and more flexible meeting spaces, faculty offices, conference rooms and classrooms.

### IN THE CENTER OF CAMPUS

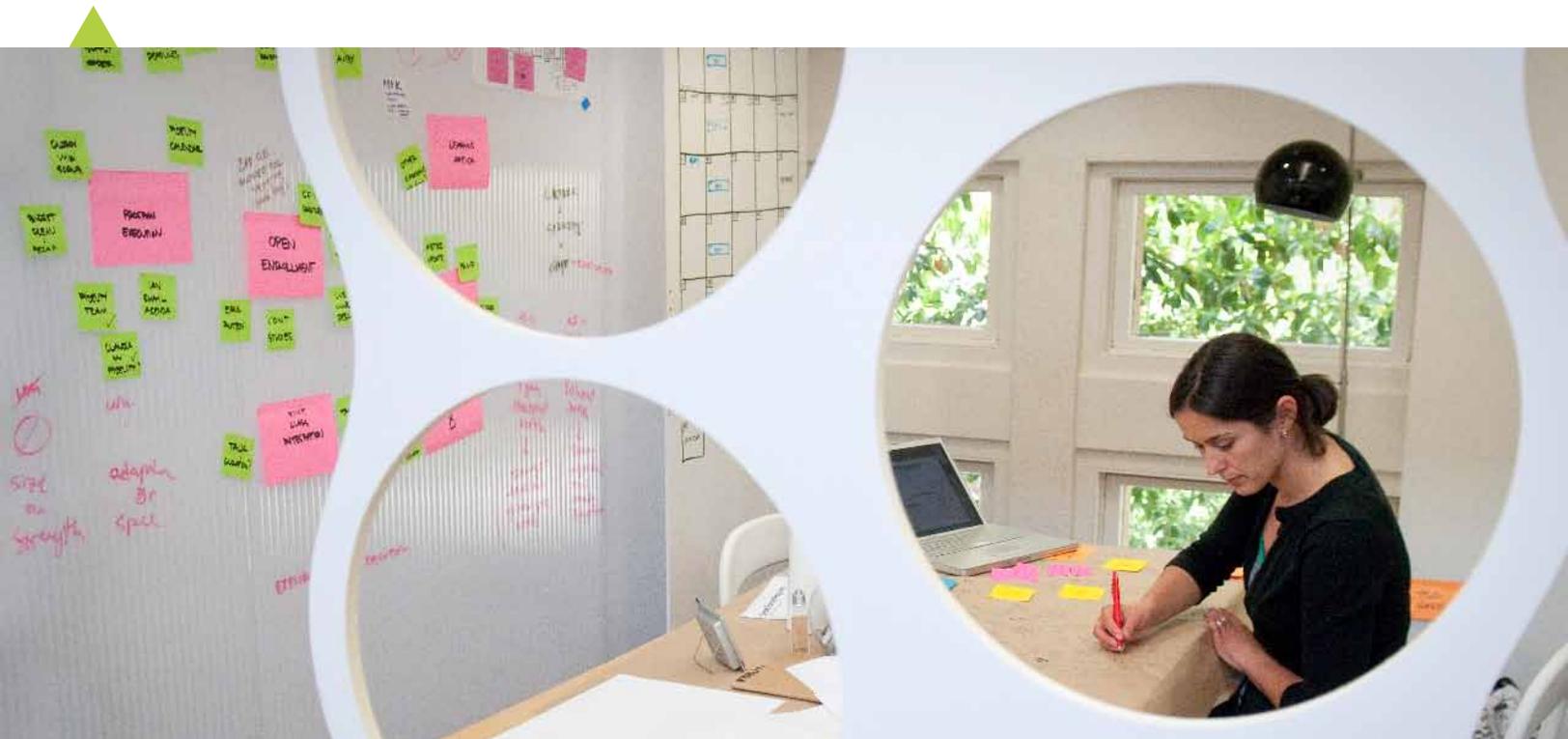
The Lorry I. Lokey Stanford Daily Building, located next to the renovated old Student Union on the corner of Duena Street and Panama Mall, provides a new two-story home for the student newspaper that is a light-filled mix of the historical and modern. The newsroom is located on the second floor, with offices and conference room downstairs.

The Peterson Building on Panama Mall is one of the original sandstone buildings on campus and more than a century old. The renovation focused on opening up small workspaces to create shared spaces that would promote collaboration while maintaining the building's architectural character. The Peterson Lab is now home to three interdisciplinary design and design-based learning groups: the Hasso Plattner Institute of Design, the Center for Design Research and the Design Group of the Mechanical Engineering Department.

### ALONG STOCK FARM ROAD

Stanford faculty and students have had great success working with automotive industry leaders on projects such as Stanley and Junior, Stanford's autonomous vehicles that competed in the 2005 and 2007 DARPA Grand Challenge, and Shelley, Stanford's driverless robotic Audi that uses GPS to avoid collisions and stay in its lane. The Automotive Innovation Facility, located at the corner of Stock Farm and Oak roads, gives Stanford's interdisciplinary teams a state-of-the-art facility to develop new ideas for vehicle safety, driver assistance and environmental improvements.

The Hasso Plattner Institute of Design's new home in the Peterson Building was created with adaptability in mind. (Linda Cicero)



# Initiative on Human Health

## NEUROSCIENCE BECOMES A MAJOR FOCUS OF THE HUMAN HEALTH INITIATIVE

**E**xpansion of optogenetics techniques, which allow researchers to combine use of light and genetics to turn specific brain cells on or off, is among the evidence of the ongoing success of the Initiative on Human Health.

Under the initiative, established in 1999 with the founding of the Stanford Program for Bioengineering, Biomedicine and Biosciences (Bio-X) and the School of Medicine's five Stanford Institutes of Medicine, progress has been made in facilitating the translation of discoveries from the laboratory to the patient's bedside. During the past decade, the initiative has focused on the biosciences, bioengineering and cancer. These are being complemented by major cross-cutting efforts in genomics, imaging and informatics.

Moving forward, techniques such as optogenetics, pioneered at Stanford by Karl Deisseroth, associate professor of bioengineering and of psychiatry and behavioral sciences, will become a key focus of the initiative under the aegis of Bio-X's NeuroVentures program, directed by William Newsome, professor of neurobiology and 2010 winner of the Champalimaud Vision Award.

### FOCUS IS ON THE BRAIN

Launched in 2008, NeuroVentures' mission is to invent and disseminate new interdisciplinary technologies and science that reveal the workings of the brain. NeuroVentures is part of Bio-X, which is directed by Carla Shatz, the Sapp Family Provostial Professor and professor of neurobiology. NeuroVentures' interdisciplinary projects have the potential to change the way academic science is done, tend to be large-scale and are beyond the scope of a single department. Initial funding of projects is then leveraged for larger grants that lead, in turn, to more progress.

Optogenetics is a good example, combining the expertise of bioengineers, psychologists and geneticists. The revolutionary science, still in the testing phase, has proved so promising that scientists worldwide have made their way to Stanford to learn more through the new Optogenetics Innovation Lab, located in the Clark Center.

Another example of Stanford's neuroscience interdisciplinary projects is the work in brain-computer interfaces used by Krishna Shenoy, associate professor of electrical engineering, to enable paralyzed patients to control prosthetic arms and computer cursors. Shenoy heads the Neural Prosthetic Systems Laboratory, which combines the expertise of electrical engineering, bioengineering and cognitive neuroscience.

Shenoy and Deisseroth are among the researchers at four universities who were awarded \$14.9 million in 2010 from the Defense Advanced Research Projects Agency to use techniques like optogenetics and brain implants to learn how the brain and its microcircuitry react to sudden physiological changes and what can be done to encourage recovery from injury.

Such novel techniques are examples of the work NeuroVentures has incubated, often in combination with the Stanford Institute for Neuro-Innovation and Translational Neurosciences (SINTN). Headed by Gary Steinberg, the Bernard and Ronni Lacroute-William Randolph Hearst Professor of Neurosurgery and Neurosciences, SINTN works to understand the normal and diseased nervous system, including interactions among genes, cells, circuits and behavior. It also aims to translate these new discoveries into novel therapeutic approaches that improve the quality of life for patients with neurological and psychiatric disorders. More than 150 researchers are participating from departments ranging from bioengineering to comparative medicine to neurology. In 2010, Steinberg and SINTN were awarded a \$20 million grant from the California Institute for Regenerative Medicine (CIRM) to develop human neural stem cell therapies for stroke and to initiate a clinical trial.

The new Stanford Center for Cognitive and Neurobiological Imaging (CNI) represents another part of Stanford's widespread efforts to better understand brain function. The CNI opened its first major facility—a magnetic resonance imaging center—in Jordan Hall on the Main

Quadrangle in 2010 to be widely accessible to students and faculty in areas ranging from humanities and sciences, business, education and law. Under the direction of psychologist Brian Wandell, the Isaac and Madeline Stein Family Professor and a co-chair of the Initiative on Human Health, the center aims to create a research and educational environment where neuroscientists, humanists and social scientists cooperate on advanced brain research problems.

#### **ADVANCES IN STEM CELL TECHNOLOGY**

The Initiative on Human Health has grown dramatically during the past decade, encompassing everything from new endowed professorships and graduate fellowships to major facilities and centers.

A major addition to our research capability is the 200,000-square-foot Lorry I. Lokey Stem Cell Research Building, which houses 550 researchers working in 33 laboratories on a range of projects, including embryonic and adult cells, cancer stem cells and the development of disease-specific stem cell lines.

The researchers in the Lokey Building focus on conditions as diverse as cancer, spinal cord injury, heart problems and autoimmune disease. The building's top level houses the Stanford Institute for Stem Cell Biology and Regenerative

Medicine, the second floor provides space for the Stanford Cancer Center and the ground floor includes neuroscience labs and the Center for Human Embryonic Stem Cell Research and Education.

The building was financed in part by CIRM, which was created by California taxpayers to support stem cell research. In 2010, Stanford continued to benefit from other CIRM funding. A \$2.3 million grant to Michele Calos, professor of genetics, to develop a stem-cell therapy for Duchenne muscular dystrophy brought Stanford's total so far to \$175 million.

#### **A NEW SCHOOL OF MEDICINE FACILITY**

Also in 2010, the School of Medicine began a new era with the dedication of the Li Ka Shing Center for Learning and Knowledge, which is changing the way physicians are trained.

The five-story building boasts sophisticated technologies—including one of the most advanced simulation facilities in the country—and represents the latest in medical education. It is designed for interactive, experiential and team-based approaches to learning at all levels, from incoming medical students to experienced clinicians.

The Lorry I. Lokey Stem Cell Research Building's 200,000 square feet of floor space, serving about 550 occupants, makes it the largest dedicated stem cell research building in the country. (Steve Fisch)



# Initiative on the Environment & Sustainability

STANFORD ENVIRONMENTAL FACULTY RESEARCH IS RECOGNIZED WORLDWIDE

Organizations worldwide recognized the accomplishments of Stanford environmental scholars in 2009-10, reflecting the increasing impact of work encouraged by the Initiative on Environment and Sustainability. Among the faculty honored:

- Gretchen Daily, the Bing Professor in Environmental Science, won a Heinz Award “for her innovative work to place a value on the services provided by natural ecosystems” and a Midori Prize for Biodiversity.
- David Lobell, assistant professor in environmental Earth system science, won the 2010 James B. Macelwane Medal from the American Geophysical Union for “significant contributions to the geophysical sciences by an outstanding young scientist.”
- Harold Mooney, the Paul S. Achilles Professor of Environmental Biology, won the Volvo Environment Prize for being a “leading voice in the biology of global change.”
- Terry Root, senior fellow at the Woods Institute, received the 2010 Spirit of Defenders Award for Science from Defenders of Wildlife.
- Peter Vitousek, the Clifford G. Morrison Professor in Population and Resource Studies, won the 2010 Japan Prize in biological production and the environment for pioneering work in biogeochemistry.

The five are among the scholars university-wide who are also fellows or senior fellows at the Ward W. and Priscilla B. Woods Institute for the Environment, which was founded in 2004 and remains the hub of the initiative.

The initiative is led by Jeffrey Koseff, the William Alden Campbell and Martha Campbell Professor in the School of Engineering and the Perry L. McCarty Director of the Woods Institute; Pamela Matson, the Chester Naramore

Dean of the School of Earth Sciences and the Richard and Rhoda Goldman Professor in Environmental Studies; and Barton “Buzz” Thompson, the Robert E. Paradise Professor in Natural Resources Law and the Perry L. McCarty Director of the Woods Institute.

## WOODS INSTITUTE INITIATIVES

Among the Woods Institute’s missions is to infuse science into policies of business, government and non-governmental organizations. To that end, the institute sponsored a range of activities, including:

- A series of Freshwater Salons and Dialogues to explore solutions to such water challenges as groundwater depletion, using wastewater as a resource and securing drinking water and sanitation for residents of the developing world;
- An Uncommon Dialogue, co-sponsored by the Precourt Institute for Energy, on how to make large-scale solar technology a viable solution for our energy future; and
- Surveys on public perception of environmental issues, conducted by Jon Krosnick, the Frederic O. Glover Professor in Humanities and Social Sciences. He found that three out of four Americans believe that the Earth has been gradually warming due primarily or at least partly as the result of human activity and want the government to take the necessary steps to address this issue.

In 2010, research and outreach activities in the three collaborations within the Woods Institute continued to expand:

- The Natural Capital Project, a collaboration with the University of Minnesota’s Institute on the Environment, The Nature Conservancy and the World Wildlife Fund, hosted a salon focused on strategies for investing in nature, with case studies from South America, Hawai’i and China.

- The Program on Food Security and the Environment (FSE), a collaboration with the Freeman Spogli Institute, provided media outreach for FSE scholars at scientific conferences in San Diego and San Francisco.
- The Center for Ocean Solutions, a collaboration with the Monterey Bay Aquarium, Hopkins Marine Station and the Monterey Bay Aquarium Research Institute, expanded the Fisheries Leadership and Sustainability Forum to facilitate communication among the eight U.S. regional fishery management councils.

### **PROGRESS IN ENERGY RESEARCH**

The Initiative on the Environment and Sustainability also benefits from the ongoing energy-related research and teaching spurred by the Precourt Institute for Energy, founded in 2009.

The Precourt Institute includes the Global Climate and Energy Project (GCEP), launched in 2002 to seek new solutions to meet the challenge of supplying energy to the world's growing population while preserving the environment; the TomKat Center for Sustainable Energy, launched in 2009 to harness the skills and creativity of science, technology and policy experts to transform the world's energy systems for a sustainable future, with initial focus on the energy grid; and the Precourt Energy Efficiency Center, created in 2006 to promote efficient and economically viable energy technology.

It also partners with the Stanford Institute for Materials and Energy Science, which is associated with the SLAC National Accelerator Laboratory, and the Program on Energy and Sustainable Development in the Freeman Spogli Institute. It is working with the Stanford Institute for Economic Policy Research to establish a new Environmental and Energy Policy Analysis Center. Also complementing this work is the new Steyer-Taylor Center for Energy Policy and Finance.

### **MULTIDISCIPLINARY RESEARCH REMAINS KEY**

Interdisciplinary research remains key to progress in environmental sustainability and energy. Faculty members in all seven schools at Stanford are addressing sustainability challenges. Grants made by the Woods Institute, the Precourt Institute, TomKat Center and GCEP encourage and facilitate innovation:

- Four teams received Woods Institute support to examine, for instance, how better industrial practices can improve both energy efficiency and productivity; the development of a computer model capable of evaluating nutrition-related health policies in India; and whether the loss of large wildlife and changes in land use increase the risk of infectious disease in developing tropical countries.
- Six Precourt projects address such issues as converting carbon dioxide to fuel, handling the fluctuations in electricity generated from intermittent renewable resources such as wind and improving the efficiency of solar cells while reducing costs.
- Four projects received TomKat Center grants to create a greener, more efficient system for delivering electricity through “smart power grid” systems.
- Nine GCEP grants investigate energy technologies in the areas of the electric grid, advanced combustion, solar energy, carbon dioxide storage, and advanced materials and catalysts.

# International Initiative

STANFORD'S INFLUENCE EXPANDS, THANKS TO INTERNATIONAL INITIATIVE

**S**tanford's international influence was reflected in 2010 in the creation of programs to curb nuclear weapons, understand food security issues and use technology to improve society; visits by world leaders; and expansion of overseas study programs.

All are evidence of the success of Stanford's International Initiative, launched in 2005 to focus interdisciplinary teaching and research on three areas: peace and security, governance at all levels and human well-being. Its co-directors are Coit Blacker, director of the Freeman Spogli Institute for International Studies and the Ken Olivier and Angela Nomellini Professor in International Studies, and Elizabeth Paté-Cornell, the Burt and Deedee McMurty Professor in the School of Engineering.

## **FREEMAN SPOGLI INSTITUTE AS INITIATIVE HUB**

The Freeman Spogli Institute for International Studies (FSI) is the hub of the initiative and home to dozens of centers and programs that apply Stanford expertise to solving some of the world's most challenging problems. Among the work of the initiative this year:

- William Perry, former secretary of defense and the Michael and Barbara Berberian Professor, Emeritus, and Siegfried Hecker, former director of the Los Alamos National Laboratory, announced the Nuclear Risk Reduction initiative under the auspices of the Center for International Security and Cooperation to address the changing nuclear threat following the end of the Cold War and the rise of international terrorism.

Freeman Spogli Institute Fellow and pediatrician Paul Wise heads the Children in Crisis program, which blends Stanford's expertise in medical research and international studies to provide care in places like Guatemala. (Adam Gorlick)



- FSI's Conference on Technology, Governance and Global Development hosted Bill Gates as the Frank E. and Arthur W. Payne Lecturer, speaking about "Giving Back: Finding the Best Way to Make a Difference." The conference launched the Global Underdevelopment Action Fund to promote interdisciplinary research on global underdevelopment and poverty alleviation. The fund has made six awards to faculty and scholars across campus.
- Political economist Francis Fukuyama was appointed an FSI senior fellow and anthropologist Thomas Blom Hansen was appointed to the International Initiative's provostial chair in South Asian studies. Fukuyama has written on democratization and political and economic development, including *The End of History* and the *Last Man*. Hansen, who will serve as director of the Center for South Asia, is known for research on local politics, the state, religious and political violence, and democracy, especially in India.
- The Program on Liberation Technology was launched by Joshua Cohen, the Marta Sutton Weeks Professor of Ethics in Society; Larry Diamond, senior fellow at the the Freeman Spogli Institute and Hoover Institution; and Terry Winograd, professor of computer science, to investigate how information technology can be used to defend human rights, improve governance, empower the poor and promote economic development. The program is under the auspices of the Center on Democracy, Development and the Rule of Law.
- The U.S. State Department awarded \$1.3 million to support the work of the Afghan Legal Education Proj-

ect, a joint program between the Law School's Rule of Law Program and the Center on Democracy, Development and the Rule of Law. The project, started by two law students, has written four textbooks for law students in Afghanistan.

- Stanford Global Health, directed by School of Medicine Senior Associate Dean Michele Barry, received an \$8 million National Institutes of Health grant to create a Consortium in Innovation, Design, Evaluation and Action to accelerate progress in the interdisciplinary development of affordable diagnostics, drugs and devices. It also earned a \$10 million grant to help improve medical education at the University of Zimbabwe.

#### ATTRACTING WORLD LEADERS

Stanford's influence on global affairs helped attract such visitors as German Chancellor Angela Merkel, who spoke to a packed Dinkelspiel Auditorium audience about international cooperation and technological research, and Russian President Dmitry Medvedev, who spoke about encouraging innovation and technology in his country.

Russian President Dmitry Medvedev came to Stanford to talk to students and faculty and to meet with a group that included former secretaries of state Condoleezza Rice and George Shultz, both affiliated with the Hoover Institution.

Also in 2010, Stanford opened its new Bing Overseas Studies Cape Town campus, which introduces students to post-apartheid South Africa, with an emphasis on health-focused community development. At the Stanford Center in China, ground was broken in August on a new facility on the campus of Peking University.

Stanford's newest Bing Overseas Studies center is located at the University of Cape Town.





# Improving K-12 Education

## TWO NEW CENTERS BECOME THE HUB OF THE K-12 INITIATIVE

Launched in 2006, the Initiative to Improve K-12 Education has been key to expanding endowed faculty positions and graduate fellowships in the School of Education, spurring multidisciplinary research in educational issues and enhancing programs that allow Stanford to partner with schools and organizations serving youths.

Moving forward, the initiative's emphasis will focus on two centers designed to support excellence in educational policy analysis and in teaching and leadership. Both have leveraged past initiative successes to attract support and design successful programs.

### THE CENTER FOR EDUCATION POLICY ANALYSIS

The interdisciplinary Center for Education Policy Analysis (CEPA), directed by Susanna Loeb, professor of education, applies scientific methods of analysis to discover what works in our nation's schools and why. CEPA involves faculty from such disciplines as economics, law, political science, psychology, public policy, sociology and education.

CEPA improves the information education leaders draw upon when making decisions about schools and students. CEPA has developed relationships with education decision makers and responds rapidly to those leaders when needs arise. It maintains a data center to improve the efficiency and relevance of education research. It also runs the premier training program for education researchers and provides forums for the development of education scholars at Stanford.

CEPA has attracted more than \$12 million in research grants, including \$5 million from the U.S. Department of Education for doctoral education. It currently funds 19 doctoral fellows who apply research methodologies to educational challenges at the interface of policy and practice.

CEPA's research affects education for the better. For instance, at the federal level, Sean Reardon, associate

professor of education, advises the director of the Institute of Education Sciences. Eric Hanushek, the Paul and Jean Hanna Senior Fellow at the Hoover Institution, and Caroline Hoxby, the Scott and Donya Bommer Professor in the School of Humanities and Sciences, are members of the National Board for Education Sciences. Associate Professor Eric Bettinger's research is informing the redesign and simplification of financial aid. At the state level, Loeb's work has helped streamline school finance aid formulas and develop new pathways into teaching.

At the local level, CEPA is working with districts on issues of school choice, assessments, human resource policy and teacher evaluation. CEPA has developed relationships with school districts in San Francisco, Fresno, Los Angeles, Long Beach, Kansas City, Milwaukee, Miami-Dade County and New York City. The data from these districts creates a rich resource for studying the effects of educational policies.

### THE CENTER TO SUPPORT EXCELLENCE IN TEACHING

The Center to Support Excellence in Teaching (CSET), also established as part of the initiative, serves as an interdisciplinary hub for research and development activities related to supporting teaching excellence. The center's mission recognizes that student achievement requires effective teaching. CSET conducts research on effective strategies for teaching particular subject areas and supports teachers in developing their craft.

CSET, which has attracted \$7.6 million in grants and gifts, is directed by Pam Grossman, the Nomellini-Olivier Professor of Education.

Over the past year, CSET provided professional development opportunities to more than 630 teachers and education leaders. In the spring, the center hosted a conference focused on teaching of English learners, with 240 educators in attendance and 300 more on the waiting list. As a

result, CSET has launched the Teaching English Learners Studio, a yearlong program for 30 new teachers and their mentors. Participants will develop and apply practices to transform their instruction to meet the needs of English learners.

CSET also launched a research and professional development program that prepares teacher leaders to understand the mathematical reasoning process, apply that understanding to lesson plans and practices and help other math teachers adopt the approach.

Connected to CSET is work that supports school leaders creating environments that support effective teaching. For example, the Principal Fellows Program draws on the expertise of Stanford faculty in business, sociology and education to support 75 high school principals who are participating in a three-year professional development program. The principals come from 13 local districts, and include over half of the high school principals in the San Francisco Unified School District. In addition, CSET ran a summer institute for principals and teachers from surrounding districts, focused on how leadership teams can create the conditions for cultivating ongoing learning and effective use of professional development resources.

## THE SCHOOL OF EDUCATION

The School of Education was also bolstered this year by a \$12 million grant from the Jim Joseph Foundation to create a concentration in education and Jewish studies focused on preparing doctoral scholars and researchers.

The gift, the largest in the education school's history, provides funding to endow a new faculty chair, support fellowships for graduate students and underwrite seminars and conferences on questions at the intersection of education, religion and civil society.

In 2011, Stanford will welcome a new dean for the School of Education. Deborah Stipek, the I. James Quillen Dean, announced she would conclude her tenure after serving since 2001. As dean, Stipek successfully pursued partnerships with schools and communities, school reform and policy research and the formation of multidisciplinary collaborations across Stanford. She strengthened the infrastructure of the school, growing the number of endowed professorships from six to 13 and adding 15 new graduate fellowships. Under her leadership Stanford faculty assumed a national role in the crucial process of improving K-12 education.

Deborah Stipek, left, the I. James Quillen Dean of the School of Education, will conclude her tenure as dean. Susanna Loeb heads the Center for Education Policy Analysis. (Steve Castillo/Linda Cicero)



# Reinventing Graduate Education

THE GRADUATE EDUCATION INITIATIVE ENCOURAGES  
INTERDISCIPLINARY LEARNING AND PROMOTES DIVERSITY

**S**tanford continues to encourage interdisciplinary learning at the graduate level and promote graduate student diversity. Both are among the objectives of the Reinventing Graduate Education initiative, which is designed to keep Stanford at the forefront of advanced education worldwide.

Stanford is known for interdisciplinary study and research at the graduate level. Many graduate students earn a second degree in another field. The Stanford Interdisciplinary Graduate Fellowship (SIGF) program, which began in 2007, awards three-year fellowships to outstanding doctoral students engaged in interdisciplinary research. Fifteen fellows were named in 2010, bringing the total to 41.

## OFFICE OF THE VICE PROVOST FOR GRADUATE EDUCATION

A key part to the initiative was the 2007 creation of the Office of the Vice Provost for Graduate Education (VPGE). In a presentation to the Faculty Senate this year, Vice Provost Patricia Gumpert reported that graduate students—as of Autumn 2009—compose 55 percent of the Stanford student body. Among other facts:

- About 51 percent of Stanford graduate students are doctoral students.
- In the last 25 years there has been a 30 percent increase in master's degree enrollment, a 30 percent increase in doctoral enrollment and 8 percent growth in professional programs.
- All but one of Stanford's schools saw an increase in graduate enrollment since 1985, with the School of Engineering accounting for half of the overall growth.

- Engineering accounts for about 40 percent of graduate students, followed by Humanities and Sciences with about 25 percent and the Graduate School of Business with about 11 percent.
- University financial support for graduate students is up 93 percent from fiscal year 1997, reflecting funding for research assistant salaries, teaching assistant salaries and fellowships.
- Underrepresented minorities are about 9 percent of Stanford's graduate enrollment.

Under the aegis of the initiative, Stanford continues to focus on diversifying the graduate student population and increasing the number of women and minorities who become faculty members. Support has been extended for the Diversifying Academia, Recruiting Excellence (DARE) Fellowship Program. The DARE program awards two-year fellowships to doctoral students in their final two years who want to prepare for academic careers and whose presence will help diversify the professoriate. In the first three years of the program, 40 DARE fellows have been named.

Under the Distinguished Alumni Scholars program co-sponsored by VPGE, alumni faculty members nationwide who are members of underrepresented groups return to campus to encourage Stanford students to consider academic careers. In 2010, 20 alumni were invited to return to campus, representing such fields as law, music, engineering, anthropology, psychology and physics. They met with about 70 graduate students and 45 undergraduates.

Above: The Munger Graduate Residence is among the new buildings designed to keep Stanford at the forefront of advanced education worldwide. (Linda Cicero)

### NEW FACILITIES FOR GRADUATE EDUCATION

The Reinventing Graduate Education initiative was also bolstered in 2009-10 by construction of new facilities designed to enhance graduate education. Among them:

- The Li Ka Shing Center for Learning and Knowledge in the School of Medicine, which was dedicated in September and is designed to transform medical and bioscience education and training.
- The Jen-Hsun Huang Engineering Center, hub for the School of Engineering's teaching and research, which was dedicated in October.

Among the graduate facilities now being completed:

- The William H. Neukom Academic Building, which will house the Law School's Mills Legal Clinic.
- The Knight Management Center at the Graduate School of Business, which includes eight new buildings designed to support new methods of teaching management and leadership.

Also benefiting graduate students is an additional childcare center on campus. Mulberry House is the second facility at the Madera Grove Children's Center, which is located in the university graduate student neighborhood.

The new Knight Management Center includes eight buildings designed to support new methods of teaching management and leadership. (Anne Knudsen)



# Arts Initiative

## ARTS INITIATIVE MAKES ARTS MORE PERVERSIVE ON STANFORD CAMPUS

The ground breaking of the Bing Concert Hall in 2010 is evidence of the progress achieved in the arts at Stanford since the Arts Initiative was announced in 2006.

The initiative, designed to integrate the arts and creativity into every field of study, has built on Stanford's ability to foster collaboration across disciplines and to create synergies between research and expression. It continues to support arts programs and increase the presence of the arts on campus.

The initiative is headed by Jonathan Berger, the Denning Family Provostial Professor, and Bryan Wolf, the Jeanette and William Hayden Jones Professor in American Art and Culture.

### AN ARTS DISTRICT TAKES SHAPE

The Bing Concert Hall represents a next step for the initiative as an arts district takes shape on the north part of campus. The district will centralize widely scattered resources for music, drama, dance, visual arts, film and creative writing.

Besides the concert hall, the new district will include the Frost Amphitheater, the Thomas Welton Stanford Art Gallery, the Iris & Gerald Cantor Arts Center, Memorial Auditorium and the new Burton and Deedee McMurtry Building, which will house the Department of Art and Art History.

"The Bing Concert Hall will be the first note for a long-range vision for the new arts district as you enter campus," said University Architect David Lenox. "What will be nice about coming onto campus in the future is that you'll know that the culture and arts are a complement to the medical, law, engineering, education, medicine and business components at Stanford."

The Bing Concert Hall, key to that new district, is expected to be completed in Fall 2012. Named for Peter and Helen Bing, the 844-seat hall will host its first public performances in January 2013.

The concert hall is designed to be acoustically exceptional and able to accommodate a variety of performances, from world-renowned visitors to Stanford's own community of faculty and student musicians—including the Stanford Symphony Orchestra and Symphonic Chorus, the Grammy-nominated St. Lawrence String Quartet, and the composers and researchers at the Center for Computer Research in Music and Acoustics, widely known for its iPhone and laptop orchestras. The concert hall also will be the primary venue for Stanford Lively Arts, whose 100 events a year bring in an audience of 30,000 annually.

### A HOME IN HUMANITIES AND SCIENCES

Moving forward, the initiative will be administratively housed in the School of Humanities and Sciences, although it remains a university-wide effort. Matthew Tiews was appointed the first executive director of arts programs in 2010. Together with faculty members, Tiews will coordinate programs throughout the Arts Initiative, including the Stanford Institute for Creativity and the Arts (SiCa), Stanford Lively Arts, the Cantor Arts Center and the new Bing Concert Hall.

In the future, the initiative is expected to build on its successes, which include developing new undergraduate programs, creating graduate fellowships, hosting artists in residence, sponsoring arts programming for undergraduates and encouraging multidisciplinary research and teaching.

Among the other 2010 highlights of the Arts Initiative was programming sponsored under the theme "The Year of Art + Invention."

SiCa, in particular, sponsored more than 65 events, 10 internships and eight graduate fellowships and awarded more than 110 grants to students, faculty and staff. Also sponsored by SiCa were 110 individual visiting artists and 12 ensembles, groups and companies participating in public performances, lectures, workshops, classroom activities and residential life. More than 1,000 arts events occurred on campus in 2009-10.

# 2010 Research Highlights

## BIOLOGICAL SCIENCES

### Optogenetics brain-research technique expanded

A team led by Karl Deisseroth, associate professor of bioengineering and of psychiatry and behavioral sciences, reported in *Cell* about new capabilities in optogenetics to use any visible color of light to control cells and about ways to make cells susceptible to the technique even if they cannot be genetically engineered directly.

Optogenetics, invented by Deisseroth, precisely turns select brain cells on or off with flashes of light. The new capabilities expand the use of optogenetics, which is considered a powerful way to troubleshoot neural circuits associated with depression, Parkinson's disease and other conditions.

### Hunting minke whales unjustified

The killing of Antarctic minke whales has been justified on the theory that their population is booming. A study based on minke DNA, led by Stephen Palumbi, the Harold A. Miller Professor in Marine Sciences and director of the Hopkins Marine Station, concludes that the population is, in fact, not booming.

The team led by Palumbi ran its DNA tests on whale meat from grocery stores in Japan. Their work, published in *Molecular Ecology*, shows that the current population of Antarctic minke whales is within the historical norm of the species over the last 100,000 years.

### What makes us unique? Not necessarily our genes

A team including Michael Snyder, the Stanford W. Ascherman MD, FACS Professor of Genetics, found the key to human individuality may not lie in our genes, but in the sequences that surround and control them – something researchers know little about. The team's research was reported in *Science Express*.

The discovery suggests that researchers focusing exclusively on genes to learn what makes people different from one another have been looking in the wrong place.

### Plant pathogen genetically tailors its attacks

Pathologists had always believed that when a pathogen went on the attack, it used all its weapons. But researchers led by Virginia Walbot, professor of biology, discovered that a tumor-causing corn fungus wields different weapons

from its genetic arsenal depending on which part of the plant it infects. The discovery marks the first time tissue-specific targeting has been found in a pathogen.

The research, published in *Science* and *Nature Cancer Reviews*, establishes a new principle in plant pathology – that a pathogen can tailor its attack to specifically exploit the tissue or organ properties where it is growing.

## BUSINESS AND MANAGEMENT

### Model reflects truthfulness of CEOs

How do you tell if CEOs are being truthful during quarterly earnings conference calls? Graduate School of Business researchers developed a model to analyze the words and phrases used during these calls and found speech patterns that give clues. They studied transcripts of CEOs and CFOs discussing financial results and then looked to see if financial statements were restated at a later point.

David Larcker, the James Irvin Miller Professor of Accounting, and doctoral student Anastasia Zakolyukina developed a model to analyze words and phrases based on prior deception detection research conducted by psychologists and linguists. CEOs who were hiding information, for instance, were less likely to say “I” and more likely to use impersonal pronouns and references to general knowledge such as “you know.”

### Posting calories in restaurants lowers calories

When restaurants post calories on menu boards, a reduction in calories per transaction results, according to researchers at the Graduate School of Business. Based on data provided by Starbucks, Phillip Leslie and Alan Sorensen, both associate professors of economics and strategic management, and doctoral student Bryan Bollinger found that calorie-posting in New York City led to a 6 percent reduction in calories per transaction.

Beverage choices are unaffected by calorie-posting. But calorie-posting leads consumers to buy fewer foods and to switch to lower-calorie foods. Starbucks gave the researchers access to data from locations in New York, Boston and Philadelphia from January 2008 to February 2009.

### **Money makes hourly workers happy**

Jeffrey Pfeffer, the Thomas D. Dee II Professor of Organizational Behavior, and colleagues from the University of Toronto found a stronger tie between money and happiness for people paid by the hour than by salary. Their research was published in the *Personality and Social Psychology Bulletin*.

“If you are paid by the hour or account for your time on a timesheet, you begin to see the world in terms of money and in terms of economic evaluation,” said Pfeffer. “To the extent that time becomes like money and money becomes more salient, the linkage between how much you earn and your happiness increases.”

### **Study calls for sheltering in place after nuclear attack**

In the event of a nuclear detonation, people in large metropolitan areas are better off sheltering in place in basements for 12 to 24 hours than trying to evacuate immediately, unless a lengthy warning period is provided.

That’s the conclusion of an analysis led by Lawrence Wein, the Jeffrey S. Skoll Professor of Management Science. Wein modeled the impacts of a detonation in downtown Washington, D.C., and calculated that clogged exit roads would pose more significant risks by exposing evacuees to radiation than if people were to remain in place at the center of large buildings or in basements.

## **EDUCATION**

### **Caution urged in use of student test scores**

Linda Darling-Hammond, the Charles E. Ducommun Professor of Education; lead researcher Edward Haertel, the Jacks Family Professor of Education; and Richard Shavelson, the Margaret Jacks Professor of Education, Emeritus, are among the experts who cautioned against reliance on student test scores to evaluate teachers in a report issued by the Economic Policy Institute.

Their report says student test scores are not reliable indicators of teacher effectiveness, even with the addition of value-added modeling. Such modeling allows for more sophisticated comparisons of teachers than were possible in the past. But they are still inaccurate, so test scores should not dominate the information used by school officials in making decisions about the evaluation, discipline and compensation of teachers.

### **Study identifies best practices in middle grades**

High-performing middle schools, regardless of whether they serve students from low- or middle-income families, embrace high expectations and design programs that prepare all students for a rigorous high school education, according to a study by Michael Kirst, professor emeritus of education, and Edward Haertel, the Jacks Family Professor of Education.

Higher-performing schools are distinguished by a school-wide focus on improving student academic outcomes. They also set measurable goals for improved outcomes on standards-based tests, share a mission to prepare students academically for the future and expect students and parents to share the responsibility for student learning. In addition, higher-performing middle-grade schools stress early intervention for struggling students and use data to monitor student progress and improve teacher practice.

## **ENGINEERING**

### **Electronic skin can feel a butterfly’s footsteps**

Researchers led by Zhenan Bao, associate professor of chemical engineering, developed an ultrasensitive, highly flexible electronic sensor that can feel a touch as light as an alighting butterfly.

The sensors, announced in *Nature Materials*, could be used in artificial electronic skin for prosthetic limbs, robots, touch-screen displays, automobile safety and a range of medical applications.

### **Same types of cell respond differently to stimulus**

Using new technology that allows scientists to monitor how individual cells react in the complex system of cell signaling, researchers led by Markus Covert, assistant professor of bioengineering, uncovered a much larger spectrum of differences between each cell than ever seen before. Cells don’t all act in a uniform fashion, as was previously thought.

Their work, published in *Nature*, used an imaging system developed at Stanford based on microfluidics and showed that scientists have been misled by the results of previous cell-population-based studies.

### **Water purification at low cost**

Stanford researchers led by Yi Cui, associate professor of materials science and engineering, have developed a water purifying filter that makes the process more than 80,000 times faster than existing filters.

The key, according to research published in *Nano Letters*, is coating the filter fabric—ordinary cotton—with nanotubes and silver nanowires, then electrifying it. The filter uses very little power, has no moving parts and could be used throughout the developing world.

#### **Ultra-thin solar cells efficiently absorb sunlight**

Shanhui Fan, associate professor of electrical engineering, and his team of researchers have shown that a polymer film of a solar cell that is nanoscale-thin and has been roughed up a bit can absorb more than 10 times the energy predicted by conventional theory.

In their research, published in *Proceedings of the National Academy of Sciences*, they say that the key to overcoming the theoretical limit for absorption lies in keeping sunlight in the grip of the solar cell long enough to squeeze the maximum amount of energy from it, using a technique called light trapping.

#### **Casinos filled with secondhand smoke**

Secondhand smoke in California's Native American casinos often exceeds concentrations associated with harmful health effects, according to a study headed by Lynn Hildemann, associate professor of civil and environmental engineering.

The casinos, which are exempt from the state's smoking restrictions, are among the few public places in California where smoking is legal. The study of smoke particle concentrations in 36 casinos across the state found that even many nonsmoking areas within the buildings contained smoke concentrations that were several times that of outdoor air. The research was published in the *Journal of Exposure Science and Environmental Epidemiology*.

#### **New solar energy conversion process discovered**

Researchers led by Nick Melosh, assistant professor of materials science and engineering, discovered a new process that simultaneously combines the light and heat of solar radiation to generate electricity and could offer more than double the efficiency of existing solar cell technology.

The process, called "photon enhanced thermionic emission," could reduce the costs of solar energy production enough for it to compete with oil as an energy source. Unlike photovoltaic technology currently used, the process excels at higher temperatures. Their work was published in *Nature Materials*.

#### **Researchers aim for rapid radiation detection**

Shan Wang, professor of materials science and engineering and of electrical engineering, leads a consortium of researchers who think blood proteins may hold the key to developing instruments for use by first responders and labs in the event of nuclear incidents.

Stanford is among nine institutions to earn research contracts to develop a fast, cheap and accurate technology for determining the level of radiation exposure victims might suffer in a nuclear incident.

### **ENVIRONMENT**

#### **Absorbing more light kept the Earth warm**

Researchers have long wondered why water on Earth was not frozen during the early days of the planet, when the sun emanated only 70 to 75 percent as much energy as it does today.

A team of researchers, including Dennis Bird, professor of geological and environmental sciences, and Minik Rosing, a geology professor at the Natural History Museum of Denmark, proposed in *Nature* that the vast global ocean of early Earth absorbed a greater percentage of the incoming solar energy than today's ocean – enough to ward off a frozen planet.

#### **Heat waves could be common by 2039**

Exceptionally long heat waves could become commonplace in the United States in the next 30 years, according to researchers led by Noah Diffenbaugh, assistant professor of environmental Earth system science and a Woods Institute fellow.

"Using a large suite of climate model experiments, we see a clear emergence of much more intense, hot conditions in the U.S. within the next three decades," said Diffenbaugh. Writing in *Geophysical Research Letters*, he concluded that high temperature extremes could become frequent events in the United States by 2039, posing serious risks to agriculture and human health.

#### **Global warming may lift some from poverty**

The impact of global warming on food prices and hunger could be large over the next 20 years. But even as some people are hurt, others would be helped out of poverty, according to a study led by David Lobell, assistant professor of environmental Earth system science and a fellow at the Woods Institute and the Program on Food Security and the Environment.



Minik Rosing, left, is a geology professor at the Natural History Museum of Denmark, University of Copenhagen, and Dennis Bird, right, is professor of geological and environmental sciences at Stanford. Their research proposed that the vast global ocean of early Earth absorbed a greater percentage of incoming solar energy than today's ocean—enough to ward off a frozen planet. (Linda Cicero)

Lobell, who presented the results at the annual meeting of the American Association for the Advancement of Science, said that higher temperatures could significantly reduce yields of wheat, rice and corn – dietary staples for tens of millions of poor people who subsist on less than \$1 a day. Still, he said, those who farm their own land may actually benefit from higher crop prices.

#### **Urban CO2 domes increase deaths**

Research by Mark Z. Jacobson, professor of civil and environmental engineering and a senior fellow at the Woods Institute, shows for the first time the adverse local health effects of the domes of carbon dioxide that have developed above cities. The results, published in *Environmental Science and Technology*, show that the domes increase death rates, providing a scientific basis for regulation of CO2.

Jacobson, director of the Atmosphere/Energy Program, also testified on behalf of California's waiver application to the U.S. Environmental Protection Agency. The waiver would allow the state to establish its own carbon dioxide emission standards for vehicles.

#### **Ocean acidification linked to prehistoric extinction**

Researchers led by Jonathan Payne, assistant professor of geological and environmental sciences, believe massive volcanic eruptions were to blame for the ocean acidification that wiped out 90 percent of marine biodiversity in Earth's biggest mass extinction 250 million years ago.

Their results, published in *Proceedings of the National Academy of Sciences*, looked at calcium found in limestone from Guizhou Province in China. The scientists believe volcanoes spewed carbon dioxide gas that dissolved in the oceans and raised the acidity of seawater. That deadly combination may parallel today's climate change and ocean acidification.

## **HUMANITIES**

#### **Historian explains why the West rules - for now**

Ian Morris, the Jean and Rebecca Willard Professor in Classics, contends in *Why the West Rules – for Now* that destiny is written in geography and that history is a slow, complicated tango between geography and social development.

Morris writes that the world's great civilizations radiated outward from two distinct central cores – the “Hilly Flanks” in western Eurasia and the region between the Yellow and Yangzi rivers in China. The West has enjoyed strategic geographic advantages, especially an abundance of domesticated plants and animals at the end of the last ice age. But while geography drives social development, social development determines what geography means.

### **Naimark calls for new definition of genocide**

In a new book, *Stalin's Genocides*, historian Norman Naimark, the Robert and Florence McDonnell Professor of Eastern European Studies, argues that we need a much broader definition of genocide – one that includes nations killing social classes and political groups. His case in point: Stalin.

He argues that the Soviet elimination of a social class, the kulaks (who were higher-income farmers), and the subsequent killer famine among all Ukrainian peasants – as well as the notorious 1937 order No. 00447 that called for the mass execution and exile of “socially harmful elements” as “enemies of the people” – were, in fact, genocide.

### **Revolutionaries shows how ordinary men are transformed**

Pulitzer Prize winner Jack Rakove, the William Robertson Coe Professor of History and American Studies, wrote *Revolutionaries: A New History of the Invention of America*, which shows how the private lives of the Founding Fathers were suddenly transformed into public careers.

Rakove traces how ordinary men—Washington, Franklin, Madison and Hamilton—were transformed by extraordinary events. None, he argues, set out to become “revolutionary” by ambition, but when events in Boston escalated, they found themselves thrust into a crisis that rapidly led to war.

### **Why Some Things Should Not Be for Sale**

In *Why Some Things Should Not Be for Sale*, Debra Satz questions the place of markets in a democratic society by

looking at markets most people find morally objectionable, like addictive drugs, weapons or human organs.

In a world in which markets are widely recognized as efficient, Satz, the Marta Sutton Weeks Professor of Ethics in Society, draws on history, philosophy, economics and sociology to ask what considerations ought to guide the debates about such markets. She suggests that markets, in fact, shape our culture, foster or thwart human development and create and support structures of power.

### **Retelling the story of New Mexico's Native Americans**

Michael Wilcox, assistant professor of anthropology, in *The Pueblo Revolt and the Mythology of Conquest*, corrects the story of New Mexican Native populations while promoting an indigenous approach to archaeology.

Wilcox uses the book to call on fellow scholars to embrace indigenous archaeology to understand Native American history by seeing the connections between artifacts and other scientific evidence and the narratives of living indigenous people. In doing so, he argues, archaeologists could better explain why indigenous populations persist.

### **LAW**

#### **How do we deal with discrimination based on looks?**

In a new book, *The Beauty Bias*, Deborah Rhode, the Ernest W. McFarland Professor of Law, says that “prejudice based on appearance is the last bastion of socially and legally acceptable bigotry.”

Research in Arizona by anthropologist and archaeologist Michael Wilcox led to a new perspective on indigenous archaeology. (Linda Cicero)





Stephen Quake (left) talks with cardiologist Euan Ashley about his possible disease risks, based on the sequencing of his genome. (Norbert von der Groeben)

Rhode, director of the Stanford Center on the Legal Profession, examines why policymakers have not taken up appearance discrimination in her book. She analyzes how this area of the law has been marginalized, arguing that conceptions of attractiveness are so deeply engrained in American culture that we no longer are even aware of our own prejudices.

#### **Lack of Internet regulation decreasing innovation**

The design and architecture of the Internet originally led to boundless economic growth and innovation, but due to a lack of governmental regulation and increasing cost barriers, entrepreneurial and application innovation is being increasingly limited.

Barbara van Schewick, associate professor of law and faculty director of the Center for Internet and Society, argues this point in *Internet Architecture and Innovation*. She identifies elements of the original Internet that fostered innovation—such as little to no cost barriers—and contrasts these features against those of the present-day Internet. Van Schewick examines applications, such as Google, that were developed by students or others with low financial backing and illustrates how these applications would never have gotten off the ground today.

#### **Limited benefits of product liability as compared with costs**

The benefits of product liability are only partial in some cases, as compared to the oftentimes more significant costs. A. Mitchell Polinsky, the Josephine Scott Crocker

Professor of Law and Economics and director of the John M. Olin Program in Law and Economics, and his co-author, Steven Shavell of Harvard, come to this conclusion in “The Uneasy Case for Product Liability.”

The two analyzed the various costs and benefits of product liability to illustrate that its use is often unwarranted, arguing that—even in the absence of product liability—companies would be motivated by market forces to increase product safety.

## **MEDICINE**

#### **Study first to analyze genome for disease risk and treatment possibilities**

For the first time, researchers led by Euan Ashley, assistant professor of medicine, used a healthy person’s complete genome sequence to predict risk for dozens of diseases and response to common medications. They used the genome of Stephen Quake, the Lee Otterson Professor in the School of Engineering, who last year used a technology he helped invent to sequence his own genome for less than \$50,000.

The resulting, easy-to-use risk report will likely catapult the use of such data out of the lab and into the waiting room of physicians within the next decade. The research was published in the *Lancet*, alongside an article about the ethical and practical challenges in such research by Hank Greely, the Deane F. and Kate Edelman Johnson Professor of Law.



Stanford researchers have developed PhysiScore, a non-invasive way of electronically scoring and assessing a baby's well-being and predicting whether future medical treatment might be needed.

#### **Evolution pushed humans toward diabetes risk**

Gene variants associated with an increased risk for type-1 diabetes and rheumatoid arthritis may confer previously unknown benefits to their human carriers, say researchers led by Atul Butte, assistant professor of pediatric cancer biology. As a result, the human race may have been evolving in the recent past to be more susceptible, rather than less, to diabetes.

“Everything we’ve been taught about evolution would indicate that we should be evolving away from developing it,” said Butte. “But instead, we’ve been evolving toward it.” The research was published in *PLoS ONE*.

#### **Potential drugs to combat hepatitis C identified**

Jeffrey Glenn, associate professor of gastroenterology and hepatology and director of the Center for Hepatitis and Liver Tissue Engineering, is among the researchers who have discovered a novel class of compounds that, in experiments in vitro, inhibit replication of the virus responsible for hepatitis C.

If these compounds prove effective in infected humans, they may accelerate efforts to confront this virus’ propensity to rapidly acquire drug resistance, while skirting side effects common among current therapies. The research appears in *Science Translational Medicine*.

#### **Scientists create functional inner-ear cells**

Researchers led by otolaryngologist Stefan Heller, the Edward C. and Amy H. Sewall Professor in the School of

Medicine, have found a way to develop mouse cells that look and act just like the animal’s inner-ear hair cells – the linchpin to hearing and balance – in a petri dish.

The research, published in *Cell*, could lead to significant scientific and clinical advances along the path to curing deafness in the future if the researchers can further perfect the recipe to generate hair cells in the millions.

#### **Therapy boosts human lymphoma cure rate in mouse models**

More than half of laboratory mice with human non-Hodgkin’s lymphoma are cured by a treatment involving just two monoclonal antibodies, researchers led by Ravindra Majeti, assistant professor of hematology, have found.

Their findings have laid the groundwork for trials in humans, aided by a grant from the California Institute for Regenerative Medicine. The trial combines the activity of rituximab, an antibody currently in use to treat the disorder, with another that blocks a molecule called CD47 on the surface of the cancer cells. Together, the two antibodies synergize to trigger the host’s own immune system to eliminate the cancer.

#### **Determining premature infants’ risk of illness**

Researchers led by Anna Penn, assistant professor of pediatrics, and computer scientist Daphne Koller, the Rajeev Motwani Professor in the School of Engineering, have developed a revolutionary, non-invasive way of quickly predicting the future health of premature infants.

Their new tool, PhysiScore, was announced in *Science Translational Medicine*. The innovation could better target specialized medical intervention and reduce health care costs. PhysiScore is, essentially, a more reliable, electronic version of the Apgar score, which is a simple assessment done on babies shortly after birth.

#### **Study disproves coronary artery disease marker**

A genetic marker touted as a predictor of coronary artery disease is no such thing, according to researchers led by Tom Quertermous, the William G. Irwin Professor in Cardiovascular Medicine, and Themistocles Assimes, assistant professor of medicine.

Their international study, published in the *Journal of the American College of Cardiology*, used more than 17,000 patients with cardiovascular disease and 40,000 others to assess the predictive value of a leading genetic assay for risk of atherosclerosis. The study found no connection.

#### **Embryo survival predicted by research**

Two-thirds of all human embryos fail to develop successfully. Researchers led by Renee Reijo Pera, professor of obstetrics and gynecology, have shown that they can predict with 93 percent certainty which fertilized eggs will make it to a critical developmental milestone and which will stall and die.

The findings, reported in *Nature Biotechnology*, are important to understanding the fundamentals of human development at the earliest stages, which have largely remained a mystery despite the attention given to human embryonic stem cell research. Because the parameters measured by the researchers in this study occur before any embryonic genes are expressed, the results indicate that embryos are likely predestined for survival or death before even the first cell division.

#### **Mouse skin cells turn into neurons**

Scientists led by Marius Wernig, assistant professor of pathology and a member of the Institute for Stem Cell Biology and Regenerative Medicine, have transformed mouse skin cells in a laboratory dish into functional nerve cells with the application of just three genes. The cells make the change without first becoming a pluripotent type of stem cell – a step long thought to be required for cells to acquire new identities.

The findings, which appeared in *Nature*, could revolutionize the future of human stem cell therapy and recast our understanding of how cells choose and maintain their specialties in the body.

#### **Melanoma-initiating cells identified**

Researchers in the laboratory of Irving Weissman, the director of the Institute for Stem Cell Biology and Regenerative Medicine, identified a cancer-initiating cell in human melanomas.

The finding, published in *Nature*, is important because the existence of such a cell in the aggressive skin cancer has been a source of debate. It may also explain why current immunotherapies are largely unsuccessful in preventing disease recurrence in human patients.

### **PHYSICAL SCIENCES**

#### **Unpeeling atoms, molecules from the inside out**

The world's first hard X-ray free-electron laser started operations with a bang. First experiments at SLAC National Accelerator Laboratory's Linac Coherent Light Source stripped electrons one by one from neon atoms and nitrogen molecules, removing the electrons from the inside out to create "hollow atoms."

These early results, published in *Nature* and *Physical Review Letters*, described how the Linac Coherent Light Source's intense pulses of X-ray light change the very atoms and molecules they are designed to image. Understanding how the machine's ultra-bright X-ray pulses interact with matter is critical for the facility's goal of making clear, atomic-scale images of biological molecules and movies of chemical processes.

#### **Learning about galaxies from other galaxies**

Researchers at the Kavli Institute for Particle Astrophysics and Cosmology at the SLAC National Accelerator Laboratory devised a new way to measure the size and age of the universe and how rapidly it is expanding. The measurement determines a value for the Hubble constant, which indicates the size of the universe, and confirms the age of the universe as 13.75 billion years old, within 170 million years.

Their research, published in the *Astrophysical Journal*, used a technique called gravitational lensing to measure the distances light traveled from a bright, active galaxy to Earth along different paths. By understanding the time it took light to travel along each path and the effective speeds involved, the researchers inferred how far away the galaxy lies and the overall scale of the universe and some details of its expansion.

### **Extreme jets take new shape**

Jets of particles streaming from black holes in faraway galaxies operate differently from what was previously thought, according to a study published in *Nature*. The study, led by scientists at the Kavli Institute for Particle Astrophysics and Cosmology, revealed that most of a jet's light – gamma rays, the universe's most energetic form of light – is created much farther from the black hole than expected and suggests a more complex shape for the jet.

“As the universe's biggest accelerators, blazar jets are important to understand,” said Kavli Research Fellow Masaaki Hayashida. “But how they are produced and how they are structured is not well understood. We're still looking to understand the basics.”

### **“Artificial nose” results from new DNA approach**

A new approach to building an “artificial nose” – using fluorescent compounds and DNA – could accelerate the use of sniffing sensors. The research, led by Eric Kool, the George A. and Hilda M. Daubert Professor in Chemistry, was published in *Angewandte Chemie*.

By sticking fluorescent compounds onto short strands of the molecules that form the backbone of DNA, the researchers produced tiny sensor molecules that change color when they detect certain substances. The sensors are cheap to make and could help devices become widely available.

### **Desktop experiments could illuminate dark matter**

Theorists at the Stanford Institute for Materials and Energy Science, including Shoucheng Zhang, professor of physics, believe desktop experiments could point the way to dark matter discovery.

Their results, published in *Nature Physics*, suggest small blocks of matter on a tabletop could reveal elusive properties of the as-yet-unidentified dark matter particles that make up a quarter of the universe, potentially making future large-scale searches easier. The theorists describe an experimental setup that could detect for the first time the axion, a theoretical tiny, lightweight particle conjectured to permeate the universe. The axion, a candidate for the mysterious dark matter particle, has never been observed experimentally.

### **Bacteria built with arsenic**

In a study that could rewrite biology textbooks, scientists at the SLAC National Accelerator Laboratory Synchrotron Radiation Lightsource helped find the first known living organism that incorporates arsenic into the working parts of its cells.

“It seems that this particular strain of bacteria has actually evolved in a way that it can use arsenic instead of phosphorus to grow and produce life,” said Sam Webb, who led the research at SLAC in collaboration with NASA. “Given that arsenic is usually toxic, this finding is particularly surprising.” The results appeared in *Science Express*.

## **SOCIAL SCIENCES**

### **Getting older leads to happiness**

A study headed by Laura Carstensen, the Fairleigh S. Dickenson, Jr. Professor in Public Policy and director of the Center on Longevity, shows that, as we grow older, we tend to become more emotionally stable. And that translates into longer, more productive lives that offer more benefits than problems.

The study, published in the journal *Psychology and Aging*, involved tracking about 180 Americans between ages 18 and 94 from 1993 to 2005. For one week every five years, participants carried pagers and responded to periodic quizzes intended to reflect how happy, satisfied and comfortable they were at any given time.

### **Using social networks to halt the spread of disease**

James Holland Jones, associate professor of anthropology, and former postdoctoral fellow Marcel Salathé developed a mathematical model to identify social networks and predict how they'll interact during a disease outbreak.

Developing an algorithm and testing it on Facebook data, they figured out how to identify the social interactions between communities – the relationships most likely to link one group to another and get more people sick. Their work, published in *PLoS Computational Biology*, could help to head off a future epidemic.

### **Older investors prone to market mental misfires**

When it comes to making risky financial investments, an older mind is likely to make more mistakes than a younger one, psychologists say in a paper in the *Journal of Neuroscience*.

Researchers led by Brian Knutson, associate professor of psychology, show that older investors make more errors when picking stocks compared to younger people playing the market. And that's not because of senility, memory lapses or other cognitive declines often associated with growing older. Instead, the problem rests with seniors' ability to estimate value, according to functional magnetic resonance imaging results.

#### **Children raised by gays do fine in school**

By mining data from the 2000 Census, Michael Rosenfeld, associate professor of sociology, figured out the rates at which kids raised by gay and straight couples repeated a grade during elementary or middle school.

His research, published in *Demography*, found that children of same-sex parents have essentially the same educational achievement as peers growing up in heterosexual households. Far more important than the sexual orientation of parents are their income and education levels in determining the success of children.

#### **Benefits should pay for housework**

A study by Londa Schiebinger, the John L. Hinds Professor in the History of Science, shows academic scientists spend about 19 hours a week on household chores. If universities offered a benefit to pay someone else to do that work, scientists would have more time to spend on the jobs they're trained for, she concluded.

"We're trying to get people more support in the household to lead to a better work-life balance," Schiebinger said. In a paper published in *Academe*, Schiebinger and co-author Shannon Gilmartin, a research consultant at the Clayman Institute for Gender Research, say partnered female scientists do 54 percent of the basic household chores; partnered male scientists do 28 percent of the cooking, cleaning and laundry.

#### **Cigarette Citadels project targets cigarette manufacturing**

Matthew Kohrman, associate professor of anthropology, plotted the international locations of more than 300 cigarette factories under the Cigarette Citadels project of the Stanford Global Tobacco Prevention Research Initiative.

The project is designed to increase the public's understanding of the tobacco industry and to share information that could combat the single largest cause of preventable death. Using tools such as Google Maps, Kohrman has pinpointed the largest clusters of cigarette manufacturers in Europe and Asia.

#### **Researchers prove limits of brain scans as legal evidence**

Brain scans are not yet accurate enough to be used as legal evidence. That's the conclusion of a team, writing in *Proceedings of the National Academy of Sciences*, that included Anthony Wagner, associate professor of psychology; postdoctoral fellow Jesse Rissman; and Hank Greely, the Deane F. and Kate Edelman Johnson Professor of Law.

Using functional magnetic resonance imaging to scan the brains of healthy adults, the researchers were able to measure how strong their subjects' sense of a specific memory was. But the researchers could not tell for sure whether the memories themselves were based on recollections of actual experiences.

# 2010: The Year in Review

Among the significant events that occurred at Stanford during the 2010 year are the following:

## JANUARY

Peter Vitousek, the Clifford G. Morrison Professor in Population and Resource Studies, wins the 2010 Japan Prize for pioneering work in biogeochemistry.

Stanford senior leadership matches donations made by faculty and staff to the Hôpital Albert Schweitzer in Haiti, which withstood the massive Jan. 12 earthquake.

President John Hennessy, co-chairman of the Committee on Science, Security and Prosperity of the National Research Council, testifies before an on-campus open hearing of the House Foreign Affairs Committee, urging lawmakers to rewrite export controls to reflect the modern realities of worldwide scientific collaboration and competition.

Applications for the fall freshman class increase 5.6 percent and set a record at 32,000.

Richard Zare, the Marguerite Blake Wilbur Professor in Natural Science, attends a White House celebration to receive a Presidential Award for Excellence in Science, Mathematics and Engineering Mentoring.

David Donoho, the Anne T. and Robert M. Bass Professor in the School of Humanities and Sciences, wins the Norbert Wiener Prize in Applied Mathematics, given every three years, for “introducing novel fundamental and powerful mathematical tools in signal processing and image analysis.”

The Law School launches a private venture in legal informatics called Lex Machina—the outgrowth of a research project called the Stanford Intellectual Property Litigation Clearinghouse.

## FEBRUARY

A Secure Data Center opens on campus to give faculty and student researchers access to information accumulated by the Census Bureau, the National Center for Health Statistics and other federal agencies.

Former *Stanford Daily* editor Devin Banerjee receives the 2010 Daniel Pearl Memorial Journalism Internship at the *Wall Street Journal*. The internship honors the Stanford alumnus slain in Pakistan in 2002.

Stanford Professor Martin Hellman helped make it possible for companies and ordinary people to encrypt their Internet communications, and he has a story to tell about it.

Martin Hellman, professor emeritus of electrical engineering, receives the 2010 Richard W. Hamming Medal of the Institute of Electrical and Electronics Engineers for development of the public key cryptography that makes Internet commerce feasible.

After years of design, assembly and testing, a space camera developed by researchers from Stanford and Lockheed Martin blasts into space to reveal the sun’s inner workings.

David A. B. Miller, the W. M. Keck Foundation Professor of Electrical Engineering, and Hau Lee, the Thoma Professor of Operations, Information and Technology at the Graduate School of Business, are elected to the National Academy of Engineering.

The National Science Foundation awards \$10 million to the Institute for Research in the Social Sciences to fund the American National Election Studies, under the auspices of political science Professors Simon Jackman and Gary Segura.

## MARCH

Energy Secretary and Nobel laureate Steven Chu, professor emeritus of physics, returns to campus to speak at Memorial Auditorium about sustainable energy and its importance to economic competitiveness in the United States.

The John A. and Cynthia Fry Gunn Building is dedicated during the annual Economic Summit of the Stanford Institute for Economic Policy Research.

Three Medical School students and three undergraduate alumni receive Paul & Daisy Soros Fellowships for New Americans: AbdulRasheed Alabi, Shah Ali, Tarek Ghani, Bowen Jiang, Tony Pan and Philip Tanedo.

Thomas Kailath, the Hitachi America Professor in the School of Engineering, Emeritus, wins the BBVA Foundation Frontiers of Knowledge Award in Information and Communication Technologies for work that enabled chip miniaturization and led to the development of a new antenna system used in the now ubiquitous Wi-Fi technology.

Arthur Bienenstock, professor emeritus of photon science and special assistant to the president for federal research policy, is elected to the Royal Swedish Academy of Engineering Sciences.

## APRIL

Bill Gates, co-chair of the Bill & Melinda Gates Foundation, talks in Memorial Auditorium to students as the Freeman Spogli Institute Payne Lecturer about the need to improve health care, bolster education and fight poverty around the world.

The Pritzker family of Chicago pledges \$10 million to create a scholarship fund to help Chicago-area students with need attend the university.

Junior Varun Sivaram receives a Truman Scholarship, which provides up to \$30,000 for graduate study to college students committed to careers in public service.

German Chancellor Angela Merkel speaks about international cooperation and tells a capacity crowd that “freedom and solidarity and partnership belong together. They must be indivisible for us to be able to master the challenges ahead.”

The Hasso Plattner Institute of Design settles into its new home in the renovated Peterson Building.

Persis Drell, director of the SLAC National Accelerator Laboratory and professor of particle physics and astrophysics; Jerome Friedman, professor emeritus of statistics; Steven Kivelson, professor of physics; Roeland Nusse, professor and chair of developmental biology; and Lee Ross, the Stanford Federal Credit Union Professor in the Department of Psychology, are elected to the National Academy of Sciences.

## MAY

Paul Volcker, former Federal Reserve chair, receives the first \$100,000 Stanford Institute for Economic Policy Research Prize for Contributions to Economic Policy.

Stanford faculty and staff are among 229 scholars elected to the American Academy of Arts and Sciences:

- Christopher Field, professor of biology and of environmental Earth system science
- Michael Keller, the Ida M. Green University Librarian
- Karla Kirkegaard, professor of microbiology and immunology
- Michael Levitt, professor of structural biology
- Grigori Mints, professor of philosophy
- Parviz Moin, the Franklin P. and Caroline M. Johnson Professor in the School of Engineering
- Myron Scholes, the Frank E. Buck Professor of Finance, Emeritus
- Gary Segura, professor of political science
- Thomas Südhof, the Avram Goldstein Professor in the School of Medicine
- Philip Zimbardo, professor emeritus of psychology



Stanford political science Professor Gary Segura (L.A. Cicero)

Peter and Helen Bing join President Hennessy for the ceremonial groundbreaking for the new Bing Concert Hall.

Pam Grossman, the Nommellini-Olivier Professor of Education, is elected to the National Academy of Education.

## JUNE

Thomas Südhof, the Avram Goldstein Professor in the School of Medicine, is named a recipient of the 2010 Kavli Prize, given for achievements in neuroscience, nanoscience and astrophysics.

Drawing on an experience in war-torn Angola, U.S. Ambassador to the United Nations Susan Rice urged Stanford's Class of 2010 to use their skills and smarts to bridge the gaps of global disparities.

The School of Medicine will develop a new Center for Cancer Systems Biology, thanks to a \$12.8 million grant from the National Cancer Institute.

Susan Rice, U.S. ambassador to the United Nations, tells graduates at Commencement that the fight against global poverty is “not only one of the great moral challenges of all time, but also one of the great national security challenges of our time.”

Harry Elam, the Olive H. Palmer Professor in Humanities, is appointed the Freeman-Thornton Vice Provost for Undergraduate Education, succeeding John Bravman, who was appointed president of Bucknell.



Harry Elam, vice provost for undergraduate education (L.A. Cicero)

Russian President Dmitry Medvedev comes to Stanford to learn more about the success of Silicon Valley and speaks about efforts to wean the Russian economy from a dependence on oil and increase investments in technology.

Stanford Athletics wins its 16th consecutive Learfield Sports Directors’ Cup, which recognizes the top intercollegiate athletic program in the nation.

Two dozen Stanford students and alumni are selected for fellowships funded by the Fulbright U.S. Student Program.

The Stanford Board of Trustees approves a new proxy voting guideline that says the university will vote “yes” on shareholder resolutions that ask companies to report on their policies on conflict minerals and conflict mineral derivatives.

Four new members are elected to the Board of Trustees: Armando Garza Sada, Frank Don Lee, Paul Alan Ormond and Deborah Anne Zoullas.

## JULY

The Stanford University Libraries acquires a 9,100-volume collection of reproductions of ancient Chinese books that chronicle the civilization’s past.



Books from a newly donated collection represent the four traditional realms of Chinese knowledge: history, philosophy, literature and classics. (Qi Qiu)

Philanthropist, diplomat, publisher and Stanford alumnus Bill Lane dies at 90.

President Obama appoints Mariano-Florentino Cuelar, professor of law, to the Council of the Administrative Conference of the United States.

## AUGUST

Leslie Hume, chair of the Board of Trustees, signs a lease with the U.S. Department of Energy allowing the SLAC National Accelerator Laboratory to continue to operate on university-owned land for the next 33 years.

U.S. Secretary of Energy Steven Chu joins SLAC National Accelerator Laboratory Director Persis Drell, President John Hennessy and other dignitaries for the dedication of the Linac Coherent Light Source, the world’s most powerful X-ray laser.

Ruth Porat, executive vice president and chief financial officer of Morgan Stanley, and Penny Pritzker, chair of TransUnion and the Pritzker Realty Group, are elected to the Board of Trustees.



Ruth Porat



Penny Pritzker

The new Center for Nanoscale Science and Engineering opens in the Science and Engineering Quadrangle.

## SEPTEMBER

The Volvo Environment Foundation awards its annual prize to Harold Mooney, the Paul S. Achilles Professor of Environmental Biology.

Gretchen Daily, the Bing Professor in Environmental Science and senior fellow at the Woods Institute for the Environment, is named a recipient of the 2010 Heinz Awards for her work to place a value on the services provided by natural ecosystems.

The Stanford Cancer Center treats the 5,000th patient using the CyberKnife, invented by John Adler, the Dorothy and Thye King Chan Professor in Neurosurgery, to combine computer imaging and robotic motion to treat the most difficult cancers.

Carlos Bustamante, professor of genetics, is named a MacArthur Foundation fellow; the award is commonly known as the “genius grant.”

The School of Medicine’s Li Ka Shing Center for Learning and Knowledge is dedicated.

The Stanford Encyclopedia of Philosophy, which attracts 700,000 visits per week on the Internet, celebrates its 15th anniversary.

The Stanford Human Immune Monitoring Research Center is created by a \$17.1 million grant from the National Institutes of Health under the directorship of Mark Davis, the Burt and Marion Avery Family Professor, to characterize the human immune system under normal conditions and to learn how it changes following infection and vaccination.

## OCTOBER

The Jen-Hsun Huang Engineering Center, the new home for the School of Engineering, is dedicated.

The Dalai Lama visits campus to deliver several talks and to attend a conference on compassion sponsored by the Medical School’s Center for Compassion and Altruism Research and Education.

Board of Trustees members fete President John Hennessy and Provost John Etchemendy for their 10 years in office, noting that Etchemendy is now the longest serving provost in Stanford history.



Provost John Etchemendy is now the longest serving provost in Stanford history. (L.A. Cicero)

Stanford celebrates the dedication of the Lorry I. Lokey Stem Cell Research Building at the School of Medicine—the largest such research facility in the nation.

Google announces it will test its ultra-high-speed broadband network within the university’s faculty/staff housing subdivision, beginning in 2011.

## NOVEMBER

Actor George Clooney and activist John Prendergast talk to a capacity crowd in Cubberley Auditorium about the volatility threatening to spark more genocide in Sudan.

Four faculty are recognized with Presidential Early Career Awards for Scientists and Engineers: Dominique Bergmann, assistant professor of biology; Gianluca Iaccarino, assistant professor of mechanical engineering; Jacob Wacker, theoretical physicist at SLAC; and Joseph Wu, associate professor of medicine and radiology.

Seniors Fatima Sabar and Varun Sivaram and alumnus Fagan Harris are among 32 Americans awarded Rhodes Scholarships for 2011, while alumnus David Gobaud won a George J. Mitchell Scholarship.



Siegfried Hecker, co-director of the Center for International Security and Cooperation, stunned the world in November with news of North Korea’s uranium enrichment facility. (L.A. Cicero)

Siegfried Hecker, co-director of the Center for International Security and Cooperation at the Freeman Spogli Institute (FSI); Robert Carlin, FSI visiting scholar; and John Lewis, William Haas Professor of Chinese Politics, Emeritus, stunned the world with news of North Korea’s new uranium-enrichment facility.

A gift from alumni couple Thomas Steyer and Kat Taylor funds the Steyer-Taylor Center for Energy Policy and Finance and allows the business and law schools to push clean energy technology to deployment.

## DECEMBER

The Cardinal football team ends the season with 11 wins for the first time in school history and earns an invitation to the Discover Orange Bowl, while quarterback Andrew Luck finishes as the Heisman Trophy runner up.

# Message from the Chair of the Board of Trustees

This year marks the 125th anniversary of Stanford's founding, a milestone that has prompted me to consider the university's origins and reflect on its development.

In November 1885 Jane and Leland Stanford executed the university's Founding Grant even as they struggled with the devastating loss of their only child. They looked beyond their personal grief and envisioned a future profoundly hopeful.

Their aspirations for the university were clear from the beginning: Established as a tribute to their son, the Leland Stanford Junior University was to be a "University of high degree." In the Founding Grant's 11 pages and little more than 3,000 words, the Stanfords articulated the foundational beliefs that have shaped — and continue to shape — Stanford University more than a century later.

The first article states the university's purpose: to educate students "for personal success, and direct usefulness in life" and "to promote the public welfare by exercising an influence in behalf of humanity and civilization." This clarion call for practical education in service to society has forged Stanford University.

From the earliest days, we have educated our students to put their knowledge to good use, and we see that tradition at work today in our multidisciplinary initiatives. Through these we are tackling society's most difficult problems from many disciplines and directions — pioneering advances in regenerative medicine, seeking new approaches to K-12 education, finding ways to alleviate poverty and developing sustainable energy technologies, just to name a few of our path-breaking ventures.



These efforts are built on the strong foundation of a liberal education, one that includes, as the Stanfords stipulated, "studies and exercises directed to the cultivation and enlargement of the mind." The Founding Grant affirms the importance of the arts in this process, recognizing that museums and art galleries are "necessary and appropriate to a university of high degree." Today, the arts are flourishing here, reflecting our deep commitment to nurturing creativity in our students and the recognition of the many ways in which the arts contribute to the Stanford experience and stimulate the spirit of innovation and discovery that permeates this campus.

The Founding Grant also describes the university's physical plant, declaring that the buildings should be "substantial in character" and "allow for additions and expansions." At the same time the Stanfords reminded the Trustees that it is the quality of the faculty and students, not its buildings, that determines a university's excellence.

As President Hennessy noted in his opening essay, we dedicated a number of buildings this year — each designed to enable the work of the university's faculty and students and accommodate their needs today and tomorrow. These superb additions to our physical plant reflect the founders' pioneering spirit, even as they embody our commitment to research and education that benefits society.

In addition to their vision of an education linked to service to society, Jane and Leland Stanford believed that education should be accessible to "the deserving and exceptional." Although the university charged no tuition in its early years, the Founding Grant included a provision for scholarships.

Today, we continue to honor that commitment. As we enter the final year of The Stanford Challenge, we are focused on investing in our students and faculty — sustaining our financial aid program, providing fellowships to outstanding graduate students and retaining our distinguished faculty.

Our alumni and friends share our belief in this work, and the excellence of Stanford University is a testament to their deep commitment and support. Their continued generosity is evidence of the strength of the Stanford community and the bonds that connect generations.

The Founding Grant is an extraordinary document, the source for the university's development as we move forward in this century. Over the years, it has guided and inspired, prompting each generation to strike out in new directions.

In a letter to the Board of Trustees on July 6, 1904, Jane Stanford wrote:

"Through all these years, I have kept a mental picture before me. I could see a hundred years ahead when all the present trials were forgotten, and all of the present active parties gone, and nothing remaining but the institution. I could see beyond all this the children's children's children coming here from the East, the West, the North, and the South."

Now — more than a hundred years ahead — Stanford University exemplifies that vision. Looking forward, I have no doubt that Stanford will remain true to its founding spirit, attracting exceptional students and faculty from all corners of the world, to advance the cause of humanity.

Thank you for your support for this remarkable university.

Leslie P. Hume  
Chair,  
Stanford University Board of Trustees

# STANFORD UNIVERSITY 2010 FINANCIAL REVIEW

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# DISCUSSION OF FINANCIAL RESULTS

Fiscal year 2010 (FY10) was a period of economic recovery and modest growth. Stanford's investments generated a positive return, resulting in a \$1.5 billion or 7.5% increase in consolidated net assets. Consolidated operating revenues exceeded expenses by \$362 million in FY10, compared to \$509 million in FY09.

Below are additional details about the University's and Hospitals' operations and financial results.

## University

During FY10, the University continued to address the impact of the 2008-09 financial downturn. Layoffs and cost cutting measures which occurred in FY09 were followed in FY10 by salary freezes for faculty and staff, and continued efforts to streamline administrative and support functions. The University reduced payout from existing endowment funds by 10% in FY10 and a further 15% in FY11. As a result of these efforts, significant progress has been made in strengthening the University's financial position.

Donor support and investment returns during FY10 contributed to a \$1.4 billion increase in University net assets, which rose to \$19.4 billion at August 31, 2010. The University's endowment increased \$1.2 billion or 10% to \$13.9 billion. Despite this improvement, the University's endowment remains 20% lower than at year-end 2008.

### FY10 FINANCIAL HIGHLIGHTS

**Support from donors.** Despite ongoing economic pressures and challenges, the University continues to benefit from the loyal and generous support of its donors. During FY10, the University received a record 116,000 gifts from over 76,000 donors. FY10 gifts as reported by the University Office of Development totaled \$599 million on a cash basis; gifts and pledges of \$494 million are reported in the financial statements on an accrual basis.

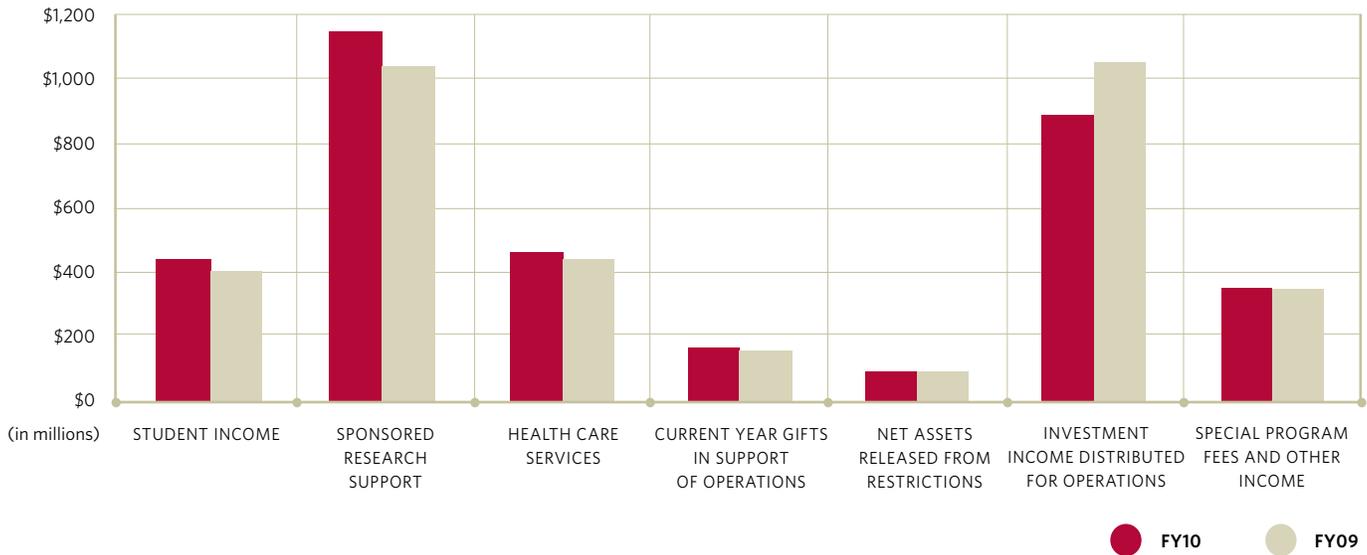
As in recent years, the majority of these gifts and pledges supported The Stanford Challenge, which was publicly launched in October 2006. The Stanford Challenge funds are aimed at seeking solutions to intractable global problems and educating a new generation of leaders for the complexities of today's world. Four years into the campaign, more than \$600 million in key priorities remain unfunded. The highest unmet needs are concentrated in facilities, faculty support and undergraduate financial aid. Stanford's endowment has been the main source of funding for scholarships. With the decline in the endowment and the growing need for scholarships, the University increased The Stanford Challenge goal for endowed need-based scholarships to \$300 million—three times the initial target. The campaign will conclude on December 31, 2011.

**Positive investment performance.** University investment returns in FY10 were \$1.9 billion, compared to a \$4.0 billion loss in FY09. The positive returns were achieved during a volatile year in the U.S. and international equity markets. See the report from the Stanford Management Company on page 55 for a further analysis of University investment strategies and performance.

### OPERATING RESULTS

The *Statements of Activities* include both results from operations and non-operating changes in the net assets of the University. The total change in net assets of the University was almost \$1.4 billion in FY10. Operating activities include all revenues and expenses that support current year teaching and research efforts and other University priorities. The University ended the year with a surplus from operations of \$210 million in FY10 compared to \$362 million in FY09. The University's non-operating changes in net assets totaling \$1.2 billion are discussed in the *Financial Position* section of this analysis.

**FIGURE 1**  
**OPERATING REVENUES**



### OPERATING REVENUES

FY10 operating revenues of \$3.5 billion showed a slight increase over FY09. Reductions in endowment and other investment income paid out to operations were offset by increases in sponsored research, healthcare and student income. The components of the University's operating revenues are shown above.

#### Student Income

Total student income, which represents 12% of University operating revenues, increased to \$430 million in FY10. Student income includes tuition and fees from undergraduate and graduate programs and room and board; this amount is offset by financial aid. Revenues from student tuition and fees increased 7% in FY10 primarily as a result of a 3.75% undergraduate and general graduate tuition increase, a slight increase in enrollment, and a new health service fee. Room and board revenues increased 11% due to rate increases and additional revenues from the newly opened 600 bed Munger Graduate Residences.

Financial aid increased \$17 million or 8% in FY10 to \$227 million, reflecting Stanford's continued commitment to providing an affordable education to all students. In FY08, the University reaffirmed this commitment and changed its financial aid policy to make Stanford more affordable to middle income families. Approximately 80% of undergraduate students and 84% of graduate students received some form of financial aid from Stanford in FY10.

#### Sponsored Research Support

Sponsored research support for the University was \$1.1 billion in FY10, increasing 11% over FY09. This category represents nearly one third of the University's operating revenues.

Approximately 84% of the University's sponsored research support, including SLAC National Accelerator Laboratory (SLAC), is received directly or indirectly from the federal government. The federal economic stimulus bill, the American Recovery and Reinvestment Act (ARRA), has been a major driver of the increase in research activity for FY09 and FY10. Five of Stanford's seven schools - Earth Sciences, Education, Engineering, Humanities and Sciences, and Medicine - and the SLAC National Accelerator Laboratory received ARRA grants. As of August 31, 2010, Stanford has been awarded \$247 million of ARRA funding; almost \$90 million of this amount was spent by the University and SLAC in FY10.

Direct costs for SLAC increased \$39 million or 13% over FY09 primarily due to ARRA funded projects, such as the LCLS Ultrafast Science Instrument. The Linac Coherent Light Source (LCLS), the world's most powerful x-ray laser, began operating in October 2009, which also contributed to the increase.

Federal and non-federal indirect cost recovery increased \$29 million to \$203 million in FY10 as a result of higher research volume and an increase in the indirect cost rate for new federally sponsored research from 58% to 60%.

### THE UNIVERSITY'S ENDOWMENT

The University's endowment is a collection of gift funds and reserves which are set aside and invested to support the University's teaching and research missions. At August 31, 2010, the endowment totaled \$13.9 billion and represented approximately 71% of the University's net assets. The endowment includes pure endowment funds, endowed lands, term endowment funds and funds functioning as endowment.

Gifts and pledge payments, investment returns, and other invested funds increased the endowment by \$1.2 billion in FY10.

Payout to operations from the endowment continues to be a substantial source of operating revenue for the University, covering approximately 26% of expenses in FY10, compared to 31% in FY09.

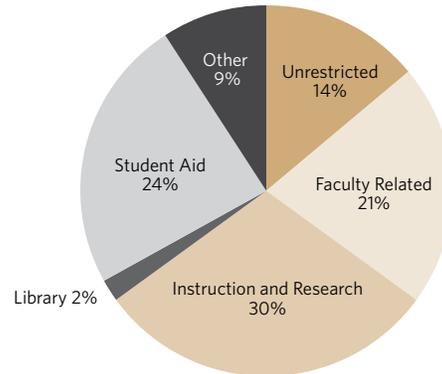
The University's endowment provides funding annually for a wide variety of important purposes. See Figure 2 for a distribution of endowment payout by purpose. Approximately 30% funds instruction and research activities, 24% goes to student aid, 21% covers faculty salaries and support, 14% is unrestricted and the remainder is split between library support and other purposes.

Endowment payout distributions were approximately 6.8% and 5.7%, respectively, of the beginning of year endowment value in FY10 and FY09.

### Health Care Services

FY10 health care services revenues for the University increased \$25 million or 6% from FY09 to \$454 million and represented 13% of operating revenues. Health care services revenues consist primarily of payments made by the Hospitals to the University, including \$405 million to the School of Medicine for faculty physicians' services, blood center and other essential services. An additional \$31 million represents other services provided by the School of Medicine and other University departments to the Hospitals, reduced by the value

**FIGURE 2**  
**ENDOWMENT PAYOUT BY PURPOSE**



of certain services provided by the Hospitals to the School of Medicine and the University. These amounts are eliminated in consolidation.

Faculty physicians also generated \$17 million in revenues from services provided to external parties, including the Santa Clara Valley Medical Center and the Palo Alto Veterans Administration Hospital.

### Current Year Gifts in Support of Operations

Current year gifts in support of operations increased to \$160 million in FY10, a 7% increase over FY09 levels. Despite an overall decline in total gifts to the University in FY10, the University received the largest number of expendable gifts in its history.

### Total Investment Income Distributed for Operations

Total investment income included in operations represented 25% of University revenue, the second highest sources of operating revenue for the University.

- Endowment income distributed for operations decreased to \$855 million in FY10, from \$957 million in FY09. The largest component of endowment income is the payout from endowment funds invested in the University's Merged Pool (MP). With the decline in the investment markets in FY09 and the uncertain economic outlook, the University implemented a 10% decrease in endowment payout from existing funds invested in the MP in FY10 and a further 15% decrease in FY11.

- Expendable funds pool and other investment income distributed for operations was \$28.3 million in FY10, compared to \$94.2 million in FY09. This category includes the payout to operations from the Expendable Funds Pool (EFP), the Endowment Income Funds Pool (EIFP) and income from the faculty and staff mortgage loan program. The EFP and the EIFP are the principal investment vehicles for the University's expendable funds.
- Effective September 1, 2009, the Board of Trustees approved an amended expendable funds policy, under which the EFP provides a variable payout to operations based on investment returns in the prior fiscal year. Actual returns in excess of the approved EFP payout are added to "buffers" invested as funds functioning as endowment, and shortfalls are withdrawn from the buffers. Due to significant losses in the EFP in FY09, payout from the EFP to support operations dropped significantly in FY10.
- The EIFP, which holds payout previously distributed to permanently restricted endowment fund holders that has not yet been expended, is invested in a money-market fund and distributes earnings on its investments to the fund holders.

## OPERATING EXPENSES

Total expenses increased \$161 million, or 5.1%, to \$3.3 billion in FY10. Salaries and benefits comprised 62.7% of the University's total expenses, depreciation expense was 7.1% and other operating expenses represented 30.2%.

- Salaries and benefits increased 3.4% in FY10 to \$2.1 billion. Although salaries were frozen in FY10, increases in health care costs and expenses associated with the University's retirement plans drove benefit costs higher. Approximately 500 positions were eliminated over the past two years. Despite these cost cutting actions, headcount increased slightly, primarily to support sponsored projects funded by ARRA.
- Depreciation expense increased by 9.3% to \$234 million in FY10 from \$214 million in FY09. The significant increase in this category is due to depreciation from buildings recently placed in service, including two buildings in the Science and Engineering Quad 2 ("SEQ2") and two buildings at the School of Medicine as discussed below under **Capital Projects**.
- Other operating expenses increased 7.9% to \$993 million from \$920 million in FY09. Offsetting University programs that continued to focus on achieving economic efficiencies and cost reductions were increases in operating expenses in support of additional sponsored research both at the University and at SLAC, with ARRA being the primary source of these additional projects.

## FINANCIAL POSITION

The University's *Statements of Financial Position* reflect solid investment returns and modest operating results. Total University assets increased \$1.9 billion in FY10 to end the year at \$24.6 billion. Total University liabilities increased \$486 million to \$5.1 billion.

### Cash and Cash Equivalents

The University's cash position at August 31 included approximately \$800 million raised through a taxable debt issue in April 2009 to ensure adequate liquidity in support of University investments and operations. Now that the financial crisis has eased, the University has begun evaluating alternative uses for this cash.

### Investments

Investments increased by \$1.3 billion, up 7.9% from FY09. Alternative investments, including various types of limited partnerships, private equity funds, venture capital funds, natural resources, real estate and hedge funds, represent approximately 76% of total investments at August 31, 2010. With such a significant portion of investments in relatively illiquid vehicles, the University closely monitors liquidity required to meet operating and other contractual commitments.

### Capital Projects

The University continued to invest heavily in its physical facilities, especially in support of science, engineering and medicine. Plant facilities, net of accumulated depreciation, increased \$314 million to \$3.6 billion in FY10. Net additions to plant facilities in FY10 totaled \$510.4 million, bringing gross plant facilities before accumulated depreciation to \$6.3 billion.

Buildings completed in FY10 include the Jen-Hsun Huang Engineering Center and the Center for Nanoscale Science and Technology in SEQ2, and the Li Ka Shing Center for Learning and Knowledge and the Lorry I. Lokey Stem Cell Research

Building (SIM1) at the School of Medicine. Progress continues on the Knight Management Center, the new Graduate School of Business campus which is scheduled to open in FY11. Other major construction projects underway include the Bing Concert Hall, and the new Neukom Law School Clinics and Faculty Office Building.

### **Retirement Plans**

The University provides retirement benefits for staff and faculty under a defined contribution plan: Stanford Contributory Retirement Plan (SCRCP); and three defined benefit plans: the Staff Retirement Annuity Plan (SRAP), which is essentially closed to new participants; the Postretirement Benefit plan (PRBP), which provides certain health care benefits to retired employees; and the Faculty Retirement Incentive Program (FRIP), which is available only to faculty. As of August 31, 2010, the obligations related to the SRAP and PRBP plans increased \$173 million from the previous year, offset by a \$26 million decline in the FRIP plan, due to payments in retirement incentive benefits. For the SRAP and PRBP plans, liabilities exceeded plan assets by \$414 million at year end FY10. The increase in the liability over FY09 was primarily attributed to (1) the estimated impact of new health care reform legislation signed into law in 2010 and (2) a significant drop in interest rates during FY10 resulting in a higher projected benefit obligation. The University is evaluating alternative strategies for mitigating the impact of rising health care costs.

University contributions to the SCRCP plan, which are based on salaries and levels of employee participation, and which vest immediately to participants, were \$99.3 million in FY10, up from \$97.7 million in FY09.

### **Debt**

The University's debt policy governs the amount and type of debt Stanford may incur and is intended to preserve debt capacity, financial flexibility and access to capital markets at competitive rates. A combination of fixed and variable rate debt, of varying maturities, is used to fund academic facilities, residential housing and dining facilities, faculty and staff mortgage loans and other infrastructure projects.

Total borrowings increased \$299 million to \$2.8 billion as of August 31, 2010. In FY10, the University issued \$215 million in additional tax-exempt bonds, CEFA Series U-1. Proceeds were used to refund commercial paper, and the remaining balance

will be used to fund capital facilities and infrastructure projects. Debt of approximately \$70 million is related to investment entities consolidated in the University financial statements.

### **Unrestricted Net Assets**

In total, unrestricted net assets of the University increased \$845 million to \$9.1 billion, with \$210 million resulting from operating activities. The most significant component of other changes in unrestricted net assets in FY10 was the \$616 million increase in realized and unrealized investment gains. Also included in non-operating activities was \$123 million in applied capital and other gifts which were released from restrictions and used to fund capital improvements. These increases were partially offset by \$100 million in additional pension related charges.

### **Temporarily Restricted Net Assets**

Temporarily restricted net assets increased \$432 million to \$5.5 billion in FY10. The University received \$190 million of new temporarily restricted gifts and pledges in FY10, and benefited from a \$444 million increase in realized and unrealized investment gains. Partially offsetting these increases were the \$123 million in capital and other gifts released from their restrictions to fund construction and operating activities.

### **Permanently Restricted Net Assets**

Permanently restricted net assets increased \$118 million to \$4.8 billion during FY10. The increase was due to the receipt of \$107 million in new gifts and pledges and gifts transferred from the Hospitals of \$58 million, offset in part by \$101 million decrease due primarily to donor redesignations and other reclassifications in FY10. The principal value of these funds must be invested in perpetuity to generate endowment income to be used only for purposes designated by donors.

## **Hospitals**

The financial results and financial position of Stanford Hospital and Clinics and Subsidiaries (SHC) and the Lucile Packard Children's Hospital at Stanford (LPCH) are combined in the consolidated financial statements under the "Hospitals" column. The University is the sole member of each of the Hospitals.

The Hospitals had a combined operating surplus of \$152.2 million, up 3% from \$147.2 million in FY09. At August 31,

2010, the Hospitals' net assets were \$2.0 billion compared to \$1.9 billion at August 31, 2009, an increase of \$97 million. The following discussion summarizes the individual financial results of SHC and LPCH as shown in the consolidated financial statements.

### **STANFORD HOSPITAL AND CLINICS AND SUBSIDIARIES (SHC)**

SHC continued to show solid results generating income from operations of \$100 million for FY10 compared to \$95 million for FY09. Total net assets at August 31, 2010 increased \$78 million to \$885 million. Higher patient revenues and improved financial market conditions contributed to SHC's increase in net assets and strengthened its financial position. Other FY10 highlights for SHC include:

- SHC completed implementation of its Clinical Information System (CIS), an electronic medical record for patients that will help promote patient safety, quality, care management, and patient communication.
- SHC established The Eye Institute at Stanford (the Eye Institute), a state-of-the-art, patient-centered facility that will deliver integrated vision care services.

#### **Statement of Activities**

Operating revenues increased by 8% to \$2.0 billion primarily due to an 8% increase in patient revenues to \$1.9 billion. Inpatient revenues represented 51% of total patient revenues and grew 3% due to continuing patient volume increases; outpatient revenues increased by 14%.

Operating expenses increased 8% in FY10 to \$1.9 billion. Salaries and benefits increased 7% to \$840 million in response to growth in patient volumes and a full year of operations for the new Stanford Medicine Outpatient Center in Redwood City. In addition, other operating expenses were up 8% to \$619 million largely as a result of costs related to increased patient activity and enhanced IT infrastructure.

#### **Statement of Financial Position**

SHC's *Statement of Financial Position* reflects improved investment returns and continued spending on facilities and systems. Property and equipment, net of depreciation, increased \$19 million to \$860 million during FY10. The largest elements of the increase were continued expenditures for the construction of a new SHC facility to replace the current facility which does not meet seismic standards which will apply in

the next few years, Clinical Information System, and The Eye Institute at Stanford.

In FY10, SHC completed a refunding of \$366 million of bonds in preparation for construction of a new SHC facility. As part of this effort, Moody's upgraded SHC's bond rating to Aa3.

### **LUCILE PACKARD CHILDREN'S HOSPITAL AT STANFORD**

LPCH generated an excess of revenues over expenses from operations of \$52 million in FY10, essentially even with FY09. Net assets at August 31, 2010 were \$1.1 billion, reflecting an increase of \$20 million over FY09. A combination of operating results, investment gains, and donor contributions increased unrestricted net assets by \$118 million during FY10, while restricted net assets fell by \$98 million. The decrease in restricted assets was principally due to a transfer of \$58 million of endowment funds restricted for pediatric research to the University, which will be managed under the oversight of the Child Health Research Institute.

#### **Operating Results**

Total operating revenues in FY10 were \$802 million, a 7% increase over FY09. Net patient revenues grew 9% to \$757 million in FY10 reflecting a 2% increase in inpatient volume, higher commercial contract rates, and a 10% increase in hospital outpatient activity; these increases were offset by a 6% increase in Medi-Cal utilization. The Hospital continued to receive DSH (Disproportionate Share) funding. DSH is a feature within California's Medi-Cal program for the poor. When the State determines that a hospital has relatively more Medi-Cal utilization than the norm, that hospital receives DSH supplemental funding to help offset, in part, the low payment rates from the program. Hospitals must re-qualify for DSH annually. LPCH recorded \$10 million in DSH support in FY09 and \$12 million in FY10.

Operating expenses grew by 7%, increases in labor costs (45% of total expense) were the major factor in the expense increase. Labor costs increased 10% in FY10 due to higher salaries commanded in the competitive market for health care professionals as well as an increase in benefit costs such as health care and salary based benefits.

#### **Other LPCH highlights:**

LPCH's community benefits, including services to patients under Medi-Cal and other publicly sponsored programs that

reimburse at amounts less than the cost of services provided to the recipients, were \$135 million in FY10 compared with \$110 million in FY09. The increase was due to increases in Medical utilization, costs exceeding the related contract increases, and uncompensated care. In addition, LPCH also invests in improving the health of the children of San Mateo and Santa Clara counties through a range of community-based programs.

## Looking Forward

Entering FY 2011 Stanford is in a strong financial position, with sufficient liquidity and reserves to weather any short-term financial disruptions. For the University, the recent economic downturn provided impetus to improve administrative efficiency and trim unnecessary expenses. Student demand and research volume are at record levels. The physical plant is in excellent condition with numerous new facilities and minimal deferred maintenance. The Hospitals have demonstrated consistently strong operating performance, while improving clinical quality and patient satisfaction, and completing implementation of clinical information systems.

The longer-term outlook is more challenging due to the global economic environment, federal budget deficit and healthcare reform. The economic environment is likely to result in modest investment returns for many years, limiting growth in endowment payout, constraining donor capacity for philanthropic support, and driving increased student need for financial aid. The federal budget deficit is likely to constrain growth, or possibly cause a decline, in sponsored research funding, which currently provides one-third of University revenue. At a time when the Hospitals are planning to invest over \$3 billion to modernize and expand acute care facilities, healthcare reform creates a long period of uncertainty in reimbursement levels and government/private payor mix.

The University and Hospitals are preparing to address the challenges which lie ahead. The strength of the Stanford community, including the students, alumni and friends, faculty and staff, has provided the talent and generosity to meet recent setbacks and will guide us through future challenges.



Randall S. Livingston  
Vice President for Business Affairs and  
Chief Financial Officer  
Stanford University



M. Suzanne Calandra  
Senior Associate  
Vice President for Finance  
Stanford University



Daniel J. Morissette  
Chief Financial Officer  
Stanford Hospital and Clinics



Timothy W. Carmack  
Chief Financial Officer  
Lucile Salter Packard Children's Hospital at Stanford

# SELECTED FINANCIAL AND OTHER DATA

Fiscal Years Ended August 31

	2010	2009	2008	2007	2006
(in millions of dollars)					
<b>CONSOLIDATED STATEMENT OF ACTIVITIES HIGHLIGHTS</b>					
Total Revenues	\$ 5,779	\$ 5,602	\$ 5,403	\$ 4,877	\$ 4,511
Student income (A)	430	401	405	394	376
Sponsored research support	1,143	1,031	1,076	1,058	994
Health care services	2,620	2,424	2,193	1,996	1,851
Total Expenses	5,417	5,093	4,957	4,467	4,212
Excess of revenues over expenses	362	509	446	410	299
Other changes in net assets	1,131	(5,450)	471	3,647	2,709
Net change in total net assets	\$ 1,493	\$ (4,941)	\$ 917	\$ 4,057	\$ 3,008
<b>CONSOLIDATED STATEMENT OF FINANCIAL POSITION HIGHLIGHTS:</b>					
<b>UNIVERSITY</b>					
Investments at fair value	\$ 17,804	\$ 16,501	\$ 21,758	\$ 21,167	\$ 17,524
Plant facilities, net of accumulated depreciation	3,584	3,270	2,887	2,706	2,547
Notes and bonds payable:	2,816	2,517	1,532	1,494	1,309
Total assets	24,553	22,672	26,704	25,888	21,808
Total liabilities	5,118	4,633	4,013	3,930	3,408
Total net assets	19,435	18,039	22,691	21,958	18,400
<b>HOSPITALS</b>					
Investments at fair value	1,359	1,257	1,712	1,952	1,739
Plant facilities, net of accumulated depreciation	1,283	1,260	1,080	766	617
Notes and bonds payable:	992	999	1,007	1,015	1,006
Total assets	3,658	3,472	3,670	3,402	2,908
Total liabilities	1,686	1,597	1,506	1,422	1,428
Total net assets	1,972	1,875	2,164	1,980	1,480
<b>OTHER UNIVERSITY FINANCIAL DATA AND METRICS:</b>					
Total endowment at year end	\$ 13,851	\$ 12,619	\$ 17,214	\$ 17,165	\$ 14,085
Endowment payout in support of operations	855	957	882	609	535
As a % of beginning of year endowment	6.8%	5.6%	5.1%	4.3%	4.4%
As a % of total expenses	26.0%	30.6%	27.8%	21.0%	19.6%
Total gifts (B)	599	640	785	832	911
<b>STUDENTS:</b>					
<b>ENROLLMENT: (C)</b>					
Undergraduate	6,887	6,878	6,812	6,759	6,689
Graduate	8,779	8,441	8,328	8,186	8,201
<b>DEGREES CONFERRED:</b>					
Bachelor degrees	1,671	1,680	1,646	1,709	1,756
Advanced degrees	3,046	2,932	2,928	3,100	3,093
<b>FACULTY:</b>					
MEMBERS OF THE ACADEMIC COUNCIL	1,475	1,451	1,459	1,428	1,418
ANNUAL UNDERGRADUATE TUITION RATE (IN DOLLARS)	\$ 37,380	\$ 36,030	\$ 34,800	\$ 32,994	\$ 31,200

(A) Financial aid is reported as a reduction of student income in the Statement of Activities.

(B) As reported by the Office of Development (See Note 14). Beginning in 2009, reported amounts include SHC gifts.

(C) Enrollment for fall quarter immediately following fiscal year end.

# REPORT OF INDEPENDENT AUDITORS



PricewaterhouseCoopers LLP  
Three Embarcadero Center  
San Francisco, CA 94111-4004  
Telephone (415) 498-5000  
Facsimile (415) 498-7100

To the Board of Trustees  
Stanford University

In our opinion, the accompanying consolidated statements of financial position and the related consolidated statements of activities and cash flows present fairly, in all material respects, the financial position of Stanford University (the "University") at August 31, 2010 and 2009, and the changes in its net assets and its cash flows for the years 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 audits. We conducted our audits 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 audits provide a reasonable basis for our opinion.

As discussed in Note 1, effective September 1, 2008 the University adopted the provisions of the accounting guidance within ASC 958-205, *Not-for-Profit Entities* and changed the manner in which it classifies donor-restricted endowment funds.

A handwritten signature in black ink that reads "PricewaterhouseCoopers LLP".

December 15, 2010

# CONSOLIDATED STATEMENTS OF FINANCIAL POSITION

At August 31, 2010 and 2009 (in thousands of dollars)

	2010			2009
	UNIVERSITY	HOSPITALS	CONSOLIDATED	CONSOLIDATED
<b>ASSETS</b>				
Cash and cash equivalents	\$ 1,494,231	\$ 526,572	\$ 2,020,803	\$ 1,781,274
Accounts receivable, net	238,313	388,661	626,974	555,970
Receivables (payables) from SHC and LPCH, net	67,595	(67,595)	-	-
Prepaid expenses and other assets	83,401	64,112	147,513	131,467
Pledges receivable, net	764,662	104,507	869,169	894,445
Student loans receivable, net	74,997	-	74,997	72,375
Faculty and staff mortgages and other loans receivable, net	442,764	-	442,764	421,052
Investments at fair value, including securities pledged or on loan of \$118,053 and \$193,862 for 2010 and 2009, respectively	17,803,361	1,359,258	19,162,619	17,757,473
Plant facilities, net of accumulated depreciation	3,583,996	1,282,666	4,866,662	4,529,636
Works of art and special collections	-	-	-	-
<b>TOTAL ASSETS</b>	<b>\$ 24,553,320</b>	<b>\$ 3,658,181</b>	<b>\$ 28,211,501</b>	<b>\$ 26,143,692</b>
<b>LIABILITIES AND NET ASSETS</b>				
<b>LIABILITIES:</b>				
Accounts payable and accrued expenses	\$ 692,696	\$ 525,978	\$ 1,218,674	\$ 1,090,634
Accrued pension and post retirement benefit cost	554,368	167,327	721,695	561,052
Pending trades	135,345	-	135,345	66,160
Liabilities under security lending agreements	160,024	-	160,024	248,048
Deferred rental income	370,573	-	370,573	378,496
Income beneficiary share of split interest agreements	335,975	-	335,975	316,404
Notes and bonds payable	2,815,933	992,414	3,808,347	3,515,590
U.S. government refundable loan funds	53,485	-	53,485	53,203
<b>TOTAL LIABILITIES</b>	<b>5,118,399</b>	<b>1,685,719</b>	<b>6,804,118</b>	<b>6,229,587</b>
<b>NET ASSETS:</b>				
Unrestricted	9,131,844	1,545,675	10,677,519	9,659,490
Temporarily restricted	5,526,835	195,264	5,722,099	5,307,165
Permanently restricted	4,776,242	231,523	5,007,765	4,947,450
<b>TOTAL NET ASSETS</b>	<b>19,434,921</b>	<b>1,972,462</b>	<b>21,407,383</b>	<b>19,914,105</b>
<b>TOTAL LIABILITIES AND NET ASSETS</b>	<b>\$ 24,553,320</b>	<b>\$ 3,658,181</b>	<b>\$ 28,211,501</b>	<b>\$ 26,143,692</b>

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

# CONSOLIDATED STATEMENTS OF ACTIVITIES

For the years ended August 31, 2010 and 2009 (in thousands of dollars)

	2010			2009
	UNIVERSITY	HOSPITALS	CONSOLIDATED	CONSOLIDATED
<b>UNRESTRICTED NET ASSETS</b>				
REVENUES:				
Student income:				
Undergraduate programs	\$ 274,943	\$ -	\$ 274,943	\$ 252,291
Graduate programs	260,302	-	260,302	249,401
Room and board	122,469	-	122,469	110,123
Student financial aid	(227,439)	-	(227,439)	(210,320)
<b>TOTAL STUDENT INCOME</b>	<b>430,275</b>	<b>-</b>	<b>430,275</b>	<b>401,495</b>
Sponsored research support :				
Direct costs - University	606,921	-	606,921	563,695
Direct costs - SLAC National Accelerator Laboratory	332,767	-	332,767	293,666
Indirect costs	202,974	-	202,974	173,984
<b>TOTAL SPONSORED RESEARCH SUPPORT</b>	<b>1,142,662</b>	<b>-</b>	<b>1,142,662</b>	<b>1,031,345</b>
Health care services:				
Patient care, net	-	2,603,046	2,603,046	2,407,724
Physicians' services and support - SHC and LPCH, net	436,947	(436,947)	-	-
Physicians' services and support - other facilities, net	17,245	-	17,245	16,205
<b>TOTAL HEALTH CARE SERVICES</b>	<b>454,192</b>	<b>2,166,099</b>	<b>2,620,291</b>	<b>2,423,929</b>
<b>CURRENT YEAR GIFTS IN SUPPORT OF OPERATIONS</b>	<b>159,701</b>	<b>5,716</b>	<b>165,417</b>	<b>155,037</b>
Net assets released from restrictions:				
Payments on prior year pledges	62,510	168	62,678	59,371
Prior year gifts released from donor restrictions	25,288	4,174	29,462	38,057
<b>TOTAL NET ASSETS RELEASED FROM RESTRICTIONS</b>	<b>87,798</b>	<b>4,342</b>	<b>92,140</b>	<b>97,428</b>
Investment income distributed for operations:				
Endowment	854,645	16,786	871,431	976,557
Expendable funds pools and other investment income	28,342	-	28,342	94,248
<b>TOTAL INVESTMENT INCOME DISTRIBUTED FOR OPERATIONS</b>	<b>882,987</b>	<b>16,786</b>	<b>899,773</b>	<b>1,070,805</b>
<b>SPECIAL PROGRAM FEES AND OTHER INCOME</b>	<b>343,082</b>	<b>85,096</b>	<b>428,178</b>	<b>422,741</b>
<b>TOTAL REVENUES</b>	<b>3,500,697</b>	<b>2,278,039</b>	<b>5,778,736</b>	<b>5,602,780</b>
EXPENSES:				
Salaries and benefits	2,064,373	1,177,034	3,241,407	3,090,283
Depreciation	234,017	134,002	368,019	321,610
Other operating expenses	992,631	814,828	1,807,459	1,681,575
<b>TOTAL EXPENSES</b>	<b>3,291,021</b>	<b>2,125,864</b>	<b>5,416,885</b>	<b>5,093,468</b>
<b>EXCESS OF REVENUES OVER EXPENSES</b>	<b>\$ 209,676</b>	<b>\$ 152,175</b>	<b>\$ 361,851</b>	<b>\$ 509,312</b>

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

# CONSOLIDATED STATEMENTS OF ACTIVITIES

For the years ended August 31, 2010 and 2009 (in thousands of dollars)

	2010			2009
	UNIVERSITY	HOSPITALS	CONSOLIDATED	CONSOLIDATED
<b>UNRESTRICTED NET ASSETS (continued)</b>				
<b>EXCESS OF REVENUES OVER EXPENSES</b>	<b>\$ 209,676</b>	<b>\$ 152,175</b>	<b>\$ 361,851</b>	<b>\$ 509,312</b>
Other changes in unrestricted net assets:				
Increase (decrease) in reinvested gains	615,575	125,531	741,106	(2,459,429)
Donor advised funds, net	35,444	-	35,444	1,010
Current year gifts not included in operations	1,238	-	1,238	10,711
Equity and fund transfers from Hospitals, net	17,672	(17,672)	-	-
Capital and other gifts released from restrictions	123,478	32,686	156,164	178,034
Pension and other post employment benefit related changes other than net periodic benefit expense	(99,529)	(31,706)	(131,235)	(278,328)
Transfer to permanently restricted net assets, net	(18,620)	-	(18,620)	(52,236)
Transfer to temporarily restricted net assets, net	(13,165)	-	(13,165)	(6,552)
Swap interest and unrealized losses	(23,490)	(79,054)	(102,544)	(65,988)
Loss on extinguishment of debt	-	(12,994)	(12,994)	-
Other	(3,074)	3,858	784	6,235
<b>Net change in unrestricted net assets</b>				
before effect of change in accounting principle	<b>845,205</b>	<b>172,824</b>	<b>1,018,029</b>	<b>(2,157,231)</b>
Effect of change in accounting principle (see Note 1)	-	-	-	(6,445,253)
<b>NET CHANGE IN UNRESTRICTED NET ASSETS</b>				
<b>AFTER EFFECT OF CHANGE IN ACCOUNTING PRINCIPLE</b>	<b>845,205</b>	<b>172,824</b>	<b>1,018,029</b>	<b>(8,602,484)</b>
<b>TEMPORARILY RESTRICTED NET ASSETS</b>				
Gifts and pledges, net	189,941	37,372	227,313	227,802
Increase (decrease) in reinvested gains	443,598	26,125	469,723	(2,611,305)
Change in value of split interest agreements, net	12,655	(748)	11,907	(3,560)
Net assets released to operations	(87,798)	(26,844)	(114,642)	(123,469)
Capital and other gifts released to unrestricted net assets	(123,478)	(32,686)	(156,164)	(178,034)
Gift transfers to Hospitals, net	(2,359)	2,359	-	-
Transfer from unrestricted net assets, net	13,165	-	13,165	6,552
Transfer to permanently restricted net assets, net	(11,503)	-	(11,503)	(12,351)
Other	(1,418)	(23,447)	(24,865)	(2,072)
<b>Net change in temporarily restricted net assets</b>				
before effect of change in accounting principle	<b>432,803</b>	<b>(17,869)</b>	<b>414,934</b>	<b>(2,696,437)</b>
Effect of change in accounting principle	-	-	-	6,445,253
<b>NET CHANGE IN TEMPORARILY RESTRICTED NET ASSETS</b>				
<b>AFTER EFFECT OF CHANGE IN ACCOUNTING PRINCIPLE</b>	<b>432,803</b>	<b>(17,869)</b>	<b>414,934</b>	<b>3,748,816</b>
<b>PERMANENTLY RESTRICTED NET ASSETS</b>				
Gifts and pledges, net	107,352	145	107,497	190,868
Decrease in reinvested gains	(101,249)	-	(101,249)	(243,488)
Change in value of split interest agreements, net	23,434	510	23,944	(99,153)
Fund transfers from Hospitals, net	58,213	(58,213)	-	-
Transfer from unrestricted net assets, net	18,620	-	18,620	52,236
Transfer from temporarily restricted net assets, net	11,503	-	11,503	12,351
Other	-	-	-	(24)
<b>NET CHANGE IN PERMANENTLY RESTRICTED NET ASSETS</b>	<b>117,873</b>	<b>(57,558)</b>	<b>60,315</b>	<b>(87,210)</b>
<b>NET CHANGE IN TOTAL NET ASSETS</b>	<b>1,395,881</b>	<b>97,397</b>	<b>1,493,278</b>	<b>(4,940,878)</b>
Total net assets, beginning of year	18,039,040	1,875,065	19,914,105	24,854,983
<b>TOTAL NET ASSETS, END OF YEAR</b>	<b>\$ 19,434,921</b>	<b>\$ 1,972,462</b>	<b>\$ 21,407,383</b>	<b>\$ 19,914,105</b>

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

# CONSOLIDATED STATEMENTS OF CASH FLOWS

For the years ended August 31, 2010 and 2009 (in thousands of dollars)

	2010			2009
	UNIVERSITY	HOSPITALS	CONSOLIDATED	CONSOLIDATED
<b>CASH FLOW FROM OPERATING ACTIVITIES:</b>				
Change in net assets	\$ 1,395,881	\$ 97,397	\$ 1,493,278	\$ (4,940,878)
Adjustments to reconcile change in net assets to net cash (used for) provided by operating activities:				
Depreciation	234,017	134,002	368,019	321,610
Amortization, loss on disposal of fixed assets and other adjustments	16,372	966	17,338	3,347
Net (gains) losses on investments and security agreements	(1,635,849)	(144,048)	(1,779,897)	4,555,391
Net losses on derivatives	17,765	79,054	96,819	61,017
Changes in split interest agreements	(82,581)	-	(82,581)	(54,707)
Investment income for restricted purposes	(12,573)	-	(12,573)	(11,957)
Gifts restricted for long-term investments	(146,980)	(37,132)	(184,112)	(251,246)
Equity and fund transfers from Hospitals	(73,526)	73,526	-	-
Gifts of securities and properties	(106,257)	-	(106,257)	(81,544)
Loss on extinguishment of debt	-	12,994	12,994	260
Premiums received from bond issuance	36,256	14,236	50,492	-
Changes in operating assets and liabilities:				
Accounts receivable, pledges receivable and receivables from SHC and LPCH, net	(26,653)	30,608	3,955	8,277
Prepaid expenses and other assets	(31,484)	(14,610)	(46,094)	38,574
Accounts payable and accrued expenses	30,668	(1,137)	29,531	(84,715)
Accrued pension and post retirement benefit costs	138,621	22,022	160,643	273,065
Deferred rental income	(7,923)	-	(7,923)	(9,522)
Other	-	4,306	4,306	355
<b>NET CASH (USED FOR) PROVIDED BY OPERATING ACTIVITIES</b>	<b>(254,246)</b>	<b>272,184</b>	<b>17,938</b>	<b>(172,673)</b>
<b>CASH FLOW FROM INVESTING ACTIVITIES:</b>				
Land, building and equipment purchases	(542,168)	(160,394)	(702,562)	(872,888)
Student, faculty and other loans:				
New loans made	(66,751)	-	(66,751)	(76,634)
Principal collected	38,635	-	38,635	25,203
Purchases of investments	(8,823,404)	(104,575)	(8,927,979)	(13,019,511)
Sales and maturities of investments	9,538,926	107,042	9,645,968	14,115,741
<b>NET CASH PROVIDED BY (USED FOR) INVESTING ACTIVITIES</b>	<b>145,238</b>	<b>(157,927)</b>	<b>(12,689)</b>	<b>171,911</b>
<b>CASH FLOW FROM FINANCING ACTIVITIES:</b>				
Gifts and reinvested income for restricted purposes	144,032	13,675	157,707	251,241
Equity and fund transfers from Hospitals	14,461	(14,461)	-	-
Proceeds from borrowing	237,750	366,415	604,165	1,212,455
Bond issuance costs and interest rate swaps	(1,749)	(3,665)	(5,414)	(5,179)
Repayment of notes and bonds payable	(38,658)	(391,472)	(430,130)	(234,608)
Decrease in liabilities under security agreements	(88,024)	-	(88,024)	(300,903)
Other	282	(4,306)	(4,024)	-
<b>NET CASH PROVIDED BY (USED FOR) FINANCING ACTIVITIES</b>	<b>268,094</b>	<b>(33,814)</b>	<b>234,280</b>	<b>923,006</b>
<b>INCREASE IN CASH AND CASH EQUIVALENTS</b>	<b>159,086</b>	<b>80,443</b>	<b>239,529</b>	<b>922,244</b>
Cash and cash equivalents, beginning of year	1,335,145	446,129	1,781,274	859,030
<b>CASH AND CASH EQUIVALENTS, END OF YEAR</b>	<b>\$ 1,494,231</b>	<b>\$ 526,572</b>	<b>\$ 2,020,803</b>	<b>\$ 1,781,274</b>
<b>SUPPLEMENTAL DATA:</b>				
Interest paid during the year	\$ 102,094	\$ 43,221	\$ 145,315	\$ 121,734
Cash collateral received under securities lending agreements	\$ 122,566	\$ -	\$ 122,566	\$ 205,622
Increase in payables for plant facilities	\$ (6,395)	\$ (3,727)	\$ (10,122)	\$ (20,045)

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

# NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

## 1. Basis of Presentation and Significant Accounting Policies

### **BASIS OF PRESENTATION**

The consolidated financial statements include the accounts of Stanford University (the “University”), Stanford Hospital and Clinics (SHC), Lucile Salter Packard Children’s Hospital at Stanford (LPCH) and other majority-owned or controlled entities. All significant inter-entity transactions and balances have been eliminated upon consolidation. Certain prior year amounts have been reclassified to conform to the current year’s presentation. These reclassifications and revisions had no impact on the change in net assets or total net assets.

### **University**

The University is a private, not-for-profit educational institution, founded in 1885 by Senator Leland and Mrs. Jane Stanford in memory of their son, Leland Stanford Jr. A Board of Trustees (the “Board”) governs the University. The “University” category presented in the consolidated financial statements comprises all of the accounts of the University, including the Hoover Institution and other institutes and research centers, and the Stanford Management Company.

SLAC National Accelerator Laboratory (SLAC) is a federally funded research and development center owned by the Department of Energy (DOE). The University manages and operates SLAC for the DOE under a management and operating contract; accordingly, the revenues and expenditures of SLAC are included in the University’s *Statements of Activities*, but SLAC’s assets and liabilities are not included in the University’s *Statements of Financial Position*. SLAC employees are University employees and participate in the University’s employee benefit programs. The University holds some receivables from the DOE substantially related to reimbursement for employee compensation and benefits.

### **Hospitals**

The health care activities of SHC and LPCH (the “Hospitals”), including revenues, expenses, assets and liabilities, are consolidated into these financial statements. Each of the Hospitals is a California not-for-profit public benefit corporation. The University is the sole member of each of the Hospitals. The Hospitals support the mission of medical education and clinical research of the University’s School of Medicine. They operate two licensed acute care and specialty hospitals on the Stanford campus and numerous physician clinics on the campus, in community settings and in association with regional hospitals in the San Francisco Bay Area and elsewhere in California. The Hospitals jointly control a captive insurance company.

Each of the Hospitals prepares separate, stand-alone financial statements. For purposes of presentation of the Hospitals’ balance sheets, statements of operations and changes in net assets and statements of cash flows in these consolidated financial statements, conforming reclassifications have been made to the Hospitals’ revenues, expenses, investment income and inter-entity receivables and payables consistent with categories in these consolidated financial statements.

### **TAX STATUS**

The University and the Hospitals are exempt from federal and state income taxes to the extent provided by Section 501(c)(3) of the Internal Revenue Code and equivalent state provisions.

### **BASIS OF ACCOUNTING**

The consolidated financial statements are prepared in accordance with accounting principles generally accepted in the United States (“U.S. GAAP”). These principles require management to make estimates and assumptions that affect the reported amounts

of assets and liabilities, the disclosure of contingent assets and liabilities at the date of the consolidated financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

For financial reporting purposes, net assets and revenues, expenses, gains and losses are classified into one of three categories - unrestricted, temporarily restricted or permanently restricted.

### **Unrestricted Net Assets**

Unrestricted net assets are expendable resources used to support the University's core activities of teaching and research or the Hospitals' patient care, teaching and research missions. These net assets may be designated by the University or the Hospitals for specific purposes under internal operating and administrative arrangements or be subject to contractual agreements with external parties. Donor-restricted contributions that relate to the University's or the Hospitals' core activities and are received and expended or deemed expended based on the nature of donors' restrictions are classified as unrestricted. All expenses are recorded as a reduction of unrestricted net assets. Unrestricted net assets include funds designated for operations, plant facilities, certain investment and endowment gains and funds functioning as endowment.

Management considers all revenues and expenses to be related to operations. Increases or decreases in reinvested gains, donor advised funds, capital and other gifts released from restrictions, hospital equity transfers, amounts transferred to other net asset categories, and pension and other post employment benefit related changes (other than net periodic benefit expense) and certain other non-operating changes are reported in other changes in unrestricted net assets.

Transfers from unrestricted net assets to temporarily restricted net assets and permanently restricted net assets are primarily the result of donor redesignations or matching funds that are added to donor gift funds and then take on the same restrictions as the donor gift.

### **Temporarily Restricted Net Assets**

Temporarily restricted net assets include gifts and pledges that are subject to donor-imposed restrictions that expire with the passage of time, payment of pledges or specific actions to be undertaken by the University or the Hospitals, which are then released and reclassified to unrestricted support. In addition, appreciation and income on certain donor-restricted endowment funds are classified as temporarily restricted net assets until authorized for spending (see *Notes 12 and 13*). Donor-restricted resources intended for capital projects are initially recorded as temporarily restricted and released from their temporary restrictions and reclassified as unrestricted support when the asset is placed in service.

### **Permanently Restricted Net Assets**

Permanently restricted net assets consist principally of endowment, annuity and life income funds which are subject to donor-imposed restrictions requiring that the principal be invested in perpetuity. Permanently restricted net assets may also include funds reclassified from other classes of net assets as a consequence of donor-imposed stipulations.

### **CASH AND CASH EQUIVALENTS**

Cash and cash equivalents included on the *Statements of Financial Position* consist of U.S. Treasury bills, commercial paper, certificates of deposit, money market funds and all other short-term investments with original maturities of 90 days or less at the time of purchase. These amounts are carried at cost, which approximates fair value. Cash and cash equivalents held for investment purposes, collateral held for securities loaned and certain cash restricted in its use, are classified as investments as discussed in *Note 5*.

### **ACCOUNTS AND STUDENT LOANS RECEIVABLE**

Accounts and student loans receivable are carried at cost, less an allowance for doubtful accounts.

## PLEDGES RECEIVABLE

Unconditional promises to give are included in the financial statements as pledges receivable and are classified as temporarily restricted or permanently restricted, depending upon donor requirements. Pledges recognized during the year ended August 31, 2009 and subsequent periods are recorded at an applicable risk-adjusted discount rate commensurate with the duration of the donor's payment plan. Pledges recognized in prior periods under such commitments were recorded at a discount based on a U.S. Treasury rate. Conditional promises, which depend on the occurrence of a specified future and uncertain event, such as matching gifts from other donors, are recognized when the conditions are substantially met.

## INVESTMENTS

Investments are recorded at fair value. Gains and losses (realized and unrealized) on investments are recognized in the *Statements of Activities* (see Note 5).

The investment portfolio may be exposed to various risks, including, but not limited to, interest rate, market, sovereign, concentration, counterparty, liquidity and credit risk. Fair value reporting requires management to make estimates and assumptions about the effects of matters that are inherently uncertain. Estimates developed using methods such as discounted cash flow are subjective, requiring significant judgments such as the amount and timing of future cash flows and the selection of appropriate discount rates that reflect market and credit risks. The University and Hospitals regularly assess these risks through established policies and procedures. Actual results could differ from these estimates and such differences could have a material impact on the consolidated financial statements.

## DONATED ASSETS

Donated assets are recorded at fair value at the date of donation. Undeveloped land is reported at fair value at the date of acquisition. Under the original endowment from Senator Leland and Mrs. Jane Stanford, a significant portion of University land may not be sold.

## PLANT FACILITIES

Plant facilities are recorded at cost or, for donated assets, at fair value at the date of donation. Interest expense for construction financing, net of income earned on unspent proceeds is capitalized as a cost of construction. Depreciation is computed using the straight-line method over the estimated useful lives of the assets.

The useful lives used in calculating depreciation for the years ended August 31, 2010 and 2009 are as follows:

	UNIVERSITY	HOSPITALS
Land improvements	10-25 years	10-25 years
Buildings and building improvements	4-50 years	7-40 years
Furniture, fixtures and equipment	3-10 years	3-20 years

## WORKS OF ART AND SPECIAL COLLECTIONS

Works of art, historical treasures, literary works and artifacts, which are preserved and protected for educational, research and public exhibition purposes, are not capitalized. Purchases of such collections are recorded as operating expenses in the period in which they are acquired.

## SELF-INSURANCE

The University self-insures at varying levels for unemployment, disability, workers' compensation, property losses, certain health care plans and general and professional liability losses. The Hospitals self-insure at varying levels for health care plans, workers' compensation and, through their captive insurance company, for professional liability losses. Third-party insurance is purchased to cover liabilities above the self-insurance limits. Estimates of retained exposures are accrued.

## **DONOR ADVISED FUNDS**

The University receives gifts from donors under donor advised fund agreements (DAFs). These funds are owned and controlled by the University and are separately identified by donor. A substantial portion of the gift must be designated to the University. The balance may be used to support other approved charities. The donors have advisory privileges with respect to the distribution of certain amounts in the funds. DAFs are recorded in other changes in unrestricted net assets at the full amount of the gift. Transfers of funds to other charitable organizations are recorded on the *Statements of Activities* as a reduction to other changes in unrestricted net assets at the time the transfer is made. At August 31, 2010 and 2009, approximately \$178,500,000 and \$139,000,000, respectively, of DAFs are not designated to the University.

## **SPLIT INTEREST AGREEMENTS**

Split interest agreements represent trusts with living income beneficiaries where the University has a residual interest and is the trustee. The discounted present value of any income beneficiary interest is reported as a liability in "income beneficiary share of split interest agreements" in the *Statements of Financial Position* based on actuarial tables established by the Internal Revenue Service using discount rates ranging from 3% to 6%. Discount rates used apply to the year the gift was received. New gifts subject to such agreements were \$8,700,000 and \$28,914,000 in fiscal years 2010 and 2009, respectively, and are recorded as "gifts and pledges, net," at the date of the gift in the *Statements of Activities*, net of the income beneficiary share. Actuarial gains or losses are included in "change in value of split interest agreements, net" in the *Statements of Activities*. Resources that are expendable upon maturity are classified as temporarily restricted net assets; all others are classified as permanently restricted net assets.

## **INTEREST RATE EXCHANGE AGREEMENTS**

The University and Hospitals have entered into several interest rate exchange agreements, also known as risk management or derivative instruments, to reduce the effect of interest rate fluctuation on their variable rate revenue notes and bonds. Current accounting guidance for derivatives and hedges requires entities to recognize all derivative instruments at fair value. The University and Hospitals do not designate and qualify their derivatives for hedge accounting; accordingly, any changes in the fair value (i.e. gains or losses) flow directly to the *Statements of Activities* in "swap interest and unrealized losses." The settlement (net cash payments less receipts) under the interest rate exchange agreements are recorded in the *Statements of Activities* in "swap interest and unrealized losses" for the University and in "other operating expenses" for the Hospitals.

## **STUDENT INCOME**

Financial assistance in the form of scholarship and fellowship grants that cover a portion of tuition, living and other costs is reflected as a reduction of student income.

## **HEALTH CARE SERVICES**

The Hospitals derive a majority of patient care revenues from contractual agreements with third-party payers including Medicare, Medi-Cal and other payers. Payments under these agreements and programs are based on a variety of payment models such as per diem, per discharge, per service, a fee schedule, cost reimbursement or negotiated rates. "Patient care, net" is reported in the *Statements of Activities* at the estimated net realizable amounts from patients, third-party payers, and others for services rendered, including estimated retroactive audit adjustments under reimbursement agreements with third-party payers. Retroactive adjustments are estimated and recorded in the period the related services are rendered and adjusted in future periods, as final settlements are determined. Contracts, laws and regulations governing the Medicare and Medi-Cal programs are complex and subject to interpretation. As a result, there is at least a reasonable possibility that recorded estimates may change by a material amount in the near term.

The University has entered into various operating agreements with the Hospitals for the professional services of faculty members from the School of Medicine, telecommunications services and other services and facilities charges.

## CHARITY CARE

The Hospitals provide care to patients who meet certain criteria under their charity care policies without charge or at amounts less than their established rates. The Hospitals do not record revenue for amounts determined to qualify as charity care. The amount of charity care services, quantified at established rates, was \$76,495,000 and \$60,500,000 for the years ended August 31, 2010 and 2009, respectively. The Hospitals also provide services to other patients under Medi-Cal and other publicly sponsored programs, which reimburse at amounts less than the cost of the services provided to the recipients. Estimated costs in excess of reimbursements for Medi-Cal and county services for the years ended August 31, 2010 and 2009 were \$219,378,000 and \$186,033,000, respectively.

## RECENT PRONOUNCEMENTS

The Financial Accounting Standards Board (FASB) is the authoritative source of U.S. GAAP. The consolidated financial statements as of and for the year ended August 31, 2010 reflect the impact of several pronouncements that were issued by the FASB or became effective during the fiscal year. These include the effect of the FASB Accounting Standards Codification (ASC), and additional disclosures on fair value measurements, pensions and other post retirement benefits, and derivatives and hedging activities. The ASC did not change any accounting principles, but impacts the way in which U.S. GAAP is referenced in the financial statements.

In September 2009, the FASB issued a pronouncement that provides guidance for estimating the fair value of investments in investment companies that calculate Net Asset Value (NAV) per share, allowing the NAV per share, or its equivalent, to be used as a practical expedient for fair value where investment companies follow the American Institute of Certified Public Accountants (AICPA) Guide in arriving at their reported NAV. Effective September 1, 2008, the University and the Hospitals early-adopted the "practical expedient" provisions of this pronouncement. For the year ended August 31, 2010, the additional disclosure provisions have been adopted.

Effective September 1, 2008, the University and the Hospitals implemented a pronouncement that impacted the net asset classification of donor-restricted endowment funds for not-for-profit organizations that are subject to the Uniform Prudent Management of Institutional Funds Act (UPMIFA). California adopted a version of UPMIFA effective January 1, 2009. The impact of implementing this pronouncement was a reclassification of \$6,333,634,000 and \$111,619,000 from unrestricted net assets to temporarily restricted net assets for the University and the Hospitals, respectively, during the year ended August 31, 2009 and is discussed in *Notes 12* and *13* to the consolidated financial statements.

Recent accounting guidance requires entities with defined benefit or other postretirement plans to provide disclosure of assets by major investment categories and by prioritized levels based on the inputs used to determine fair value. This guidance requires a description of the valuation techniques and inputs for each major asset category, including a description of how investment allocation decisions are made, the target allocation ranges or percentages employed, the investment goals and risk management practices, and significant risk concentrations within asset categories. The University and Hospitals adopted this policy during the year ended August 31, 2010. These disclosures are included in *Notes 16* and *17*.

New U.S. GAAP pronouncements require entities that utilize derivative instruments or hedges to include enhanced disclosures about these activities in their financial statements, including their objectives for using derivative instruments in terms of underlying risk and accounting designation, the fair values of derivative instruments and related gains and losses, and information about credit-risk-related contingent features. These disclosures are included in *Note 6*.

In January 2010, the FASB issued an update to the ASC which expanded the required disclosures about fair value measurements. In particular, this guidance requires: (1) separate disclosure of the amounts of significant transfers in and out of Level 1 and Level 2 fair value measurements along with the reasons for such transfers; (2) information about purchases, sales, issuances and settlements to be presented separately in the reconciliation for Level 3 fair value measurements; (3) fair value measurement disclosures for each class of assets and liabilities; and (4) disclosures about the valuation techniques and inputs used to measure fair value for both recurring and nonrecurring fair value measurements that fall in either Level 2 or Level 3. This guidance is effective for the fiscal year beginning September 1, 2010 except for (2) above which is effective for the fiscal year beginning September 1, 2011. The University is currently evaluating the impact that this guidance will have on its financial statement disclosures.

## 2. Accounts Receivable

Accounts receivable at August 31, 2010 and 2009, in thousands of dollars, are as follows:

	2010			2009
	UNIVERSITY	HOSPITALS	CONSOLIDATED	CONSOLIDATED
U.S. government	\$ 61,825	\$ -	\$ 61,825	\$ 66,010
Non-government sponsors	26,818	-	26,818	31,273
Due from brokers	102,469	-	102,469	45,488
Accrued interest on investments	4,542	-	4,542	3,892
Student	11,220	-	11,220	8,000
Patient and third-party payers	-	457,094	457,094	435,891
Other	33,464	19,077	52,541	47,371
	240,338	476,171	716,509	637,925
Less bad debt allowances	(2,025)	(87,510)	(89,535)	(81,955)
<b>ACCOUNTS RECEIVABLE, NET</b>	<b>\$ 238,313</b>	<b>\$ 388,661</b>	<b>\$ 626,974</b>	<b>\$ 555,970</b>

## 3. Pledges Receivable

Pledges are recorded at the present value of the discounted future cash flows, using discount rates ranging from 1.3% to 5.8% for the University and ranging from 0.3% to 6.4% for the Hospitals. At August 31, 2010 and 2009, pledges receivable, net of allowances, in thousands of dollars, are as follows:

	2010			2009
	UNIVERSITY	HOSPITALS	CONSOLIDATED	CONSOLIDATED
One year or less	\$ 86,432	\$ 44,273	\$ 130,705	\$ 132,593
Between one year and five years	622,898	66,356	689,254	738,338
More than five years	287,690	6,737	294,427	313,020
	997,020	117,366	1,114,386	1,183,951
Less discounts and allowances	(232,358)	(12,859)	(245,217)	(289,506)
<b>PLEDGES RECEIVABLE, NET</b>	<b>\$ 764,662</b>	<b>\$ 104,507</b>	<b>\$ 869,169</b>	<b>\$ 894,445</b>

Conditional pledges for the University, which depend on the occurrence of a specified future and uncertain event, were \$16,809,000 and \$17,802,000 at August 31, 2010 and 2009, respectively. LPCH has conditional pledges of \$100,000,000 and \$0 at August 31, 2010 and 2009, respectively through the Lucile Packard Foundation for Children's Health (LPFCH). LPFCH is the primary community fundraising agent for LPCH and the pediatric faculty and programs at the University's School of Medicine.

## 4. Faculty and Staff Mortgages

In a program to attract and retain excellent faculty and senior staff, the University provides home mortgage financing assistance. Notes receivable amounting to \$439,879,000 and \$418,166,000 at August 31, 2010 and 2009, respectively, from University faculty and staff are included in "Faculty and staff mortgages and other loans receivable, net" in the *Statements of Financial Position*. These loans and mortgages are collateralized by deeds of trust on properties concentrated in the region surrounding the University.

## 5. Investments

Investments held by the University and the Hospitals at August 31, 2010 and 2009, in thousands of dollars, are as follows:

	2010			2009
	UNIVERSITY	HOSPITALS	CONSOLIDATED	CONSOLIDATED
Cash and cash equivalents	\$ 625,207	\$ 39,767	\$ 664,974	\$ 411,054
Collateral held for securities loaned	122,566	-	122,566	205,622
Public equities	3,788,900	46,183	3,835,083	3,944,795
Derivatives	(85)	-	(85)	1,379
Fixed income	415,651	-	415,651	265,426
Real estate	3,402,206	-	3,402,206	3,269,081
Natural resources	1,532,135	-	1,532,135	1,636,677
Private equities	3,867,427	-	3,867,427	3,197,431
Absolute return	5,005,170	-	5,005,170	4,512,189
Assets held by other trustees <sup>1</sup>	152,744	13,628	166,372	153,471
Other	151,120	-	151,120	160,348
	19,063,041	99,578	19,162,619	17,757,473
Hospital funds invested in the University's Merged Pool	(1,259,680)	1,259,680	-	-
<b>INVESTMENTS AT FAIR VALUE</b>	<b>\$ 17,803,361</b>	<b>\$ 1,359,258</b>	<b>\$ 19,162,619</b>	<b>\$ 17,757,473</b>

<sup>1</sup> Net of income beneficiary share of \$169,058 and \$160,400 at August 31, 2010 and 2009, respectively.

The University managed the majority of the Hospitals' investments, including the Hospitals' investment in the Merged Pool (MP), with a combined fair value of \$1,263,784,000 and \$1,116,277,000 at August 31, 2010 and 2009, respectively.

### BASIS OF REPORTING

To the extent available, the University's investments are recorded at fair value based on quoted prices in active markets. When such inputs do not exist, fair value measurements are based on the best available information and usually require a degree of judgment. The University's investments that are listed on any U.S. or non-U.S. recognized exchanges are valued based on readily available market quotations. Many investments are held in the form of limited partnership interests. In these cases, the value of the investments is based on the Net Asset Value (NAV) of the underlying investments, as reported by the general partner or investment manager on a periodic basis. The most recent NAV reported by the investment manager is adjusted for capital calls, distributions and significant known valuation changes (if any) of its respective portfolio through August 31, 2010 and 2009. These investments are generally less liquid than other investments, and the value reported by the general partner or investment manager may differ from the values that would have been reported had a ready market for these investments existed. The University exercises due diligence in assessing the policies, procedures, and controls implemented by its external investment managers and believes the University's proportionate share of the carrying amount of these assets is a reasonable estimate of fair value.

## INVESTMENT CATEGORIES

Investments are categorized by asset class as described below:

**Cash and cash equivalents** categorized as investments include money market funds and overnight receivables on repurchase agreements. Overnight receivables on repurchase agreements are valued based on cost, which approximates fair value. Money market funds are valued based on reported unit values. Included in "Cash and cash equivalents" on the investment table above are assets limited as to use of \$1,029,000 and \$49,327,000 as of August 31, 2010 and 2009, respectively. Assets limited as to use include various hospital accounts held by a trustee in accordance with indenture requirements. The indenture terms require that the trustee control the expenditure of bond proceeds for hospital capital projects, and the assets are recorded at fair value.

**Collateral held for securities loaned** originates in the form of cash and cash equivalents which are reinvested for income in cash equivalent vehicles that are recorded at cost, which approximates fair value.

**Public equities** include directly held publicly traded equities as well as commingled funds which invest in publicly traded equities. These securities are valued based on quoted market prices (and exchange rates, if applicable). Security transactions are reported on a trade-date basis. The fair values of public equities held through limited partnerships are calculated by the respective external investment managers.

**Derivatives** are used by the University to manage its exposure to certain risks relating to ongoing business and investment operations. Derivatives such as forward contracts, options, interest rate exchange agreements (swaps) and credit default swaps are valued using models based on market verifiable inputs, or by using independent broker quotes.

**Fixed income** represents actively traded fixed income securities or mutual funds. The securities are valued by independent pricing sources or broker dealers.

**Real estate** represents directly owned real estate and other real estate interests held through limited partnerships. The fair value of real estate directly owned by the University, including the Stanford Shopping Center and the Stanford Research Park, is based primarily on discounted cash flows, using estimates from the asset manager or general partner, corroborated by appraisals and market data, if available. The fair value of real estate limited partnerships is based on NAV as reported by the general partners and is adjusted as described under *Basis of Reporting* above.

**Natural resources** are mostly held in commodity and energy related investments. They are generally in the form of limited partnership interests with certain assets that are valued on the basis of a combination of models including appraisals, discounted cash flows and commodity price factors. The fair value of these limited partnerships is based on NAV as reported by the general partners and adjusted as described under *Basis of Reporting* above.

**Private equities** are investments in limited partnerships that participate primarily in venture capital and leveraged buyout strategies. Distributions from these investments are received through liquidation of the underlying asset. The fair value of private equities is based on the NAV reported by the general partners and is adjusted as described under *Basis of Reporting* above.

**Absolute return** investments are typically commingled funds that employ multiple strategies to produce positive returns regardless of the direction of the financial markets. Absolute return investments are valued based on NAV as reported by the general partners and is adjusted as described under *Basis of Reporting* above.

**Assets held by other trustees** generally represent the University's and the Hospitals' residual interest in split interest agreements, which are discussed in *Note 1* under the section, Split Interest Agreements. The residual (or beneficial) interest represents the present value of the future distributions expected to be received over the term of the agreement, which approximates fair value, and the assets are based on estimates provided by trustees.

## INVESTMENT RETURNS

Total investment returns (losses) for the years ended August 31, 2010 and 2009, in thousands of dollars, are as follows:

	2010			2009
	UNIVERSITY	HOSPITALS	CONSOLIDATED	CONSOLIDATED
Investment income	\$ 158,571	\$ 7,513	\$ 166,084	\$ 165,657
Net realized and unrealized gains (losses)	1,752,621	143,905	1,896,526	(4,493,800)
<b>TOTAL INVESTMENT RETURN (LOSS)</b>	<b>\$ 1,911,192</b>	<b>\$ 151,418</b>	<b>\$ 2,062,610</b>	<b>\$ (4,328,143)</b>

Investment returns are net of investment management expenses, including both external management fees and internal University investment-related salaries, benefits and operating expenses, and the portion of interest expense and amortization related to the April 2009 bond issuance held for liquidity purposes (see *Note 10*).

## INVESTMENT POOLS

The University's investments are held in various pools or in specific instruments to comply with donor requirements as indicated in the following table, as of August 31, 2010 and 2009, in thousands of dollars:

	2010	2009
UNIVERSITY:		
Merged Pool	\$ 16,616,406	\$ 15,093,093
Expendable Funds Pool	2,369,236	2,034,885
Endowment Income Funds Pool	354,844	356,319
Other Investment Pools	369,572	361,418
Specific Investments	2,075,245	2,147,272
	21,785,303	19,992,987
Less:		
Amounts included in cash and cash equivalents in the <i>Statements of Financial Position</i>	(640,563)	(510,843)
Funds cross-invested in investment pools	(2,077,595)	(1,865,197)
Hospital funds invested in the University's investment pools	(1,263,784)	(1,116,277)
	17,803,361	16,500,670
HOSPITALS:		
Investments	1,359,258	1,256,803
<b>INVESTMENTS AT FAIR VALUE</b>	<b>\$ 19,162,619</b>	<b>\$ 17,757,473</b>

The MP is the primary investment pool in which endowment (see *Note 12*) and other long-term funds are invested. The MP is invested with the objective of maximizing long-term total return. It is a unitized pool in which the fund holders purchase investments and withdraw funds based on a monthly share value.

The Expendable Funds Pool (EFP) and Endowment Income Funds Pool (EIFP) are the principal investment vehicles for the University's expendable funds. A substantial portion of the EFP is cross-invested in the MP; the remainder is included in cash and cash equivalents in the *Statements of Financial Position*. The EIFP holds income previously distributed to holders of permanently restricted endowment funds that has not yet been expended. The EIFP is invested in highly liquid instruments and is included in the *Statements of Financial Position* as cash and cash equivalents.

The Board has established a policy for the distribution of the investment returns of the EFP. The difference between the actual return of this pool and the approved payout is deposited in, or withdrawn from, funds functioning as endowment (*Note 12*). For the years ended August 31, 2010 and 2009, the results of the EFP, in thousands of dollars, are as follows:

	2010	2009
Total investment return (loss) of the EFP	\$ 251,501	\$ (406,091)
Less distributions to fund holders and operations	(478)	(81,896)
<b>AMOUNTS ADDED TO (WITHDRAWN FROM)</b>		
<b>THE ENDOWMENT</b>	<b>\$ 251,023</b>	<b>\$ (487,987)</b>

### OTHER INVESTMENT PROPERTIES

As part of its investment portfolio, the University holds certain investment properties that it leases to third parties. Future minimum rental income due from the Stanford Shopping Center, the Stanford Research Park and other properties under non-cancelable leases in effect with tenants at August 31, 2010, in thousands of dollars, is as follows:

YEAR	
2011	\$ 72,612
2012	67,856
2013	63,709
2014	61,809
2015	55,554
Thereafter	1,171,970
<b>TOTAL</b>	<b>\$ 1,493,510</b>

## 6. Derivatives

The University utilizes various strategies to reduce investment and credit risks, to serve as a temporary surrogate for investment in stocks and bonds, to manage interest rate exposure on the University's debt, and/or to achieve specific exposure to foreign currencies. Futures, options and other derivative instruments are used to adjust elements of investment exposures to various securities, sectors, markets and currencies without actually taking a position in the underlying asset or basket of assets. Interest rate swaps are used to manage interest rate risk. With respect to foreign currencies, the University utilizes forward contracts and foreign currency options to manage exchange rate risk.

Foreign currency forward contracts, interest rate swaps, securities lending, and repurchase agreements entail counterparty credit risk. The University seeks to control this risk by entering into transactions with quality counterparties, by establishing and monitoring credit limits and by requiring collateral in certain situations.

### INVESTMENT-RELATED DERIVATIVES

The following table presents amounts for investment-related derivatives including the notional amount, the fair values at August 31, 2010, and gains and losses for the year ended August 31, 2010, in thousands of dollars:

	AS OF AUGUST 31, 2010			YEAR ENDED
	NOTIONAL AMOUNT <sup>1</sup>	GROSS DERIVATIVE ASSETS <sup>2</sup>	GROSS DERIVATIVE LIABILITIES <sup>2</sup>	AUGUST 31, 2010 REALIZED AND UNREALIZED GAINS (LOSSES) <sup>3</sup>
Interest-rate contracts	\$ 103,381	\$ 232	\$ 770	\$ 621
Credit contracts	53,072	244	476	(515)
Foreign exchange contracts	62,570	1,104	419	125
	<b>\$ 219,023</b>	<b>\$ 1,580</b>	<b>\$ 1,665</b>	<b>\$ 231</b>
Counterparty netting <sup>4</sup>		(684)	(684)	
<b>INCLUDED IN INVESTMENTS, AT FAIR VALUE</b>		<b>\$ 896</b>	<b>\$ 981</b>	

<sup>1</sup> The notional amount is representative of the volume and activity of the respective derivative type during the year ended August 31, 2010.

<sup>2</sup> Gross derivative assets less gross derivative liabilities is presented as Derivatives on the investment table in Note 5.

<sup>3</sup> Gains (losses) on derivatives are included in the Statements of Activities as increase (decrease) in reinvested gains in other changes to unrestricted net assets.

<sup>4</sup> The University nets the fair value of cash collateral paid or received against fair value amounts recognized for net derivative positions executed with the same counterparty under master netting arrangements that are legally binding.

### CREDIT DEFAULT SWAPS

The University's derivative activities include both the purchase and sale of credit default swaps (CDS) which are included in credit contracts in the previous table. CDS are contracts under which counterparties are provided protection against the risk of default on a set of debt obligations issued by specific companies (or group of companies combined in an index). The buyer of the CDS will make payment to the seller and in return receive payment if the underlying instrument goes into default or is triggered by some other credit event. The University's CDS transactions include both single name entities as well as index CDS. Under the index CDS, the credit events that would trigger settlement of the CDS and require the University to remit payment are generally bankruptcy and failure to pay.

The tables below summarize certain information regarding protection sold through CDS as of August 31, 2010 and 2009, in thousands of dollars:

CREDIT RATINGS OF THE REFERENCE OBLIGATION <sup>1</sup>	MAXIMUM POTENTIAL PAYOUT (NOTIONAL AMOUNT)/YEARS TO MATURITY			FAIR VALUE ASSET/(LIABILITY)
	LESS THAN 3	OVER 3	TOTAL	
<b>2010</b>				
Single name credit default swaps:				
A- to AA+	\$ 7,600	\$ 200	\$ 7,800	\$ 29
BBB- to BBB+	4,000	800	4,800	(106)
Total single name credit default swaps	11,600	1,000	12,600	(77)
Index credit default swaps <sup>2</sup>	-	800	800	(37)
<b>TOTAL CREDIT DEFAULT SWAPS SOLD</b>	<b>\$ 11,600</b>	<b>\$ 1,800</b>	<b>\$ 13,400</b>	<b>\$ (114)</b>
<b>2009</b>				
Single name credit default swaps:				
A to A+	\$ -	\$ 9,100	\$ 9,100	\$ (357)
BBB+	1,200	-	1,200	(56)
Total single name credit default swaps	1,200	9,100	10,300	(413)
Index credit default swaps <sup>2</sup>	-	35,865	35,865	751
<b>TOTAL CREDIT DEFAULT SWAPS SOLD</b>	<b>\$ 1,200</b>	<b>\$ 44,965</b>	<b>\$ 46,165</b>	<b>\$ 338</b>

<sup>1</sup> The credit rating is according to Standard & Poor's and represents the current performance risk of the swap.

<sup>2</sup> Index credit default swaps are linked to a basket of credit derivatives that include entities that have a Standard & Poor's rating of BBB- or higher.

## DEBT-RELATED DERIVATIVES

The University and SHC use interest rate exchange agreements to manage the interest rate exposure of its debt portfolio. Under the terms of the current agreements, the entities pay a fixed interest rate, determined at inception, and receive a variable rate on the underlying notional principal amount. Generally, the exchange agreements require mutual posting of collateral by the University and Hospitals and the counterparties if the termination payments exceed a predetermined threshold dollar amount.

At August 31, 2010, the University had exchange agreements expiring November 1, 2039 to pay an interest rate of approximately 3.69% on \$130,000,000 of the outstanding balance of the CEFA Series S VRDBs and exchange agreements expiring through 2011 to pay an interest rate of approximately 5.58% on approximately \$20,000,000 of taxable commercial paper outstanding (see *Note 10*). The notional amount and the fair value of the exchange agreements are included in the following table. Collateral posted with various counterparties was \$35,600,000 and \$20,000,000 as of August 31, 2010 and 2009, respectively, and is included in the *Statements of Financial Position*.

At August 31, 2010, SHC had interest rate exchange agreements expiring through November 2045 on certain of its variable rate notes and bonds (see *Note 11*). Certain of the agreements pay fixed interest rates to counterparties varying from 3.37% to 3.94% and a portion involves the exchange of fixed rate payments for variable rate payments based on a percentage of the One Month London Interbank Offered Rate (LIBOR). The notional amount and the fair value of the exchange agreements are included in the following table. The amount of collateral required to be posted with counterparties was \$72,618,000 and \$29,718,000 as of August 31, 2010 and 2009, respectively, and was met by the posting of standby letters of credit in the aggregate amount of \$75,000,000 as of August 31, 2010, which may only be drawn upon in the event of a default by SHC.

The following table presents amounts for debt-related derivatives including the notional amount, the fair values at August 31, 2010 and 2009, and gains and losses for the years ended August 31, 2010 and 2009, in thousands of dollars:

	AS OF		YEAR ENDED	AS OF		YEAR ENDED
	AUGUST 31, 2010		AUGUST 31,	AUGUST 31, 2009		AUGUST 31,
	NOTIONAL	GROSS	REALIZED &	NOTIONAL	GROSS	REALIZED &
AMOUNT	DERIVATIVE	UNREALIZED	AMOUNT	DERIVATIVE	UNREALIZED	
		LIABILITIES <sup>1</sup>	LOSSES <sup>2</sup>		LIABILITIES <sup>1</sup>	LOSSES <sup>2</sup>
Debt-related interest-rate contracts:						
University	\$ 150,000	\$ 42,613	\$ 17,765	\$ 150,000	\$ 24,848	\$ 12,679
Hospitals	749,400	166,365	79,054	749,400	87,311	48,338
<b>TOTAL</b>	<b>\$ 899,400</b>	<b>\$ 208,978</b>	<b>\$ 96,819</b>	<b>\$ 899,400</b>	<b>\$ 112,159</b>	<b>\$ 61,017</b>

<sup>1</sup> Fair value is measured using Level 2 inputs as defined in Note 7. Amounts are included in the Statements of Financial Position in accounts payable and accrued expenses and discussed more fully in Notes 10 and 11.

<sup>2</sup> Amounts are included in the Statements of Activities in other changes in unrestricted net assets.

## 7. Fair Value of Financial Instruments

U.S. GAAP defines fair value as the price received upon sale of an asset or paid upon transfer of a liability in an orderly transaction between market participants. Current guidance establishes a hierarchy of valuation inputs based on the extent to which the inputs are observable in the marketplace. Observable inputs reflect market data obtained from independent sources. In contrast, unobservable inputs reflect the entity's assumptions about how market participants would value the financial instrument. Valuation techniques used under U.S. GAAP must maximize the use of observable inputs to the extent available.

The following describes the hierarchy of inputs used to measure fair value and the primary valuation methodologies used for financial instruments measured at fair value on a recurring basis:

**LEVEL 1** - Quoted prices in active markets for identical assets or liabilities, at the reporting date, without adjustment. Market price data is generally obtained from relevant exchange or dealer markets.

**LEVEL 2** - Inputs other than Level 1 that are observable, either directly or indirectly, such as quoted prices for similar assets or liabilities, quoted prices in markets that are not active, or other inputs that are observable or can be corroborated by observable market data for substantially the same term of the assets or liabilities. Inputs are obtained from various sources including market participants, dealers and brokers.

**LEVEL 3** - Unobservable inputs that are supported by little or no market activity and that are significant to the fair value of the assets or liabilities.

A financial instrument's categorization within this hierarchy is based upon the lowest level of input that is significant to the fair value measurement.

Investments measured at fair value as of August 31, 2010 and 2009, in thousands of dollars, are as follows:

	AS OF AUGUST 31, 2010	LEVEL 1	LEVEL 2	LEVEL 3
<b>ASSETS</b>				
<b>UNIVERSITY*</b>				
Cash and cash equivalents	\$ 625,207	\$ 587,689	\$ 37,518	\$ -
Collateral held for securities loaned	122,566	86,128	36,438	-
Public equities	3,788,900	1,772,259	655,839	1,360,802
Derivatives	(85)	(27)	(58)	-
Fixed income	415,651	154,633	261,018	-
Real estate	3,402,206	-	-	3,402,206
Natural resources	1,532,135	249,040	-	1,283,095
Private equities	3,867,427	7,383	-	3,860,044
Absolute return	5,005,170	-	1,607,159	3,398,011
Assets held by other trustees	152,744	-	-	152,744
Other	151,120	132	653	150,335
<b>TOTAL</b>	<b>\$ 19,063,041</b>	<b>\$ 2,857,237</b>	<b>\$ 2,598,567</b>	<b>\$ 13,607,237</b>
<b>HOSPITALS</b>				
Cash and cash equivalents	\$ 39,767	\$ 35,663	\$ 4,104	\$ -
Public equities	46,183	-	46,183	-
Assets held by other trustees	13,628	-	-	13,628
<b>TOTAL</b>	<b>\$ 99,578</b>	<b>\$ 35,663</b>	<b>\$ 50,287</b>	<b>\$ 13,628</b>
<b>CONSOLIDATED</b>				
Cash and cash equivalents	\$ 664,974	\$ 623,352	\$ 41,622	\$ -
Collateral held for securities loaned	122,566	86,128	36,438	-
Public equities	3,835,083	1,772,259	702,022	1,360,802
Derivatives	(85)	(27)	(58)	-
Fixed income	415,651	154,633	261,018	-
Real estate	3,402,206	-	-	3,402,206
Natural resources	1,532,135	249,040	-	1,283,095
Private equities	3,867,427	7,383	-	3,860,044
Absolute return	5,005,170	-	1,607,159	3,398,011
Assets held by other trustees	166,372	-	-	166,372
Other	151,120	132	653	150,335
<b>TOTAL ASSETS</b>	<b>\$ 19,162,619</b>	<b>\$ 2,892,900</b>	<b>\$ 2,648,854</b>	<b>\$ 13,620,865</b>

\* Amounts include the Hospitals' cross investment in the University's Merged Pool of \$1,259,680.

	AS OF			
	AUGUST 31, 2009	LEVEL 1	LEVEL 2	LEVEL 3
<b>ASSETS</b>				
<b>UNIVERSITY*</b>				
Cash and cash equivalents	\$ 327,154	\$ 303,308	\$ 23,846	\$ -
Collateral held for securities loaned	205,622	110,000	95,622	-
Public equities	3,902,166	1,665,912	796,363	1,439,891
Derivatives	1,379	80	1,299	-
Fixed income	265,426	30,259	209,173	25,994
Real estate	3,269,081	-	-	3,269,081
Natural resources	1,636,677	-	-	1,636,677
Private equities	3,197,431	-	-	3,197,431
Absolute return	4,512,189	-	1,019,793	3,492,396
Assets held by other trustees	139,474	-	-	139,474
Other	160,348	262	1,548	158,538
<b>TOTAL</b>	<b>\$ 17,616,947</b>	<b>\$ 2,109,821</b>	<b>\$ 2,147,644</b>	<b>\$ 13,359,482</b>
<b>HOSPITALS</b>				
Cash and cash equivalents	\$ 83,900	\$ 83,900	\$ -	\$ -
Public equities	42,629	-	42,629	-
Assets held by other trustees	13,997	-	-	13,997
<b>TOTAL</b>	<b>\$ 140,526</b>	<b>\$ 83,900</b>	<b>\$ 42,629</b>	<b>\$ 13,997</b>
<b>CONSOLIDATED</b>				
Cash and cash equivalents	\$ 411,054	\$ 387,208	\$ 23,846	\$ -
Collateral held for securities loaned	205,622	110,000	95,622	-
Public equities	3,944,795	1,665,912	838,992	1,439,891
Derivatives	1,379	80	1,299	-
Fixed income	265,426	30,259	209,173	25,994
Real estate	3,269,081	-	-	3,269,081
Natural resources	1,636,677	-	-	1,636,677
Private equities	3,197,431	-	-	3,197,431
Absolute return	4,512,189	-	1,019,793	3,492,396
Assets held by other trustees	153,471	-	-	153,471
Other	160,348	262	1,548	158,538
<b>TOTAL ASSETS</b>	<b>\$ 17,757,473</b>	<b>\$ 2,193,721</b>	<b>\$ 2,190,273</b>	<b>\$ 13,373,479</b>

\* Amounts include the Hospitals' cross investment in the University's Merged Pool of \$1,116,277.

The following tables present a reconciliation of beginning and ending balances for Level 3 investments for the years ended August 31, 2010 and 2009, in thousands of dollars:

FAIR VALUE MEASUREMENTS USING SIGNIFICANT UNOBSERVABLE INPUTS (LEVEL 3)	BEGINNING BALANCE AS OF SEPTEMBER 1, 2009	NET PURCHASES (SALES AND MATURITIES)	REALIZED GAINS (LOSSES)	CHANGE IN UNREALIZED GAINS (LOSSES)	NET TRANSFERS IN (OUT)	ENDING BALANCE AS OF AUGUST 31, 2010
<b>UNIVERSITY</b>						
Public equities	\$ 1,439,891	\$ (159,608)	\$ (31,130)	\$ 313,186	\$ (201,537)	\$ 1,360,802
Fixed Income	25,994	(26,088)	2,084	(1,990)	-	-
Real estate	3,269,081	263,108	9,780	(139,763)	-	3,402,206
Natural resources	1,636,677	(141,882)	52,006	(64,377)	(199,329)	1,283,095
Private equities	3,197,431	155,157	(14,291)	521,747	-	3,860,044
Absolute return	3,492,396	(142,431)	(88,181)	694,387	(558,160)	3,398,011
Assets held by other trustees	139,474	(1,777)	15,047	-	-	152,744
Other	158,538	10,588	1,555	(20,346)	-	150,335
<b>TOTAL</b>	<b>\$ 13,359,482</b>	<b>\$ (42,933)</b>	<b>\$ (53,130)</b>	<b>\$ 1,302,844</b>	<b>\$ (959,026)</b>	<b>\$ 13,607,237</b>
<b>HOSPITALS</b>						
Assets held by other trustees	\$ 13,997	\$ -	\$ (131)	\$ (238)	\$ -	\$ 13,628
<b>TOTAL</b>	<b>\$ 13,997</b>	<b>\$ -</b>	<b>\$ (131)</b>	<b>\$ (238)</b>	<b>\$ -</b>	<b>\$ 13,628</b>
<b>CONSOLIDATED TOTAL</b>	<b>\$ 13,373,479</b>	<b>\$ (42,933)</b>	<b>\$ (53,261)</b>	<b>\$ 1,302,606</b>	<b>\$ (959,026)</b>	<b>\$ 13,620,865</b>

FAIR VALUE MEASUREMENTS USING SIGNIFICANT UNOBSERVABLE INPUTS (LEVEL 3)	BEGINNING BALANCE AS OF SEPTEMBER 1, 2008	NET PURCHASES (SALES AND MATURITIES)	REALIZED GAINS (LOSSES)	CHANGE IN UNREALIZED GAINS (LOSSES)	NET TRANSFERS IN (OUT)	ENDING BALANCE AS OF AUGUST 31, 2009
<b>UNIVERSITY</b>						
Public equities	\$ 2,152,276	\$ (219,446)	\$ (39,398)	\$ (296,260)	\$ (157,281)	\$ 1,439,891
Fixed Income	88,550	(66,689)	(1,004)	5,137	-	25,994
Real estate	3,870,229	289,931	(4,363)	(886,716)	-	3,269,081
Natural resources	2,242,674	18,317	88,197	(712,511)	-	1,636,677
Private equities	3,502,844	428,501	9,033	(742,947)	-	3,197,431
Absolute return	4,193,861	189,365	15,125	(734,345)	(171,610)	3,492,396
Assets held by other trustees	196,814	20,298	-	(77,638)	-	139,474
Other	196,265	(5,533)	5,055	(37,249)	-	158,538
<b>TOTAL</b>	<b>\$ 16,443,513</b>	<b>\$ 654,744</b>	<b>\$ 72,645</b>	<b>\$(3,482,529)</b>	<b>\$ (328,891)</b>	<b>\$ 13,359,482</b>
<b>HOSPITALS</b>						
Assets held by other trustees	\$ 16,394	\$ -	\$ 10	\$ (2,407)	\$ -	\$ 13,997
<b>TOTAL</b>	<b>\$ 16,394</b>	<b>\$ -</b>	<b>\$ 10</b>	<b>\$ (2,407)</b>	<b>\$ -</b>	<b>\$ 13,997</b>
<b>CONSOLIDATED TOTAL</b>	<b>\$ 16,459,907</b>	<b>\$ 654,744</b>	<b>\$ 72,655</b>	<b>\$(3,484,936)</b>	<b>\$ (328,891)</b>	<b>\$ 13,373,479</b>

Realized gains (losses) and the change in unrealized gains (losses) in the tables above appear in three categories in the *Statements of Activities* primarily as "increase (decrease) in reinvested gains" by level of restriction.

Net transfers in (out) include investments which have been reclassified to Level 2 as the University has the ability to redeem these at NAV in the near term. Net transfers in (out) also include situations where observable inputs have changed, such as when Level 3

investments make distributions from an underlying asset with a fair value based on quoted market prices. All transfer amounts are based on the fair value at the beginning of the fiscal year.

The University's net asset balances are classified as unrestricted, temporarily or permanently restricted based upon donor restrictions. Funds representing these net asset balances primarily own shares in the MP or other similar unitized investment pools. Accordingly, the total Level 3 realized gains (losses) and change in unrealized gains (losses) are distributed pro-rata among unrestricted, temporarily or permanently restricted net asset balances based upon the relative ownership of the unitized investment pools.

The table below sets forth significant terms of the agreements with certain investment companies as of August 31, 2010, in thousands of dollars:

ASSET CLASS	FAIR VALUE	UNFUNDED COMMITMENT	REMAINING LIFE (YEARS)	REDEMPTION TERMS	REDEMPTION RESTRICTIONS
Public equities	\$ 2,016,421	\$ 31,043	0 to 6	After initial lock up expires, redemptions are available on a rolling basis and require 3 to 180 days prior notification	Generally, lock-up provisions ranging from 0 to 6 years
Real estate	1,157,655	1,067,142	0 to 11	Not eligible for redemption	Not redeemable
Natural resources	1,011,292	425,241	0 to 13	Not eligible for redemption	Not redeemable
Private equities	3,859,773	2,167,838	0 to 15	Not eligible for redemption	Not redeemable
Absolute return	4,941,171	431,493	0 to 6	After initial lock up expires, redemptions are available on a rolling basis and require 3 to 180 days prior notification	Generally, lock-up provisions ranging from 0 to 6 years
<b>TOTAL</b>	<b>\$ 12,986,312</b>	<b>\$ 4,122,757</b>			

## 8. Plant Facilities

Plant facilities at August 31, 2010 and 2009, in thousands of dollars, are as follows:

	2010			2009
	UNIVERSITY	HOSPITALS	CONSOLIDATED	CONSOLIDATED
Land and improvements	\$ 454,094	\$ 93,593	\$ 547,687	\$ 503,445
Buildings and building improvements	3,821,141	1,129,133	4,950,274	4,383,908
Furniture, fixtures and equipment	1,627,090	783,802	2,410,892	2,153,834
Construction in progress	438,476	219,762	658,238	873,302
Plant facilities	6,340,801	2,226,290	8,567,091	7,914,489
Less accumulated depreciation	(2,756,805)	(943,624)	(3,700,429)	(3,384,853)
<b>PLANT FACILITIES, NET OF ACCUMULATED DEPRECIATION</b>	<b>\$ 3,583,996</b>	<b>\$ 1,282,666</b>	<b>\$ 4,866,662</b>	<b>\$ 4,529,636</b>

At August 31, 2010, \$1,098,989,000 and \$550,289,000 of fully depreciated plant facilities were still in use by the University and Hospitals, respectively.

## 9. Liabilities Under Security Lending Agreements

At August 31, 2010 and 2009, the University received \$122,566,000 and \$206,277,000, respectively, of short-term U.S. government obligations and cash as collateral deposits for certain securities loaned temporarily to brokers. The University is party to certain forward sale and purchase agreements totaling \$37,458,000 and \$41,771,000 at August 31, 2010 and 2009, respectively. These amounts are included as both investments and liabilities in the University's financial statements (see Note 5). The estimated fair value of securities on loan at August 31, 2010 and 2009 was \$118,053,000 and \$193,862,000, respectively. It is the University's policy to require receipt of collateral on securities lending contracts and repurchase agreements equal to a minimum of 102% of the fair market value of the security loaned.

## 10. University Notes and Bonds Payable

Notes and bonds payable at August 31, 2010 and 2009, in thousands of dollars, are as follows:

	YEAR OF MATURITY	EFFECTIVE INTEREST RATE 2010/2009	OUTSTANDING PRINCIPAL	
			2010	2009
<b>Tax-exempt:</b>				
California Educational Facilities Authority (CEFA)				
Fixed Rate Revenue Bonds:				
Series O	2031	5.13%	\$ 89,555	\$ 89,555
Series P	2013	5.25%	51,260	51,260
Series Q	2032	5.25%	101,860	101,860
Series R	2011-2021	4.00% - 5.00%	111,585	111,585
Series T	2014-2039	4.00% - 5.00%	361,310	361,310
Series U	2040	5.25%	215,375	-
CEFA Variable Rate Revenue Notes and Bonds:				
Series L	2014-2022	0.20%/0.14%	83,818	83,818
Series S	2039-2050	0.30%-0.46%/0.40%-0.57%*	181,200	181,200
Commercial Paper	2010	0.28%/0.23%	113,532	152,140
<b>Taxable:</b>				
Fixed Rate Notes and Bonds:				
Stanford University Bonds	2024	6.88%	150,000	150,000
Medium Term Notes	2011-2026	6.16% - 7.65%	100,000	100,000
Stanford University Series 2009A	2014-2019	3.63% - 4.75%	1,000,000	1,000,000
Other	2015-2016	Various	70,225	1,601
Variable Notes and Bonds:				
Commercial Paper	2010	0.34%/0.51%*	119,676	97,476
University notes and bonds payable			2,749,396	2,481,805
Unamortized original issue premiums/discounts, net			66,537	34,779
<b>TOTAL</b>			<b>\$ 2,815,933</b>	<b>\$ 2,516,584</b>

\* Exclusive of interest rate exchange agreements (see Note 6).

At August 31, 2010 and 2009, the fair value of these debt instruments was approximately \$2,998,713,000 and \$2,620,304,000, respectively.

The University issues tax-exempt debt through the California Educational Facilities Authority (CEFA). The CEFA debt is a general unsecured obligation of the University. Although CEFA is the issuer, the University is responsible for the repayment of the tax-exempt debt.

In May 2010, CEFA Series U-1 revenue bonds (the "Bonds") in the amount of \$215,375,000 plus an original issue premium of \$36,256,000 were issued. The Bonds bear interest at a rate of 5.25% and mature on April 1, 2040. Proceeds were used to refund

commercial paper, and the unspent balance will be used to fund facilities and infrastructure. In connection with the issuances of CEFA Series U-1 revenue bonds, the University's long-term ratings of AAA/Aaa/AAA were affirmed by Standard and Poor's, Moody's Investors Service and Fitch Ratings, respectively.

Stanford holds controlling interests in several investment entities which were consolidated in the financial statements in fiscal year 2010. Taxable debt includes \$68,500,000 of debt where Stanford is ultimately liable for principal should the investees default.

In August 2009, CEFA T-5 Revenue Bonds (the "T5 Bonds") in the amount of \$51,765,000 plus an original issue premium of \$7,383,000 were issued. Proceeds were used to refund and defease approximately \$59,180,000 of CEFA P revenue bonds. The T5 Bonds bear interest at a rate of 5%, and mature on March 15, 2023.

In May 2009, CEFA Series S4 (Tranche One) revenue bonds in the amount of \$51,200,000 were converted from a daily rate mode to a commercial paper rate mode. Series S bonds bear interest at a commercial paper municipal rate and are outstanding for various periods which may vary from one day to 270 days.

In April 2009, the University issued \$1,000,000,000 of taxable fixed rate Series 2009A bonds. The series was comprised of \$350,000,000 in principal amount that will mature in 2014, \$250,000,000 in principal amount that will mature in 2016 and \$400,000,000 in principal amount that will mature in 2019 and bear interest at a rate of 3.625%, 4.25% and 4.75%, respectively. Proceeds of \$200,000,000 from the Series 2009A were used to refinance debt incurred to fund certain capital improvements of the University and the approximately \$800,000,000 unspent balance is currently invested in cash and cash equivalents to provide additional liquidity for the University's general purposes.

In March 2009, taxable Medium Term Notes in the amount of \$50,000,000 matured.

The following table presents the University's taxable and tax-exempt commercial paper facilities and related information in thousands of dollars:

COMMERCIAL PAPER	POTENTIAL BORROWINGS	OUTSTANDING BALANCE AT AUGUST 31, 2010	WEIGHTED AVERAGE DAYS TO MATURITY	WEIGHTED AVERAGE EFFECTIVE INTEREST RATE
Taxable	\$ 350,000	\$ 119,676	45.6	0.34%
Tax-exempt	\$ 300,000	\$ 113,532	42.5	0.28%

The University has \$265,018,000 of variable-rate revenue notes and bonds ("VRDBs") outstanding in addition to commercial paper. CEFA Series L bonds bear interest at a weekly rate and CEFA Series S bonds bear interest at a commercial paper municipal rate and are outstanding for various interest periods of 270 days or less. In the event the University receives notice of any optional tender of its VRDBs, or if the bonds become subject to mandatory tender, the purchase price of the bonds will be paid from the remarketing of such bonds. However, if the remarketing proceeds are insufficient, the University will have a current obligation to purchase the bonds tendered. The University has identified several sources of funding including cash, money market funds, U.S. treasury securities and agencies' discount notes to provide for the full and timely purchase price of any bonds tendered in the event of a failed remarketing.

The University uses interest rate exchange agreements to manage the interest rate exposure of its debt portfolio (see Note 6).

The University incurred interest expense of approximately \$60,150,000 and \$57,901,000 for the years ended August 31, 2010 and 2009, respectively, which is net of \$790,000 and \$460,000, respectively, of interest income on invested unspent proceeds and approximately \$3,880,000 and \$3,818,000, respectively, in interest capitalized as a cost of construction. Interest expense includes administrative expenses, amortized bond issuance costs, and amortized bond premium or discount. Interest expense for fiscal

years 2010 and 2009 associated with the Series 2009A bonds in the amount of \$33,684,000 and \$10,529,000 (net of interest income of \$683,000 and \$1,144,000), respectively, is included as an investment expense and has been excluded from the interest expense amounts above. Net payments on interest rate exchange agreements, which are included in "swap interest and unrealized losses" in the *Statements of Activities*, totaled \$5,725,000 and \$4,971,000 for fiscal years 2010 and 2009, respectively.

Scheduled principal payments on notes and bonds, in thousands of dollars, are as follows:

YEAR ENDING AUGUST 31	PRINCIPAL
2011 Commercial paper	\$ 233,208
2011 Variable debt subject to remarketing	265,018
2011 Other	51,525
2012	68,735
2013	61,450
2014	573,720
2015	50
Thereafter	1,495,690
<b>TOTAL</b>	<b>\$ 2,749,396</b>

## 11. Hospitals' Notes and Bonds Payable

Note, bonds and capital lease obligations at August 31, 2010 and 2009, in thousands of dollars, are as follows:

	YEAR OF MATURITY	EFFECTIVE INTEREST RATE* 2010/2009	OUTSTANDING PRINCIPAL	
			2010	2009
<b>SHC:</b>				
California Health Facilities Financing Authority (CHFFA)				
Fixed Rate Revenue Bonds:				
1998 Series B	-	- /5.00%	\$ -	\$ 163,435
2003 Series A	2023	2.00% - 5.00%	83,400	88,015
2008 Series A-1	2040	2.25%-5.15%/0.55%	70,360	70,500
2010 Series A	2031	4.00%-5.75%	149,345	-
2010 Series B	2036	4.50%-5.75%	146,710	-
Promissory Note	2014	7.03%	704	857
CHFFA Variable Rate Revenue Bonds:				
2003 Series B, C and D	-	- /0.67%	-	150,000
2008 Series A-2	2040	0.26%/0.24%	104,100	104,100
2008 Series A-3	2040	3.45%	85,700	85,700
2008 Series B	2045	0.24%/0.16%	168,200	168,200
<b>LPCH:</b>				
CHFFA Fixed Rate Revenue Bonds:				
2003 Series C	2013-2027	3.25%	55,000	55,000
CHFFA Variable Rate Revenue Bonds:				
2008 Series A	2027-2033	0.25%/0.15%	30,340	30,340
2008 Series B	2027-2033	0.23%/0.14%	30,340	30,340
2008 Series C	2015-2023	0.23%/0.14%	32,770	32,770
Capital lease obligations			15,572	15,748
Hospitals notes and bonds payable			972,541	995,005
Unamortized original issue premiums/discounts, net			19,873	4,001
<b>TOTAL</b>			<b>\$ 992,414</b>	<b>\$ 999,006</b>

\*Exclusive of interest rate exchange agreements (see Note 6).

At August 31, 2010 and 2009, the fair value of these debt instruments was approximately \$999,506,000 and \$989,419,000 respectively.

The Hospitals issue tax-exempt debt through the California Health Facilities Financing Authority (CHFFA). The CHFFA debt is a general obligation of the Hospitals. Payments of principal and interest on the Hospitals' bonds are collateralized by a pledge of the revenues of the respective hospital. Although CHFFA is the issuer, the Hospitals are responsible for the repayment of the tax-exempt debt. In 2009, payments of principal and interest on certain of the bonds are insured by municipal bond guaranty policies.

SHC and LPCH are each party to separate master trust indentures that include, among other things, limitations on the incurrence of additional indebtedness, liens on property, restrictions on disposition or transfer of assets and compliance with certain financial ratios. Subject to applicable no-call provisions, the Hospitals may cause the redemption of the bonds, in whole or in part, prior to the stated maturities.

### **SHC**

In June 2010, CHFFA, on behalf of SHC, issued fixed rate revenue bonds in the aggregate principal amount of \$296,055,000 (the "2010 Bonds") to refund the 1998 Series B Bonds and the 2003 Series B, C and D Bonds. The 2010 Bonds were comprised of \$149,345,000 of 2010 Series A bonds, proceeds of which were used to refund the 1998B Bonds, and \$146,710,000 of 2010 Series B bonds, proceeds of which were used to refund the 2003 Series B, C and D bonds. The 2010 Series A and B bonds mature in 2031 and 2036, respectively. As a result of the bond refinancing, the unamortized bond issuance costs related to the above-mentioned bonds and unamortized original issue discount related to the 1998 Bonds were included in loss on extinguishment of debt of \$12,994,000 for the year ended August 31, 2010.

In June 2009, SHC remarketed the 2008 Series A-1 bonds in the aggregate principal amount of \$70,500,000. In June 2010, SHC converted the 2008 Series A-1 bonds from an annual put mode to a long-term fixed interest rate mode and the bonds mature in 2040. The remarketing of the 2008 Series A-1 Bonds generated an original issue premium of approximately \$140,000; that, pursuant to the requirements of the underlying documents, was used to reduce the principal amount of the bonds from \$70,500,000 to \$70,360,000.

SHC has \$358,000,000 of VRDBs outstanding, including \$85,700,000 of 2008 Series A-3, \$104,100,000 of 2008 Series A-2, and \$168,200,000 of 2008 Series B bonds. The 2008 Series A-3 Bonds are in a multi-annual long-term mode and subject to mandatory tender in June 2011. The 2008 Series A-2 Bonds are in a weekly interest rate mode and secured by a direct pay letter of credit which expires in June 2011. The 2008 Series B Bonds are in a weekly interest rate mode and supported by SHC's self-liquidity. The Bonds in a weekly interest rate mode are remarketed every 7 days at the then prevailing interest rate. Bondholders in a weekly mode have the option to tender their bonds on a weekly basis. In order to ensure the availability of funds to purchase any bonds tendered that the remarketing agent is unable to remarket, SHC entered into a liquidity agreement with the University. The agreement allows access on a same-day basis of up to \$200,000,000 of SHC's investments in University managed pools.

SHC has irrevocable standby letters of credit in the amount of \$75,000,000 to support collateral requirements under certain interest rate exchange agreements discussed in *Note 6* and irrevocable standby letters of credit in the amount of \$14,386,000 which are required as security for the workers' compensation self-insurance arrangement. No amounts have been drawn on these letters of credit as of August 31, 2010. Additionally, SHC has a direct pay letter of credit for the 2008 Series A-2 debt in the amount of \$105,674,000.

## LPCH

LPCH has \$93,450,000 of VRDBs outstanding, consisting of the CHFFA 2008 Series A, B and C Bonds, which may bear interest at a daily, weekly, commercial paper, long term or auction rate, as defined by the LPCH Master Indenture. The bonds of each series currently bear interest at a weekly rate, which resets every 7 days. The VRDBs are payable solely from payments made by LPCH. Bondholders have the option to tender their bonds on a weekly basis. In order to ensure the availability of funds to purchase any bonds tendered that the remarketing agent is unable to remarket, LPCH has entered into a liquidity agreement with the University. The agreement allows immediate availability of up to \$100,000,000 of LPCH funds invested in the University MP for funding tenders.

LPCH has irrevocable letters of credit in the amount of \$5,403,000 which are posted as collateral for the workers' compensation deductible plan. No amounts have been drawn on these letters of credit as of August 31, 2010.

The University is not an obligor or guarantor with respect to any obligations of SHC or LPCH, nor is SHC or LPCH obligors or guarantors with respect to obligations of the University.

## INTEREST

The Hospitals incurred interest expense of approximately \$42,399,000 and \$40,858,000 for the years ended August 31, 2010 and 2009, respectively, which is net of \$19,000 and \$1,550,000, respectively, of interest income and approximately \$1,283,000 and \$2,526,000, respectively, in interest capitalized as a cost of construction. Interest expense includes net payments on interest rate exchange agreements of \$19,641,000 and \$15,550,000 for the years ended August 31, 2010 and 2009, respectively.

## PRINCIPAL PAYMENTS

Estimated principal payments on bonds, promissory notes and capital lease obligations, in thousands of dollars, are as follows:

YEAR ENDING AUGUST 31	PRINCIPAL
2011 Variable debt subject to remarketing	\$ 358,000
2011 Other	99,290
2012	24,447
2013	12,455
2014	13,044
2015	16,580
Thereafter	448,725
<b>TOTAL</b>	<b>\$ 972,541</b>

## 12. University Endowment

The University classifies a substantial portion of its financial resources as endowment, which is invested to generate income to be used to support operating and strategic initiatives. The endowment is comprised of pure endowment funds (which include endowed lands), term endowment funds, and funds functioning as endowment. Depending on the nature of the donor's stipulation, these resources are recorded as permanently restricted, temporarily restricted or unrestricted net assets. Term endowments are similar to other endowment funds except that, upon the passage of a stated period of time or the occurrence of a particular event, all or part of the principal may be expended. These resources are classified as temporarily restricted net assets. Funds functioning as endowment are University resources designated by the Board as endowment and are invested for long-term appreciation and current income. These assets, however, remain available and may be spent at the Board's discretion. Funds functioning as endowment are recorded as unrestricted net assets.

The University classifies as permanently restricted net assets (a) the original value of gifts donated to the permanent endowment, (b) the original value of subsequent gifts to the permanent endowment, and (c) accumulations to the permanent endowment made in accordance with the direction of the applicable donor gift instrument at the time the accumulation is added to the fund. The remaining portion of the donor-restricted endowment fund that is not classified in permanently restricted net assets is classified as temporarily restricted net assets until those amounts are authorized for expenditure. In the absence of donor stipulations or law to the contrary, net unrealized losses on permanently restricted endowment funds first reduce related appreciation on temporarily restricted net assets and then on unrestricted net assets, as needed, until such time as the fair value of the fund equals or exceeds historic value. The aggregate amount by which fair value was below historic value was \$130,134,000 and \$203,089,000 as of August 31, 2010 and 2009, respectively.

Endowment funds by net asset classification as of August 31, 2010 and 2009, in thousands of dollars, are as follows:

	2010			TOTAL
	UNRESTRICTED	TEMPORARILY RESTRICTED	PERMANENTLY RESTRICTED	
Donor restricted endowment funds	\$ (130,134)	\$ 4,340,344	\$ 4,349,295	\$ 8,559,505
Funds functioning as endowment	5,291,610	-	-	5,291,610
<b>TOTAL ENDOWMENT FUNDS</b>	<b>\$ 5,161,476</b>	<b>\$ 4,340,344</b>	<b>\$ 4,349,295</b>	<b>\$ 13,851,115</b>

	2009			TOTAL
	UNRESTRICTED	TEMPORARILY RESTRICTED	PERMANENTLY RESTRICTED	
Donor restricted endowment funds	\$ (203,089)	\$ 3,917,921	\$ 4,180,875	\$ 7,895,707
Funds functioning as endowment	4,723,387	-	-	4,723,387
<b>TOTAL ENDOWMENT FUNDS</b>	<b>\$ 4,520,298</b>	<b>\$ 3,917,921</b>	<b>\$ 4,180,875</b>	<b>\$ 12,619,094</b>

Most of the University's endowment is invested in the MP. The return objective for the MP is to generate optimal total return while maintaining an appropriate level of risk for the University. Investment returns are achieved through both capital appreciation (realized and unrealized gains) and current yield (interest and dividends). Portfolio asset allocation targets as well as expected risk, return and correlation among the asset classes are reevaluated annually by Stanford Management Company and the Board.

Through the combination of investment strategy and payout policy, the University is striving to provide a reasonably consistent payout from endowment to support operations, while preserving the purchasing power of the endowment adjusted for inflation.

The Board approves the amounts to be paid out annually from endowment funds invested in the MP. Consistent with UPMIFA, when determining the appropriate payout the Board considers the purposes of the University and the endowment, the duration and preservation of the endowment, general economic conditions, the possible effect of inflation or deflation, the expected return from income and the appreciation of investments, other resources of the University, and the University's investment policy.

The current Board approved targeted spending rate is 5.5%. The sources of payout are earned income on endowment assets (interest, dividends, rents and royalties), realized capital gains and funds functioning as endowment, as needed and as available.

Changes in the University's endowment, excluding pledges, for the years ended August 31, 2010 and 2009, in thousands of dollars, are as follows:

	2010			TOTAL
	UNRESTRICTED	TEMPORARILY RESTRICTED	PERMANENTLY RESTRICTED	
Endowment, beginning of year	\$ 4,520,298	\$ 3,917,921	\$ 4,180,875	\$ 12,619,094
Investment returns:				
Earned income	107,300	-	-	107,300
Unrealized and realized gains	538,524	909,306	14,458	1,462,288
Total investment returns	645,824	909,306	14,458	1,569,588
Amounts distributed for operations	(293,998)	(560,647)	-	(854,645)
Gifts and pledge payments	1,247	1,473	108,763	111,483
Funds invested in endowment, net <sup>1</sup>	13,151	630	133,159	146,940
EFP funds invested in the endowment	251,023	-	-	251,023
Transfers due to donor redesignations and other reclassifications <sup>2</sup>	34,700	81,828	(116,528)	-
Other	(10,769)	(10,167)	28,568	7,632
Other (decreases) increases in endowment	(4,646)	(486,883)	153,962	(337,567)
Total net increase in endowment	641,178	422,423	168,420	1,232,021
<b>ENDOWMENT, END OF YEAR</b>	<b>\$ 5,161,476</b>	<b>\$ 4,340,344</b>	<b>\$ 4,349,295</b>	<b>\$ 13,851,115</b>

	2009			TOTAL
	UNRESTRICTED	TEMPORARILY RESTRICTED	PERMANENTLY RESTRICTED	
Endowment, beginning of year	\$ 12,929,342	\$ 88,226	\$ 4,196,805	\$ 17,214,373
Net asset reclassification based on adoption of current accounting guidance	(6,333,634)	6,333,634	-	-
Endowment after reclassification	6,595,708	6,421,860	4,196,805	17,214,373
Investment returns:				
Earned income	111,186	-	-	111,186
Unrealized and realized losses	(1,429,929)	(2,101,565)	(50,535)	(3,582,029)
Total investment losses	(1,318,743)	(2,101,565)	(50,535)	(3,470,843)
Amounts distributed for operations	(353,084)	(603,434)	-	(956,518)
Gifts and pledge payments	11,841	2,238	141,280	155,359
Funds invested in endowment, net	82,739	(663)	80,792	162,868
EFP funds withdrawn from the endowment	(487,987)	-	-	(487,987)
Transfers due to donor redesignations and other reclassifications <sup>2</sup>	-	196,270	(196,270)	-
Other	(10,176)	3,215	8,803	1,842
Other increases (decreases) in endowment	(756,667)	(402,374)	34,605	(1,124,436)
Total net decrease in endowment	(2,075,410)	(2,503,939)	(15,930)	(4,595,279)
<b>ENDOWMENT, END OF YEAR</b>	<b>\$ 4,520,298</b>	<b>\$ 3,917,921</b>	<b>\$ 4,180,875</b>	<b>\$ 12,619,094</b>

<sup>1</sup> \$58,213,000 of endowment funds used to support pediatric research programs were transferred from the Hospitals to the University in 2010.

<sup>2</sup> During the years ended August 31, 2010 and 2009, the payout requirements of certain endowment funds were changed pursuant to donor requests or court decrees. Similar to many other endowment funds, income and a reasonable portion of gains as determined by the Board of Trustees may be expended for donor intended purposes. Under U.S. GAAP, any accumulated appreciation related to these funds must be reclassified from permanently restricted net assets to unrestricted or temporarily restricted net assets.

### 13. Hospitals' Endowments

The endowments of SHC and LPCH are intended to generate investment income that can be used to support their current operating and strategic initiatives. The Hospitals invest the majority of their endowments in the University's MP. As such, the Hospitals' endowments are subject to the same investment and spending strategies as described in Note 12. These policies provide for annual amounts (payout) to be distributed for current use. The Hospitals' endowment payout of \$14,125,000 in fiscal year 2010 and \$20,039,000 in fiscal year 2009 represents current year payout spent for designated purposes during these fiscal years.

The Hospitals classify as permanently restricted net assets (a) the original value of gifts donated to the permanent endowment, (b) the original value of subsequent gifts to the permanent endowment, and (c) accumulations to the permanent endowment made in accordance with the direction of the applicable donor gift instrument at the time the accumulation is added to the fund. The remaining portion of the donor-restricted endowment fund that is not classified in permanently restricted net assets is classified as temporarily restricted net assets until those amounts are authorized for expenditure. In the absence of donor stipulations or law to the contrary, net unrealized losses on permanently restricted endowment funds first reduce related appreciation on temporarily restricted net assets and then on unrestricted net assets, as needed, until such time as the fair value of the fund equals or exceeds historic value. The aggregate amount by which fair value was below historic value was approximately \$2,285,000 and \$11,280,000 as of August 31, 2010 and 2009, respectively.

Changes in the Hospitals' endowments, for the years ended August 31, 2010 and 2009, in thousands of dollars, are as follows:

	2010			TOTAL
	UNRESTRICTED	TEMPORARILY RESTRICTED	PERMANENTLY RESTRICTED	
Endowment, beginning of year	\$ (10,918)	\$ 46,037	\$ 289,081	\$ 324,200
Investment returns:				
Earned income	-	14,535	-	14,535
Unrealized and realized gains (losses)	8,633	10,511	510	19,654
Total investment returns (losses)	8,633	25,046	510	34,189
Amounts distributed for operations	-	(15,362)	-	(15,362)
Gifts and pledge payments	-	368	213	581
Transfer of funds to the University <sup>1</sup> and other	-	(2,928)	(58,281)	(61,209)
Other decreases in endowment	-	(17,922)	(58,068)	(75,990)
Net increase (decrease) in endowment	8,633	7,124	(57,558)	(41,801)
<b>ENDOWMENT, END OF YEAR</b>	<b>\$ (2,285)</b>	<b>\$ 53,161</b>	<b>\$ 231,523</b>	<b>\$ 282,399</b>

<sup>1</sup> \$58,213,000 of endowment funds used to support pediatric research programs were transferred from the Hospitals to the University in 2010.

	2009			
	UNRESTRICTED	TEMPORARILY RESTRICTED	PERMANENTLY RESTRICTED	TOTAL
Endowment, beginning of year	\$ 111,619	\$ 18,347	\$ 275,788	\$ 405,754
Net asset reclassification based on adoption of current accounting guidance	(111,619)	111,619	-	-
Endowment after reclassification	-	129,966	275,788	405,754
Investment returns:				
Earned income	-	19,614	-	19,614
Unrealized and realized losses	(10,918)	(85,782)	(1,917)	(98,617)
Total investment losses	(10,918)	(66,168)	(1,917)	(79,003)
Amounts distributed for operations	-	(17,761)	-	(17,761)
Gifts and pledge payments	-	-	18,740	18,740
Other	-	-	(3,530)	(3,530)
Other (decreases) increases in endowment	-	(17,761)	15,210	(2,551)
Net (decrease) increase in endowment	(10,918)	(83,929)	13,293	(81,554)
<b>ENDOWMENT, END OF YEAR</b>	<b>\$ (10,918)</b>	<b>\$ 46,037</b>	<b>\$ 289,081</b>	<b>\$ 324,200</b>

All of the Hospitals' endowments are classified as donor restricted.

#### 14. University Gifts and Pledges

The University's Office of Development (OOD) reports total gifts based on contributions received in cash or property during the fiscal year. Gifts and pledges reported for financial statement purposes are recorded on the accrual basis. The following summarizes gifts and pledges reported for the years ended August 31, 2010 and 2009, per the *Statements of Activities* reconciled to the cash basis reported by OOD, in thousands of dollars:

	2010	2009
Current year gifts in support of operations	\$ 159,701	\$ 149,035
Donor advised funds, net	35,444	1,010
Current year gifts not included in operations	1,238	10,711
Temporarily restricted gifts and pledges, net	189,941	209,293
Permanently restricted gifts and pledges, net	107,352	172,128
<b>TOTAL PER STATEMENT OF ACTIVITIES</b>	<b>493,676</b>	<b>542,177</b>
ADJUSTMENTS TO ARRIVE AT GIFT TOTAL AS REPORTED BY OOD:		
New pledges	(174,831)	(279,505)
Payments made on pledges	198,630	243,581
Pledge discounts and other adjustments	(5,097)	48,089
Donor advised funds not designated for Stanford	(22,851)	43
Non-cash gifts	3,248	1,361
Non-government grants, recorded as sponsored research support when earned	87,151	74,772
SHC gifts	15,630	7,167
Other	3,334	2,422
<b>TOTAL AS REPORTED BY OOD</b>	<b>\$ 598,890</b>	<b>\$ 640,107</b>

## 15. Functional Expenses

Expenses for each of the years ended August 31, 2010 and 2009 are categorized on a functional basis as follows, in thousands of dollars:

	2010			2009
	UNIVERSITY	HOSPITALS	CONSOLIDATED	CONSOLIDATED
Instruction and departmental research	\$ 1,104,447	\$ -	\$ 1,104,447	\$ 1,098,245
Organized research - direct costs	927,700	-	927,700	816,477
Patient services	-	1,960,074	1,960,074	1,822,116
Auxiliary activities	642,121	-	642,121	595,263
Administration and general	220,697	153,598	374,295	339,924
Libraries	148,430	-	148,430	147,956
Student services	124,384	-	124,384	128,608
Development	74,719	12,192	86,911	90,478
SLAC construction	48,523	-	48,523	54,401
<b>TOTAL EXPENSES</b>	<b>\$ 3,291,021</b>	<b>\$ 2,125,864</b>	<b>\$ 5,416,885</b>	<b>\$ 5,093,468</b>

Depreciation, interest and operations and maintenance expenses are allocated to program and supporting activities, except for SLAC construction. Auxiliary activities include housing and dining services, intercollegiate athletics, Stanford Alumni Association, other activities and certain patient care provided by the School of Medicine faculty.

## 16. University Retirement Plans

The University provides retirement benefits through both contributory and noncontributory retirement plans for substantially all of its employees.

### DEFINED CONTRIBUTION PLAN

The University offers a defined contribution plan to eligible faculty and staff. University and participant contributions are primarily invested in annuities and mutual funds. University contributions under this plan, which are vested immediately to participants, were approximately \$99,373,000 and \$97,705,000 for the years ended August 31, 2010 and 2009, respectively.

### DEFINED BENEFIT PLANS

The University provides retirement and postretirement medical and other benefits through three defined benefit plans: the *Staff Retirement Annuity Plan*, the *University Postretirement Benefit Plan*, and the *Faculty Retirement Incentive Plan* (the "Plans"). The obligations for the Plans, net of plan assets, are recorded in the *Statements of Financial Position*. These are described more fully below.

#### Staff Retirement Annuity Plan

Retirement benefits for certain employees are provided through the *Staff Retirement Annuity Plan* (SRAP), a noncontributory plan. The SRAP is essentially closed to new participants. The University's policy is to fund pension costs in accordance with the Employee Retirement Income Security Act minimum funding requirements.

#### Postretirement Benefit Plan

The University also provides certain health care benefits for retired employees through its *Postretirement Benefit Plan* (PRBP). The University's employees and their covered dependents may become eligible for the PRBP upon the employee's retirement. Retiree health plans are paid for, in part, by retiree contributions, which are adjusted annually. Health benefits provided and the gross premiums charged (before University subsidies) to retirees under age 65 are the same as those provided to active employees. The

University subsidy varies depending on whether the retiree is covered under the traditional design or the defined dollar benefit design. Medicare supplement options are provided for retirees over age 65.

### Faculty Retirement Incentive Program

The University also provides a retirement incentive bonus for eligible faculty through the *University Faculty Retirement Incentive Program* (FRIP). The University's faculty may become eligible for the FRIP program if they commit to retire within a designated window of time. At August 31, 2010 and 2009, there were no program assets. The University funds benefit payouts as they are incurred.

The change in the Plans' assets, the related change in benefit obligations and the amounts recognized in the financial statements, in thousands of dollars, are as follows:

	STAFF RETIREMENT ANNUITY PLAN (SRAP)		POST RETIREMENT BENEFIT PLAN (PRBP)		FACULTY RETIREMENT INCENTIVE PROGRAM (FRIP)	
	2010	2009	2010	2009	2010	2009
<b>CHANGE IN PLAN ASSETS</b>						
Fair value of plan assets, beginning of year	\$ 241,296	\$ 268,886	\$ 100,085	\$ 101,350	\$ -	\$ -
Actual return on plan assets	18,620	(6,896)	5,659	(12,108)	-	-
Employer contributions	-	-	13,980	22,861	32,871	-
Plan participants' contributions	-	-	6,796	6,475	-	-
Benefits and plan expenses paid	(17,057)	(15,824)	(19,669)	(19,389)	(7,570)	-
Adjustments due to adoption of current accounting guidance measurement date provisions	-	(4,870)	-	896	-	-
Settlements on Special Retirement Incentive programs (SRI)	-	-	-	-	(25,301)	-
<b>FAIR VALUE OF PLAN ASSETS, END OF YEAR</b>	<b>242,859</b>	<b>241,296</b>	<b>106,851</b>	<b>100,085</b>	<b>-</b>	<b>-</b>
<b>CHANGE IN PROJECTED BENEFIT OBLIGATION</b>						
Benefit obligation, beginning of year	270,979	246,408	320,212	323,842	165,937	-
Service cost	3,642	3,493	9,964	11,104	8,481	-
Interest cost	14,863	15,670	20,532	21,990	8,015	-
Plan participants' contributions	-	-	6,796	6,475	-	-
Actuarial loss (gain)	30,271	22,908	123,246	(30,304)	(9,263)	165,937
Benefits and plan expenses paid	(17,057)	(15,824)	(19,669)*	(17,889)*	(7,570)	-
Adjustments due to adoption of current accounting guidance measurement date provisions	-	(1,676)	-	4,994	-	-
Settlements on Special Retirement Incentive programs (SRI)	-	-	-	-	(25,301)	-
<b>BENEFIT OBLIGATION, END OF YEAR</b>	<b>302,698</b>	<b>270,979</b>	<b>461,081</b>	<b>320,212</b>	<b>140,299</b>	<b>165,937</b>
<b>NET LIABILITY RECOGNIZED IN THE STATEMENTS OF FINANCIAL POSITION</b>						
	<b>\$ (59,839)</b>	<b>\$ (29,683)</b>	<b>\$ (354,230)</b>	<b>\$ (220,127)</b>	<b>\$ (140,299)</b>	<b>\$ (165,937)</b>
Prior service cost	\$ 2,889	\$ 4,390	\$ 40,564	\$ 48,169	\$ -	\$ -
Net actuarial loss	50,874	23,221	174,846	51,733	123,806	165,937
<b>ACCUMULATED COSTS OF PLAN BENEFIT COSTS NOT YET RECOGNIZED IN THE STATEMENT OF ACTIVITIES</b>						
	<b>\$ 53,763</b>	<b>\$ 27,611</b>	<b>\$ 215,410</b>	<b>\$ 99,902</b>	<b>\$ 123,806</b>	<b>\$ 165,937</b>

\* Net of Medicare subsidy

The accumulated benefit obligation for the SRAP was \$298,171,000 and \$266,750,000 as of August 31, 2010 and 2009, respectively.

Net periodic benefit expense and other changes in net assets related to the Plans for the years ended August 31, 2010 and 2009, in thousands of dollars, includes the following components:

	STAFF RETIREMENT ANNUITY PLAN (SRAP)		POST RETIREMENT BENEFIT PLAN (PRBP)		FACULTY RETIREMENT INCENTIVE PROGRAM (FRIP)	
	2010	2009	2010	2009	2010	2009
Service cost	\$ 3,642	\$ 3,493	\$ 9,964	\$ 11,104	\$ 8,481	\$ -
Interest cost	14,863	15,670	20,532	21,990	8,015	-
Expected return on plan assets	(16,002)	(17,803)	(8,007)	(8,509)	-	-
Amortization of:						
Prior service cost	1,501	1,501	7,605	7,605	-	-
Actuarial (gain) loss	-	(63)	2,481	2,570	8,549	-
SRI settlement loss recognized	-	-	-	-	24,319	-
<b>NET PERIODIC BENEFIT EXPENSE</b>	<b>4,004</b>	<b>2,798</b>	<b>32,575</b>	<b>34,760</b>	<b>49,364</b>	<b>-</b>
Net actuarial loss (gain) during period	27,653	50,574	125,594	(9,648)	(9,263)	165,937
Amortization of:						
Prior service cost	(1,501)	(1,501)	(7,605)	(7,605)	-	-
Actuarial gain (loss)	-	63	(2,481)	(2,570)	(8,549)	-
SRI settlement loss recognized	-	-	-	-	(24,319)	-
<b>TOTAL AMOUNTS RECOGNIZED IN CHANGES IN UNRESTRICTED NET ASSETS</b>	<b>26,152</b>	<b>49,136</b>	<b>115,508</b>	<b>(19,823)</b>	<b>(42,131)</b>	<b>165,937</b>
<b>TOTAL AMOUNT RECOGNIZED IN NET PERIODIC BENEFIT EXPENSE AND CHANGES IN UNRESTRICTED NET ASSETS</b>	<b>\$ 30,156</b>	<b>\$ 51,934</b>	<b>\$ 148,083</b>	<b>\$ 14,937</b>	<b>\$ 7,233</b>	<b>\$ 165,937</b>

The prior service costs and net actuarial loss expected to be amortized from change in net assets to net periodic benefit expense in fiscal year 2011, in thousands of dollars, are as follows:

	STAFF RETIREMENT ANNUITY PLAN (SRAP)	POST RETIREMENT BENEFIT PLAN (PRBP)	FACULTY RETIREMENT INCENTIVE PROGRAM (FRIP)
Prior service cost	\$ 674	\$ 7,605	\$ -
Net actuarial loss	\$ 2,498	\$ 8,696	\$ 7,422

## ACTUARIAL ASSUMPTIONS

The weighted average assumptions used to determine the benefit obligations for the Plans are shown below:

	STAFF RETIREMENT ANNUITY PLAN (SRAP)		POST RETIREMENT BENEFIT PLAN (PRBP)		FACULTY RETIREMENT INCENTIVE PROGRAM (FRIP)	
	2010	2009	2010	2009	2010	2009
Discount rate	4.61%	5.75%	5.10%	6.00%	4.67%	5.75%
Covered payroll growth rate	4.76%	4.21%	3.50%	3.50%	4.14%	3.50%

The weighted average assumptions used to determine the net periodic benefit cost for the Plans are shown below:

	STAFF RETIREMENT ANNUITY PLAN (SRAP)		POST RETIREMENT BENEFIT PLAN (PRBP)		FACULTY RETIREMENT INCENTIVE PROGRAM (FRIP)	
	2010	2009	2010	2009	2010	2009
Discount rate	5.75%	6.75%	6.00%	6.50%	5.75%	N/A
Expected returns on plan assets	7.00%	7.00%	8.00%	8.00%	N/A	N/A
Covered payroll growth rate	4.21%	4.29%	3.50%	3.50%	3.50%	N/A

To develop the 7% and the 8% expected long-term rate of return on asset assumptions for the SRAP and PRBP plans, respectively, the University's Retirement Program Investment Committee (RPIC) considered historical returns and future expectations for returns in each asset class, as well as the target asset allocation of the portfolios.

Expected returns on plan assets, a component of net periodic (income)/benefit cost, represent the long-term return on plan assets based on the calculated market-related value of plan assets. These rates of return are developed using an arithmetic average and are tested for reasonableness against historical returns. The use of expected long-term returns on plan assets may result in income that is greater or less than the actual returns of those plan assets in any given year. Over time, however, the expected long-term returns are designed to approximate the actual long-term returns, and therefore result in a pattern of income and cost recognition that more closely matches the pattern of the services provided by the employees. Differences between actual and expected returns are recognized as a component of change in unrestricted net assets and amortized as a component of net periodic (income)/benefit cost over the service life expectancy of the plan participants, depending on the plan, provided such amounts exceed the accounting standards threshold.

To determine the accumulated PRBP obligation as of August 31, 2010, an 8.5% annual rate of increase in the per capita costs of covered health care was assumed for the year ending August 31, 2011, declining gradually to 4.75% by 2024 and remaining at this rate thereafter. For covered dental plans, a constant 5% annual rate of increase was assumed.

Health care cost trend rate assumptions have a significant effect on the amounts reported for the health care plans. Increasing the health care cost trend rate by 1% in each future year would increase the accumulated PRBP obligation by \$69,849,000 and the aggregate annual service and interest cost by \$5,178,000. Decreasing the health care cost trend rate by 1% in each future year would decrease the accumulated PRBP obligation by \$57,006,000 and the aggregate annual service and interest cost by \$4,176,000.

### EXPECTED CONTRIBUTIONS

No contributions are expected to be made to the SRAP for the year ending August 31, 2011. The University expects to contribute \$24,620,000 to its PRBP during the year ending August 31, 2011.

## EXPECTED BENEFIT PAYMENTS

The following benefit payments, which reflect expected future service, are expected to be paid, in thousands of dollars, for the years ending August 31:

FISCAL YEAR	STAFF RETIREMENT ANNUITY PLAN (SRAP)	POST RETIREMENT BENEFIT PLAN (PRBP)		FACULTY RETIREMENT INCENTIVE PROGRAM (FRIP)
		EXCLUDING MEDICARE SUBSIDY	EXPECTED MEDICARE PART D SUBSIDY	
2011	\$ 26,269	\$ 19,535	\$ 2,177	\$ 5,122
2012	22,770	21,353	2,435	7,641
2013	22,764	23,157	2,711	7,852
2014	21,278	24,990	3,001	8,245
2015	22,531	26,787	3,322	8,910
2016 - 2020	104,847	165,731	22,704	52,817

## INVESTMENT STRATEGY

The RPIC, acting in a fiduciary capacity, has established formal investment policies for the assets associated with the University's funded plans (SRAP and PRBP). The investment strategy of the plans is to preserve and enhance the value of the plans' assets within acceptable levels of risk. Investments in the plans are diversified among asset classes, striving to achieve an optimal balance between risk and return, and income and capital appreciation. Because the liabilities of each of the plans are long-term, the investment horizon is primarily long-term, with adequate liquidity to meet short-term benefit payment obligations.

## CONCENTRATION OF RISK

The University manages a variety of risks, including market, credit, and liquidity risks, across its plan assets. Concentration of risk is defined as an undiversified exposure to one of the above-mentioned risks that increases the exposure of the loss of plan assets unnecessarily. Risk is minimized by predominately investing in broadly diversified index funds for public equities and fixed income. As of August 31, 2010, the University did not have concentrations of risk in any single entity, counterparty, sector, industry or country.

## PLAN ASSET ALLOCATIONS

Actual allocations by investment category at August 31, 2010 and 2009 are as follows:

ASSET CATEGORY	STAFF RETIREMENT ANNUITY PLAN (SRAP)		POST RETIREMENT BENEFIT PLAN (PRBP)	
	2010	2009	2010	2009
Cash and cash equivalents	1%	1%	0%	0%
Public equities	44%	45%	75%	75%
Fixed income	55%	54%	25%	25%
Private equities	<1%	<1%	0%	0%
<b>TOTAL PORTFOLIO</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

For fiscal year 2010 and 2009, the weighted-average target allocations by investment category are as follows:

ASSET CATEGORY	STAFF RETIREMENT ANNUITY PLAN (SRAP)		POST RETIREMENT BENEFIT PLAN (PRBP)	
	2010	2009	2010	2009
Public equities	45%	45%	75%	75%
Fixed income	55%	55%	25%	25%
<b>TARGET PORTFOLIO</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

### FAIR VALUE OF PLAN ASSETS

Current GAAP defines a hierarchy of valuation inputs for the determination of the fair value of plan assets as described in Note 7.

The plan assets measured at fair value as of August 31, 2010, in thousands of dollars, are as follows:

	AS OF AUGUST 31, 2010	LEVEL 1	LEVEL 2	LEVEL 3
SRAP:				
Cash and cash equivalents	\$ 1,093	\$ 1,093	\$ -	\$ -
Public equities	105,939	105,939	-	-
Fixed income	135,142	130,350	4,792	-
Private equities	685	-	-	685
<b>TOTAL</b>	<b>\$ 242,859</b>	<b>\$ 237,382</b>	<b>\$ 4,792</b>	<b>\$ 685</b>
PRBP:				
Public equities	\$ 80,147	\$ 80,147	\$ -	\$ -
Fixed income	26,704	26,704	-	-
<b>TOTAL</b>	<b>\$ 106,851</b>	<b>\$ 106,851</b>	<b>\$ -</b>	<b>\$ -</b>

The following table presents a reconciliation of beginning and ending balances for Level 3 investments in the SRAP for the year ended August 31, 2010, in thousands of dollars:

FAIR VALUE MEASUREMENTS USING SIGNIFICANT UNOBSERVABLE INPUTS (LEVEL 3)	BEGINNING BALANCE AS OF SEPTEMBER 1, 2009	NET PURCHASES (SALES AND MATURITIES)	REALIZED GAINS (LOSSES)	CHANGE IN UNREALIZED GAINS (LOSSES)	NET TRANSFERS IN (OUT)	ENDING BALANCE AS OF AUGUST 31, 2010
Private equities	\$ 700	\$ -	\$ -	\$ (15)	\$ -	\$ 685
<b>TOTAL</b>	<b>\$ 700</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ (15)</b>	<b>\$ -</b>	<b>\$ 685</b>

## 17. Hospitals' Retirement Plans

The Hospitals provide retirement benefits through defined benefit and defined contribution retirement plans covering substantially all employees.

### DEFINED CONTRIBUTION PLAN

Employer contributions to the defined contribution retirement plan are based on a percentage of participant annual compensation. Employer contributions to this plan amounted to approximately \$61,274,000 and \$55,581,000 for the years ended August 31, 2010 and 2009, respectively.

## DEFINED BENEFIT PLANS

Certain employees of the Hospitals are covered by a noncontributory, defined benefit pension plan ("Pension plan"). Benefits of certain prior employees of LPCH are covered by a frozen defined benefit plan. Benefits are based on years of service and the employee's compensation. Contributions to the plans are based on actuarially determined amounts sufficient to meet the benefits to be paid to plan participants.

## POST RETIREMENT MEDICAL BENEFIT PLAN

The Hospitals currently provide health insurance coverage for certain of their employees upon retirement as early as age 55, with years of service as defined by specific criteria. The health insurance coverage for retirees who are under age 65 is the same as that provided to active employees. A Medicare supplement option is provided for retirees over age 65. The obligation for these benefits has been recorded in the *Statements of Financial Position*.

The change in Pension and Post Retirement Medical Benefit plans' assets, the related change in benefit obligations and the amounts recognized in the financial statements, in thousands of dollars, are as follows:

	PENSION		POST RETIREMENT MEDICAL	
	2010	2009	2010	2009
<b>CHANGE IN PLAN ASSETS</b>				
Fair value of plan assets, beginning of year	\$ 116,779	\$ 145,724	\$ -	\$ -
Actual return on plan assets	14,383	(23,078)	-	-
Employer contributions	13,830	3,075	3,298	4,490
Plan participants' contributions	-	-	782	665
Benefits paid	(7,511)	(7,763)	(4,080)	(4,580)
Adjustments due to adoption of current accounting guidance measurement date provisions	-	(1,179)	-	(575)
Settlements	(2,348)	-	-	-
<b>FAIR VALUE OF PLAN ASSETS, END OF YEAR</b>	<b>135,133</b>	<b>116,779</b>	<b>-</b>	<b>-</b>
<b>CHANGE IN PROJECTED BENEFIT OBLIGATION</b>				
Benefit obligation, beginning of year	183,256	151,941	78,828	63,543
Service cost	1,723	1,747	2,357	1,665
Interest cost	10,895	12,664	4,458	5,067
Plan participants' contributions	-	-	782	665
Actuarial loss	25,119	25,787	8,505	9,411
Benefits paid	(7,511)	(7,763)	(4,080)	(4,580)
Plan amendment	-	-	-	3,632
Adjustments due to adoption of current accounting guidance measurement date provisions	-	(1,120)	-	(575)
Settlements	(1,872)	-	-	-
<b>BENEFIT OBLIGATION, END OF YEAR</b>	<b>211,610</b>	<b>183,256</b>	<b>90,850</b>	<b>78,828</b>
<b>NET LIABILITY RECOGNIZED IN THE STATEMENTS OF FINANCIAL POSITION</b>				
	\$ (76,477)	\$ (66,477)	\$ (90,850)	\$ (78,828)
Prior service cost	\$ -	\$ -	\$ 2,594	\$ 2,020
Net actuarial loss	90,024	67,292	9,895	1,495
<b>ACCUMULATED COSTS OF PLAN BENEFIT COSTS NOT YET RECOGNIZED IN THE STATEMENT OF ACTIVITIES</b>				
	\$ 90,024	\$ 67,292	\$ 12,489	\$ 3,515

The accumulated benefit obligation for the Pension plan was \$207,238,000 and \$179,184,000 as of August 31, 2010 and 2009, respectively.

Net periodic benefit expense and other changes in net assets related to the plans for the years ended August 31, 2010 and 2009, in thousands of dollars, includes the following components:

	PENSION		POST RETIREMENT MEDICAL	
	2010	2009	2010	2009
Service cost	\$ 1,723	\$ 1,747	\$ 2,357	\$ 1,665
Interest cost	10,895	12,664	4,458	5,067
Expected return on plan assets	(12,866)	(14,195)	-	-
Amortization of:				
Prior service credit	-	-	(574)	(973)
Actuarial loss (gain)	1,346	97	105	(1,056)
<b>NET PERIODIC BENEFIT EXPENSE</b>	<b>1,098</b>	<b>313</b>	<b>6,346</b>	<b>4,703</b>
Prior service cost during period	-	-	-	3,632
Net actuarial loss during period	24,078	63,109	8,505	9,411
Amortization of:				
Prior service credit	-	-	574	973
Actuarial (loss) gain	(1,346)	(97)	(105)	1,056
<b>TOTAL AMOUNTS RECOGNIZED IN UNRESTRICTED NET ASSETS</b>	<b>22,732</b>	<b>63,012</b>	<b>8,974</b>	<b>15,072</b>
<b>TOTAL AMOUNT RECOGNIZED IN NET PERIODIC BENEFIT EXPENSE AND CHANGES IN UNRESTRICTED NET ASSETS</b>	<b>\$ 23,830</b>	<b>\$ 63,325</b>	<b>\$ 15,320</b>	<b>\$ 19,775</b>

The prior service credit and net actuarial loss expected to be amortized from change in net assets to net periodic benefit expense in fiscal year 2011, in thousands of dollars, are as follows:

	PENSION		POST RETIREMENT MEDICAL	
Prior service credit	\$ -		\$ 574	
Net actuarial loss	\$ 5,177		\$ 696	

### ACTUARIAL ASSUMPTIONS

The weighted average assumptions used to determine the benefit obligations for the Pension and Post Retirement Medical Benefit plans are shown below:

	PENSION		POST RETIREMENT MEDICAL	
	2010	2009	2010	2009
Discount rate	4.79% - 4.99%	5.93 - 6.10%	4.70%	5.83%
Covered payroll growth rate	5.50%	5.50%	N/A	N/A

The weighted average assumptions used to determine the net periodic benefit cost for the Pension and Post Retirement Medical Benefit plans are shown below:

	PENSION		POST RETIREMENT MEDICAL	
	2010	2009	2010	2009
Discount rate	5.93% - 6.10%	7.31 - 7.38%	5.83%	7.12%
Expected return on plan assets	6.25% - 8.00%	6.25 - 8.00%	N/A	N/A
Covered payroll growth rate	5.50%	5.50%	N/A	N/A

To develop the expected long-term rate of return on assets assumptions, the Hospitals considered the historical returns and the future expectations for returns for each asset class, as well as the target asset allocation of the pension portfolio.

To determine the accumulated post retirement medical benefit obligation as of August 31, 2010, an 8.5% annual rate of increase in the pre-65 per capita costs, an 8.5% annual rate of increase in the post-65 prescription drug per capita costs, and a 7.0% rate of increase in the post-65 per capita cost of all other medical benefits was assumed for 2010, all declining gradually to 4.75% by 2024 and remaining at this rate thereafter.

Assumed health care cost trend rates have a significant effect on the amounts reported for the health care plans. Increasing the health care cost trend rate by 1% in each future year would increase the accumulated post retirement medical benefit obligation by \$3,257,000 and the aggregate annual service and interest cost by \$251,000. Decreasing the health care cost trend rate by 1% in each future year would decrease the accumulated post retirement medical benefit obligation by \$2,940,000 and the aggregate annual service and interest cost by \$227,000.

### EXPECTED CONTRIBUTIONS

The Hospitals expect to contribute \$26,166,000 to their Pension plan and \$4,827,000 to their Post Retirement Medical Benefit plan during the fiscal year ending August 31, 2011.

### EXPECTED BENEFIT PAYMENTS

The following benefit payments, which reflect expected future service, are expected to be paid for the fiscal years ending August 31, in thousands of dollars:

FISCAL YEAR	PENSION PLAN	POST RETIREMENT MEDICAL	
		EXCLUDING MEDICARE SUBSIDY	EXPECTED MEDICARE PART D SUBSIDY
2011	\$ 9,455	\$ 5,330	\$ 503
2012	10,157	5,927	564
2013	10,787	6,547	627
2014	11,479	7,086	691
2015	12,254	7,504	760
2016 - 2020	69,588	39,807	4,833

### INVESTMENT STRATEGY

The Hospitals' investment strategy for the Pension plan is to maximize the total rate of return (income and appreciation) within the limits of prudent risk taking and Section 404 of the Employee Retirement Income Security Act. The funds are diversified across asset classes to achieve an optimal balance between risk and return and between income and capital appreciation. Many of the pension liabilities are long-term. The investment horizon is also long-term; however, the investment plan also ensures adequate near-term liquidity to meet benefit payments.

## CONCENTRATION OF RISK

The Hospitals manage risks similar to those described in *Note 16* for the University retirement plans. Similar to the University, risk is minimized by diversifying the Hospitals' exposure to such risks across a variety of instruments, markets, and counterparties. As of August 31, 2010, the Hospitals did not have concentrations of risk in any single entity, manager, counterparty, sector, industry or country.

## PLAN ASSETS

Actual allocations by investment category at August 31, 2010 and 2009 are as follows:

ASSET CATEGORY	PENSION	
	2010	2009
Cash equivalents	0%	9%
Public equities	43%	42%
Fixed income	51%	42%
Real estate	6%	7%
<b>TOTAL PORTFOLIO</b>	<b>100%</b>	<b>100%</b>

The Hospitals' investment policy is to invest in assets that result in a favorable long term rate of return from a diversified portfolio. For fiscal year 2010 and 2009, the weighted-average target allocations by investment category are as follows:

ASSET CATEGORY	PENSION	
	2010	2009
Cash equivalents	<1%	<1%
Public equities	46%	46%
Fixed income	44%	44%
Real estate	10%	10%
<b>TARGET PORTFOLIO</b>	<b>100%</b>	<b>100%</b>

## FAIR VALUE OF PLAN ASSETS

Current U.S. GAAP defines a hierarchy of valuation inputs for the determination of the fair value of plan assets as described in *Note 7*.

The Pension plan assets measured at fair value as of August 31, 2010, in thousands of dollars, are as follows:

	AS OF			
	AUGUST 31, 2010	LEVEL 1	LEVEL 2	LEVEL 3
Cash and cash equivalents	\$ 670	\$ 670	\$ -	\$ -
Public equities	58,384	58,384	-	-
Fixed income	68,609	68,609	-	-
Real estate	7,458	-	-	7,458
Other	12	12	-	-
<b>TOTAL</b>	<b>\$ 135,133</b>	<b>\$ 127,675</b>	<b>\$ -</b>	<b>\$ 7,458</b>

The following table presents a reconciliation of beginning and ending balances for Level 3 investments in the Pension plan for the year ended August 31, 2010, in thousands of dollars:

FAIR VALUE MEASUREMENTS USING SIGNIFICANT UNOBSERVABLE INPUTS (LEVEL 3)	BEGINNING BALANCE AS OF SEPTEMBER 1, 2009	NET PURCHASES (SALES AND MATURITIES)	REALIZED GAINS (LOSSES)	CHANGE IN UNREALIZED GAINS (LOSSES)	NET TRANSFERS IN (OUT)	ENDING BALANCE AS OF AUGUST 31, 2010
Real estate	\$ 8,301	\$ (146)	\$ 473	\$ (1,170)	\$ -	\$ 7,458
<b>TOTAL</b>	<b>\$ 8,301</b>	<b>\$ (146)</b>	<b>\$ 473</b>	<b>\$ (1,170)</b>	<b>\$ -</b>	<b>\$ 7,458</b>

## 18. Operating Leases

The University and the Hospitals lease certain equipment and facilities under operating leases expiring at various dates. Total rental expense under these leases for the years ended August 31, 2010 and 2009 was \$28,949,000 and \$32,172,000, respectively, for the University and \$56,197,000 and \$51,084,000, respectively, for the Hospitals.

Net minimum future operating lease payments and related present value, assuming a 4.34% discount rate for periods subsequent to August 31, 2010, in thousands of dollars, are as follows:

YEAR ENDED AUGUST 31	MINIMUM LEASE PAYMENTS		PRESENT VALUE OF MINIMUM LEASE PAYMENTS	
	UNIVERSITY	HOSPITALS	UNIVERSITY	HOSPITALS
2011	\$ 23,636	\$ 39,810	\$ 22,129	\$ 37,272
2012	20,725	37,678	18,597	33,809
2013	18,650	36,699	16,038	31,561
2014	17,384	28,006	14,328	23,083
2015	12,010	22,553	9,487	17,815
Thereafter	55,441	127,798	35,903	92,708
<b>TOTAL</b>	<b>\$ 147,846</b>	<b>\$ 292,544</b>	<b>\$ 116,482</b>	<b>\$ 236,248</b>

## 19. Related Party Transactions

Members of the University's Board and senior management may, from time to time, be associated, either directly or indirectly, with companies doing business with the University. For senior management, the University requires annual disclosure of significant financial interests in, or employment or consulting relationships with, entities doing business with the University. These annual disclosures cover both senior management and their immediate family members. When such relationships exist, measures are taken to appropriately manage the actual or perceived conflict in the best interests of the University. The University has a written conflict of interest policy that requires, among other things, that no member of the Board can participate in any decision in which he or she (or an immediate family member) has a material financial interest. Each trustee is required to certify compliance with the conflict of interest policy on an annual basis and indicate whether the University does business with an entity in which a trustee has a material financial interest. When such relationships exist, measures are taken to mitigate any actual or perceived conflict, including requiring that such transactions be conducted at arm's length, for good and sufficient consideration, based on terms that are fair and reasonable to and for the benefit of the University, and in accordance with applicable conflict of interest laws. No such associations are considered to be significant.

## 20. Commitments and Contingencies

Management is of the opinion that none of the following commitments and contingencies will have a material adverse effect on the University's consolidated financial position.

### **SPONSORED PROJECTS**

The University conducts substantial research for the federal government pursuant to contracts and grants from federal agencies and departments. The University records reimbursements of direct and indirect costs (facilities and administrative costs) from grants and contracts as operating revenues. The Office of Naval Research is the University's cognizant federal agency for determining indirect cost rates charged to federally sponsored agreements. It is supported by the Defense Contract Audit Agency, which has the responsibility for auditing direct and indirect charges under those agreements. Costs recovered by the University in support of sponsored research are subject to audit and adjustment.

### **HEALTH CARE**

The healthcare industry is subject to numerous laws and regulations of federal, state and local governments. Compliance with these laws and regulations can be subject to future government review and interpretation, as well as to regulatory actions unknown or unasserted at this time. Recently, government activity has increased with respect to investigations and allegations concerning possible violations by healthcare providers of regulations that could result in the imposition of significant fines and penalties, as well as significant repayments for patient services previously billed. The Hospitals are subject to similar regulatory reviews, and while such reviews may result in repayments and/or civil remedies that could have a material effect on the Hospital's financial results of operations in a given period, the Hospitals' management believes that such repayments and/or civil remedies would not have a material effect on their financial position.

The California Office of Statewide Health Planning and Development has classified a substantial portion of SHC's facilities as compliant with seismic safety structural standards until 2030 and beyond. However, some acute care activities are located in facilities that current law requires to be made compliant or to be taken out of service by 2013 or, under prescribed circumstances, by 2015. SHC plans to construct a new hospital facility to address seismic safety requirements and other needs. Applications for state and local approvals are pending.

Recent amendments to legislation will extend the structural compliance deadline for eligible hospitals from 2013 until January 1, 2016 due to local planning delays. In addition, such legislation authorizes two additional one-year extensions, until January 1, 2018, to facilities that meet certain criteria in the legislation. Hospital management expects SHC to be eligible for such extensions. Based on current estimated schedules for obtaining local approvals and for the construction of the new hospital, management currently projects that the new hospital construction will be complete by January 1, 2018.

### **LABOR AGREEMENTS**

Approximately 11% of the University's, 36% of SHC's and 48% of LPCH's employees are covered under union contract arrangements and are, therefore, subject to labor stoppages when contracts expire. The Hospitals' agreement with the Committee for Recognition of Nursing Achievement (CRONA) expired during fiscal year 2010 and negotiations are ongoing. The Hospitals' agreement with the Service Employees International Union (SEIU) will expire in 2011.

### **LITIGATION**

The University and the Hospitals are defendants in a number of legal actions. While the final outcome cannot be determined at this time, management is of the opinion that the liability, if any, resulting from these legal actions will not have a material adverse effect on the consolidated financial position.

## **CONTRACTUAL COMMITMENTS**

At August 31, 2010, the University had contractual obligations of approximately \$277,071,000 in connection with major construction projects. Remaining expenditures on construction in progress are estimated to be \$491,403,000, which will be financed with certain unexpended plant funds, gifts and debt.

Commitments on contracts for the construction and remodeling of Hospital facilities were approximately \$81,175,000 at August 31, 2010.

The University has committed to invest in numerous investment partnerships over a period of years pursuant to provisions of the individual partnership agreements. As of August 31, 2010, the aggregated amount of such unfunded commitments was \$4,143,703,000.

## **GUARANTEES AND INDEMNIFICATIONS**

The University and the Hospitals enter into mutual indemnification agreements with third parties in the normal course of business. The impact of these agreements is not expected to be material. As a result, no liabilities related to guarantees and indemnifications have been recorded as of August 31, 2010.

## **21. Subsequent Events**

The University and the Hospitals have evaluated subsequent events for the period from August 31, 2010 through December 15, 2010, the date the financial statements were available to be issued.

# MANAGEMENT RESPONSIBILITY FOR FINANCIAL STATEMENTS

The University is the sole member of Stanford Hospital and Clinics and Lucile Packard Children's Hospital; however, each of the Hospitals has its own separate management with responsibility for its own financial reporting.

Management of the University and the Hospitals is responsible for the integrity and objectivity of their respective portions of these financial statements. The University oversees the process of consolidating the Hospitals' information into the consolidated financial statements. Management of each entity represents that, with respect to its financial information, the consolidated financial statements in this annual report have been prepared in conformity with generally accepted accounting principles in the United States.

In accumulating and controlling financial data, management of the University and the Hospitals maintains separate systems of internal accounting controls. Management of the respective entities believes that effective internal controls are maintained and communication of accounting and business policies, by selection and training of qualified personnel and by programs of internal audits, give reasonable assurance, at reasonable cost, that assets are protected and that transactions and events are recorded properly.

The accompanying consolidated financial statements have been audited by the University's and Hospitals' independent auditors, PricewaterhouseCoopers LLP. Their report expresses an informed judgment as to whether the consolidated financial statements, considered in their entirety, present fairly, in conformity with generally accepted accounting principles, the consolidated financial position and changes in net assets and cash flows. The independent auditors' opinion is based on audit procedures described in their report, which include obtaining an understanding of systems, procedures and internal accounting controls, and performing tests and other audit procedures to provide reasonable assurance that the financial statements are neither materially misleading nor contain material errors. While the independent auditors test procedures and controls, it is neither practical nor necessary for them to scrutinize a large portion of transactions.

The Board of Trustees of the University and the separate Boards of Directors of the Hospitals, through their respective Audit Committees, comprised of trustees and directors not employed by the University or the Hospitals, are responsible for engaging the independent auditors and meeting with management, internal auditors and the independent auditors to independently assess whether each is carrying out its responsibility and to discuss auditing, internal control and financial reporting matters. Both the internal auditors and the independent auditors have full and free access to the respective Audit Committees. Both meet with the respective Audit Committees at least annually, with and without each other, and without the presence of management representatives.



Randall S. Livingston  
Vice President for Business Affairs  
and Chief Financial Officer  
Stanford University



Daniel J. Morissette  
Chief Financial Officer  
Stanford Hospital and Clinics



M. Suzanne Calandra  
Senior Associate Vice President for Finance  
Stanford University



Timothy W. Carmack  
Chief Financial Officer  
Lucile Salter Packard Children's Hospital at Stanford

# REPORT FROM THE STANFORD MANAGEMENT COMPANY

The Stanford Management Company (SMC) was established in 1991 to manage Stanford's financial assets. SMC is a division of the University with oversight by a Board of Directors appointed by the University Board of Trustees. The SMC Board consists of investment and real estate professionals, the University president, the University chief financial officer, the chairman of the Board of Trustees and the CEO of SMC. The Board approves SMC asset allocation targets, oversees the hiring of external asset managers and evaluates the performance of SMC investments and professionals. SMC oversees endowment and trust assets, which are temporarily invested expendable funds.

The majority of the University's endowment assets is invested through the Merged Pool (MP), which is a diversified portfolio of actively managed financial and real estate assets valued at approximately \$15.9 billion as of June 30, 2010. To facilitate the comparison of returns with results of other endowments and foundations, MP performance measurements are calculated on the 12 months ending June 30, 2010. The following discussion of endowment performance relates solely to investments in the MP. The MP realized a 14.4% investment gain for the 12 months ending June 30, 2010. Over the past 10 years, the MP achieved an annualized rate of return of 6.9%, growing from \$7.9 billion to \$15.9 billion.

The MP portfolio is constructed on a foundation of modern portfolio theory and strategic asset allocation. The portfolio is designed to optimize long-term returns, create consistent annual payouts to the University's operating budget and preserve purchasing power for future generations of Stanford faculty and students.

SMC, with assistance from its Board of Directors, actively manages the MP, selecting third-party managers to deploy the MP's capital. Stanford University's brand and SMC's reputation as a stable long-term source of capital enable SMC to gain access to the best third-party managers in the world. Within each asset class, we endeavor to place capital with a diversified set of managers across geographies and investment strategies. We seek to benefit from drivers of economic growth through a broadly diversified and hedged portfolio that is less subject to drawdown than the more concentrated portfolio of the late 1990's. SMC also seeks to add value through effective risk management, tactical portfolio rebalancing and opportunistic investment tilts.

**STANFORD MP ASSET ALLOCATION** Given the perpetual nature of the University, SMC's investment horizon is long-term. Our objective is to generate optimal total return relative to an appropriate level of risk for Stanford. Each June, SMC and the Board reevaluate portfolio asset allocation targets, as well as expected risk, return and correlation among asset classes. This annual review takes into account current market conditions and historical characteristics of each asset class. The strategic asset allocation targets for the MP as of June 30, 2010 are listed below:

<b>LONG-TERM POLICY TARGETS</b>	
<b>ASSET CLASS</b>	<b>STRATEGIC ALLOCATION</b>
Public Equity	37%
Real Estate	16%
Private Equity	12%
Natural Resources	7%
Absolute Return	18%
Fixed Income	10%

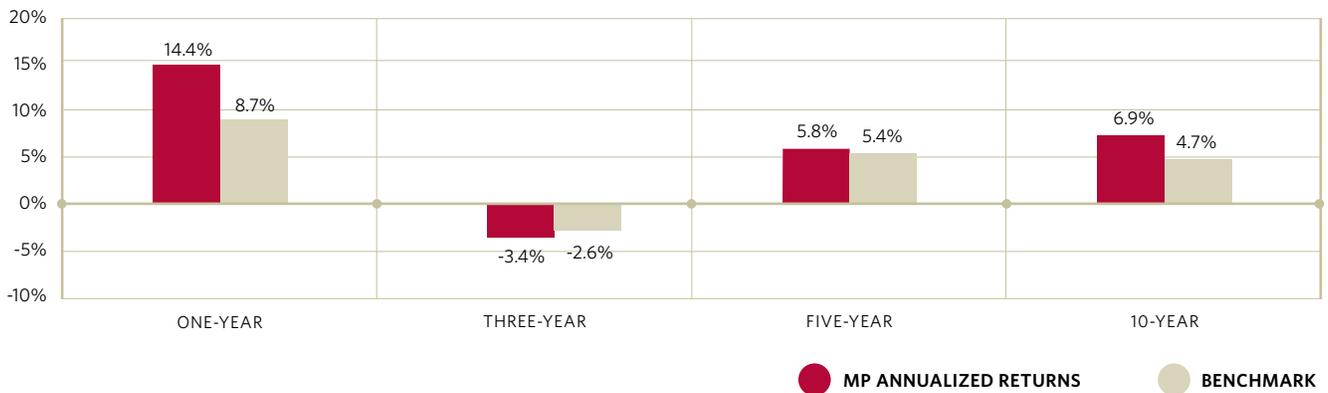
**STANFORD MP PERFORMANCE COMPARED TO INFLATION** The table below outlines annualized returns for various periods ending June 30, 2010.

**MP PERFORMANCE COMPARED TO INFLATION**

	ONE-YEAR	THREE-YEAR	FIVE-YEAR	TEN-YEAR
Nominal Endowment Return	14.4%	-3.4%	5.8%	6.9%
GDP Deflator	0.8%	1.3%	2.1%	2.3%
Real Endowment Return	13.6%	-4.7%	3.7%	4.6%

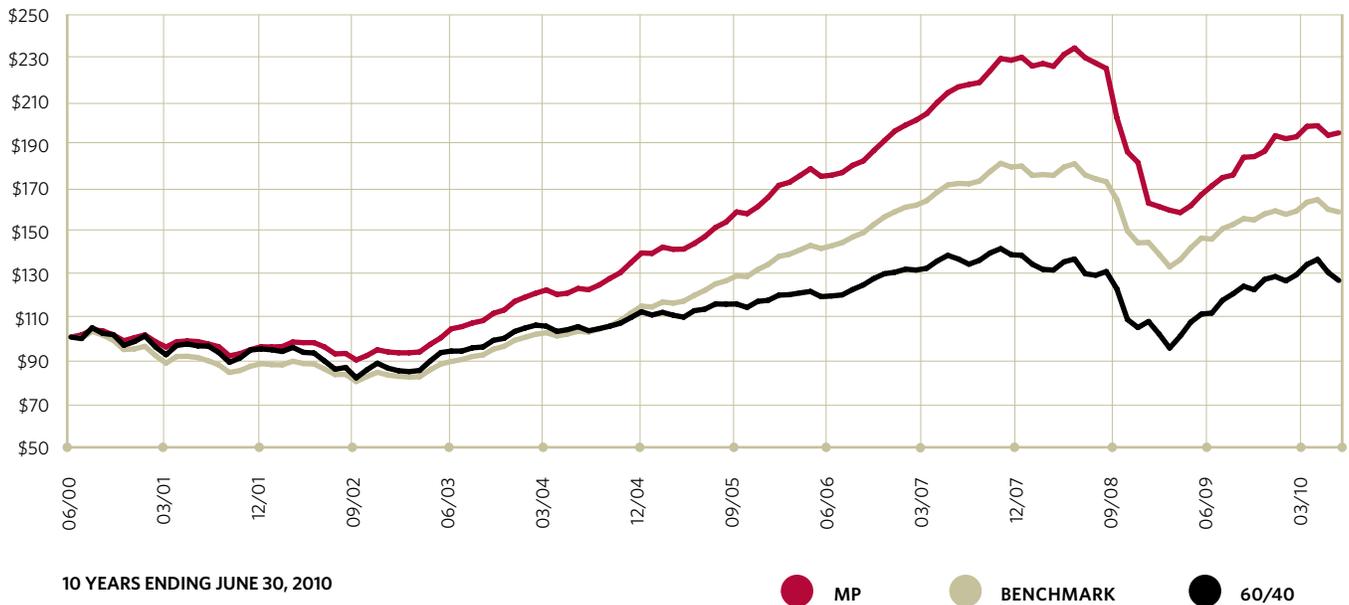
**STANFORD MP PERFORMANCE COMPARED TO BENCHMARKS** SMC evaluates the performance of investment managers by comparing their returns to benchmarks that are appropriate for each individual asset class. The SMC Board reviews asset class benchmarks on an annual basis to ensure comparability. SMC compares overall MP performance to the composite benchmark return, which represents a blend of the benchmark returns for each asset class weighted by the strategic allocations above. In the table below, actual performance, net of management fees, is compared to the composite benchmark for periods ended June 30, 2010.

**STANFORD MP VS. STANFORD COMPOSITE BENCHMARK**



SMC's effectiveness in implementing its investment strategies through top-level manager selection has resulted in consistent and long-term outperformance over the composite benchmark. This has added an excess of \$2.9 billion to the value of the MP over this 10-year period. The cumulative return chart below compares the growth of \$100 in Stanford's MP, a composite benchmark portfolio, and a 60% stock/40% bond portfolio over the past 10 years:

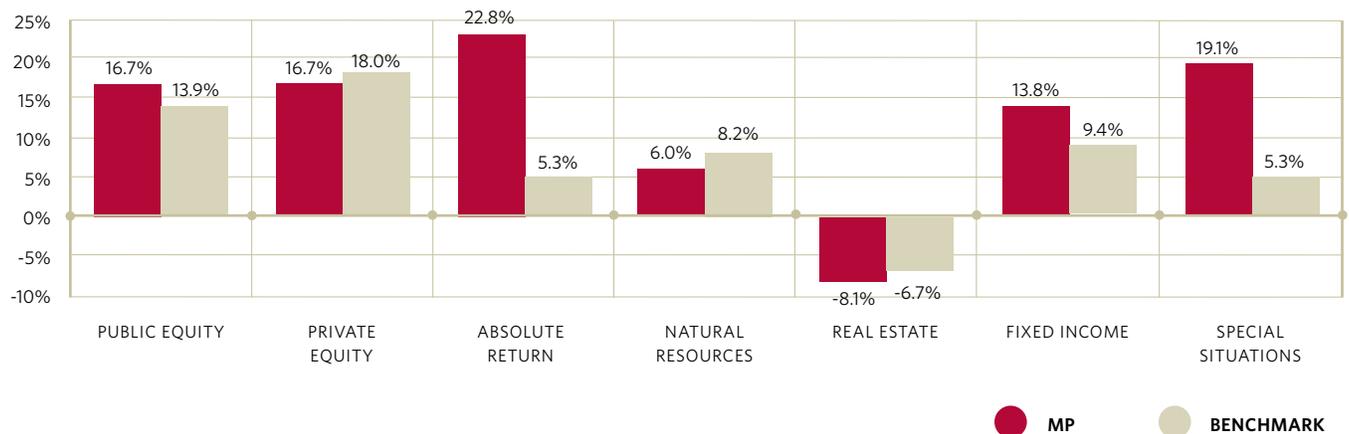
**STANFORD MP VS. STANFORD COMPOSITE BENCHMARK VS. PASSIVE 60% EQUITY/40% BOND COMPOSITE**



The relative one-year performance of the MP versus the benchmark was 5.8%.

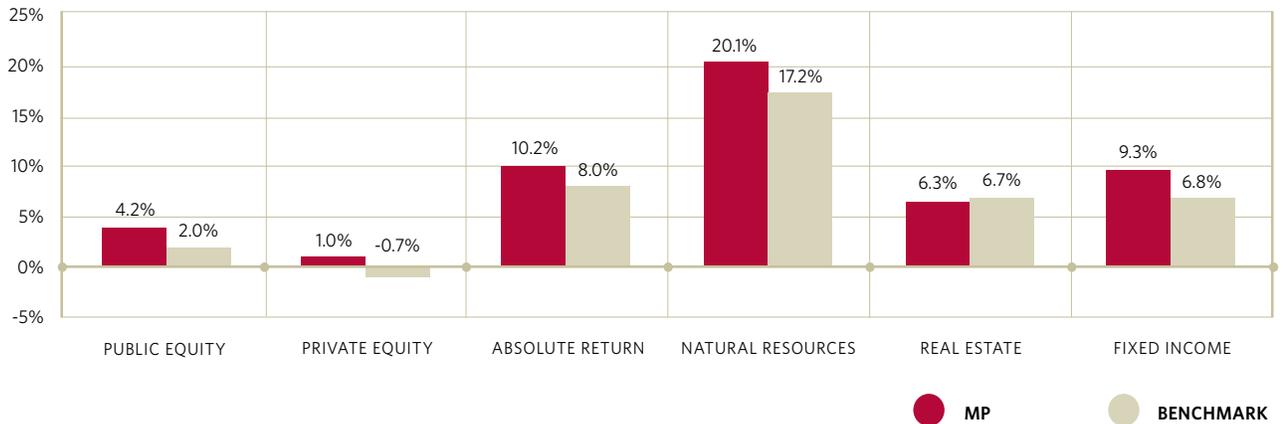
**INDIVIDUAL ASSET CLASS PERFORMANCE** The performance of individual asset classes for the 12 months ended June 30, 2010, relative to each asset class benchmark, is illustrated in the graph below:

**STANFORD MP ONE-YEAR ASSET CLASS RETURNS VS. BENCHMARK**



As outlined below, the results of 10-year asset class returns, relative to benchmark, illustrate the value of SMC's ability to shift investment styles/strategies and identify outstanding managers in each asset class:

**STANFORD MP 10-YEAR ANNUALIZED ASSET CLASS RETURNS VS. BENCHMARK**



In the 12 months through June 30, 2010, the Merged Pool returns were 14.4%. During the same period, the S&P 500 Total Return Index returned 14.4%, the Barclays Aggregate returned 9.5%, and a 60/40 equity/fixed income mix would have returned 12.4%. In late 2008 and early 2009 there was little benefit to diversification as most asset classes were rocked by the de-leveraging cycle. Thus, we were especially pleased with the defensiveness of the portfolio in the June 2010 quarter, when the MP was down only modestly even as global equity markets were down 12.1% (MSCI World Index). Heightened correlations during the crisis did not diminish the value of diversification, rather the experience highlighted the importance of risk management and appropriate diversification across risks. Diversification remains the cornerstone of our investment strategy.

During Fiscal Year 2010 the liquidity characteristics of the Merged Pool continued to improve, without recourse to the \$800MM liquidity reserve that the University raised in the spring of 2009. With the improvement in liquidity, we have taken further steps to lower risk in the portfolio and increase flexibility. At the same time, we continue to look for ways to profit from a very uncertain investing environment.

John F. Powers  
 President and Chief Executive Officer  
 Stanford Management Company





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