

ACADEMIC UNITS

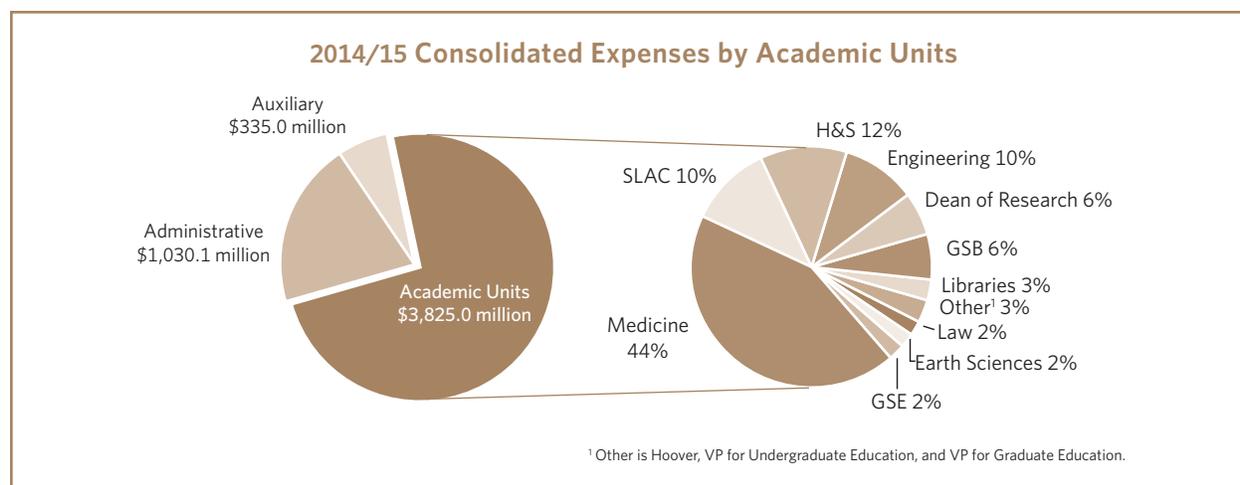
OVERVIEW OF ACADEMIC UNITS

This chapter summarizes programmatic and financial activity for each academic unit. The revenue expectation in 2014/15 for these academic units comprises nearly 74% of the university total revenue. Overall, the academic units project an operating surplus of \$177.1 million. After transfers to facilities and endowment, the unit budgets overall will achieve a \$128.2 million surplus.

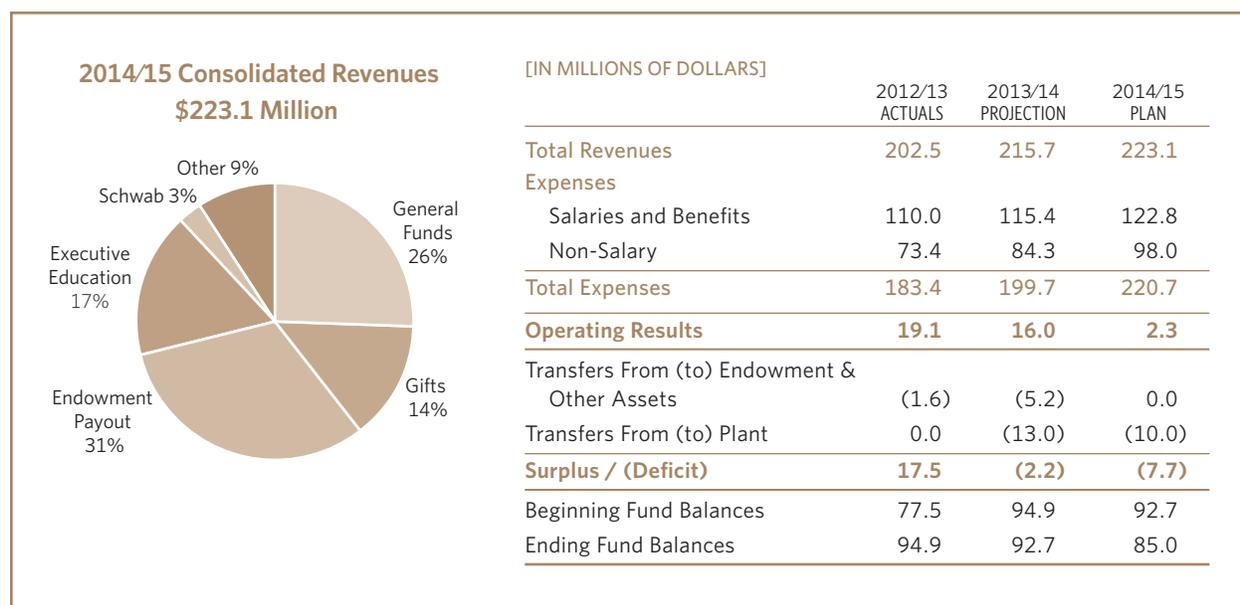
CONSOLIDATED BUDGET FOR OPERATIONS, 2014/15: ACADEMIC UNITS

[IN MILLIONS OF DOLLARS]

	TOTAL REVENUES AND TRANSFERS	TOTAL EXPENSES	RESULT OF CURRENT OPERATIONS	TRANSFERS (TO)/FROM ASSETS	CHANGE IN EXPENDABLE FUND BALANCE
Academic Units:					
Graduate School of Business	223.1	220.7	2.3	(10.0)	(7.7)
School of Earth Sciences	67.4	63.4	4.0	(3.5)	0.5
Graduate School of Education	63.3	62.3	1.0	(1.0)	(0.0)
School of Engineering	396.5	381.1	15.4	(3.4)	12.0
School of Humanities and Sciences	465.0	455.7	9.4	(11.8)	(2.4)
School of Law	82.4	77.9	4.5	(4.3)	0.3
School of Medicine	1,849.1	1,699.4	149.7	(15.5)	134.2
Vice Provost and Dean of Research	206.3	212.2	(5.9)	6.0	0.1
Vice Provost for Undergraduate Education	48.3	47.0	1.2	(0.8)	0.4
Vice Provost for Graduate Education	4.3	8.3	(4.1)	(1.5)	(5.5)
Hoover Institution	55.9	54.8	1.1	(3.3)	(2.2)
Stanford University Libraries	116.9	118.1	(1.2)	0.0	(1.2)
SLAC	423.8	424.0	(0.3)	0.0	(0.3)
Total Academic Units	4,002.1	3,825.0	177.1	(48.9)	128.2



GRADUATE SCHOOL OF BUSINESS



Programmatic Directions

The Graduate School of Business (GSB) is in its third year of execution of the GSB2020 strategy and has already made significant progress in the three focal areas: global strategy, the Stanford Institute for Innovation in Developing Economies (SEED), and education technology. The GSB also continues to advance initiatives around the degree programs.

- **Global Strategy:** The GSB's global strategy will affect existing students, Stanford graduates, GSB and Stanford alumni, and businesses around the world. The GSB has expanded through the Global Innovation Programs, which offer Stanford Ignite, a certificate program that teaches graduate students, alumni, and experienced professionals to formulate and commercialize their ideas. Programs have been run in Paris, France, and Bangalore, India, and are planned to run in Latin America. In addition, alumni relations and development activities will take place in locations such as Mexico City and Monterrey, Mexico; Singapore; and Hong Kong.
- **SEED:** SEED also expands the GSB's global reach, but its strategic mission is specifically to transform lives on a massive scale in the foreseeable future by stimulating creation of economic opportunities that reach and benefit those who live under circumstances of poverty. SEED provides funding to faculty and visiting scholars

who wish to research topics that further its mission. To date, SEED has granted more than a quarter-million dollars in funding to faculty and PhD students. SEED also provides funding for the Design for Extreme Affordability and Social Entrepreneurship classes to support students' learning so that they can become future leaders in this mission. Another component of the SEED strategy is the establishment of regional centers. The first, West Africa, in Ghana, has run two 30-company cohorts from six West African countries. In 2014/15 the GSB plans to continue to consolidate and stabilize the operation in West Africa; expand student engagement and university-wide faculty research; and launch the East Africa center.

- **Education Technology:** The GSB's education technology strategy includes curricular initiatives, facilities, and online communities. Creation of the appropriate facilities to support development and implementation of the curricular initiatives has been important to the success of technology in education thus far. Recording studios have been created so that high-quality video content can be produced for either online education or curriculum enhancement; distance education classrooms have been created that enable professors to teach real-time programs around the world without leaving the campus, using high-quality audiovisual transmissions. Flipped classrooms, such as the Startup Garage, allow students

to watch videos and come to class prepared to engage in class activities and deeper discussions, and allow professors to more fully gauge the students' understanding of the material. The first GSB massive open online course (MOOC), Finance of Retirement & Pensions, ran from September through December 2013, with more than 11,000 active students.

The GSB also continues to advance initiatives around its core degree programs. For example, it is developing ways to improve the online experience for MBA students. The GSB is also continuing its efforts to support and develop joint MBA degrees. In 2013/14, it conducted a review of the PhD program, which will result in an opportunity to increase the number of PhD students in 2014/15. Finally, the MS in Management for Experienced Managers (MSx) program has become more integrated with the MBA program through greater sharing of electives and international study trips, increasing the economies of scale and the opportunities for learning between the cohorts.

Consolidated Budget Overview

The 2014/15 GSB Consolidated Budget for Operations shows total revenues and transfers of \$223.1 million and expenses of \$220.7 million, yielding a surplus of \$2.3 million. The school plans to transfer \$10 million to capital for the housing expansion project described below, resulting in a planned \$7.7 million decrease in current funds by the end of 2014/15.

GSB revenues and transfers for 2014/15 are projected to grow by about \$7.4 million, or 3.4%, over the 2013/14 projection, largely because of growth in tuition and instructional fees, Executive Education, and endowment payout. Tuition for first-year MBAs is planned to increase by 3.9% to \$61,875. MSx tuition is planned to increase 3.9% to \$116,500, and the number of students is planned to increase from 83 to 90. PhD tuition will be 3.5% higher than in 2013/14, and the number of students is planned to increase from 109 to 116.

Endowment payout is projected to increase by about 6.2% over the 2013/14 projection as a result of market growth and new gifts. The endowment payout and interest income will provide roughly a third of overall funding for the GSB, directed primarily for teaching, research, and fellowships. The GSB projects expendable gifts to be about \$31 million, roughly the same as the 2013/14 projection. Growth in expendable gifts is not anticipated because of an increasing

focus on faculty support and fellowships, which are usually endowed gifts.

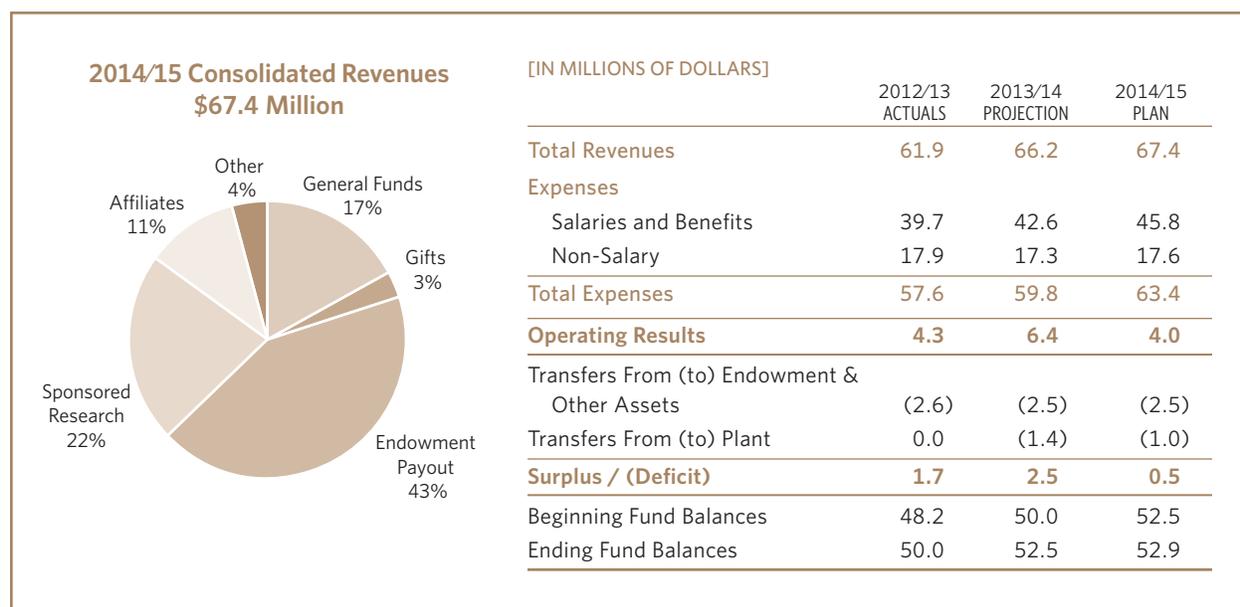
GSB expenses are projected to increase by 10.6% in 2014/15. Compensation is projected to increase 6.4% through salary increases and growth in the number of faculty and staff. The GSB programmatic areas planning growth include SEED, fellowships, Executive Education, and faculty research support. For example, the MBA program will support global fellowships, a new opportunity for students to receive financial support if they commit to return to their developing countries of origin after graduation. Executive Education will continue to grow through creative use of online technology and the launch of new open-enrollment programs. Faculty will receive improved and focused support through the creation of a research department. This department plans to arrange for research assistants and resources to assist with data collection and analysis, assist with research dissemination, and support and implement necessary technology.

The GSB's fund balances are projected to be 42% unrestricted and 58% restricted. Unrestricted fund balances are planned to decrease due to capital investment in the student housing project and fundraising focus on faculty support and fellowships. The unrestricted balances include a \$10 million operations reserve, a \$4 million reserve to support fellowship growth, and a \$5 million reserve to temporarily accelerate the Global Development and Poverty Initiative, which will also be supported by the university's SEED matching fund. A large proportion of the restricted balances supports specific ongoing activities at the GSB, in which the funds will be used over a period of years, rather than in the same year they were received.

Capital Plan

The GSB is planning to build a 200-room residence to support the MBA program, the MSx program, and growth of the Executive Education program. In combination with the existing 280-room Schwab Residential Center, the new residence will be able to accommodate all first-year MBA students (excluding families with children, who are housed elsewhere on campus), some MSx students, and Stanford Ignite participants, in addition to new Executive Education participants in the summer. The estimated \$75 million cost of the project is planned to be funded by gifts, reserves, and debt. The housing expansion is in the design stage and is expected to be operational for the 2016/17 academic year.

SCHOOL OF EARTH SCIENCES



Programmatic Directions

The School of Earth Sciences has evolved substantially over the past decade, adding new departments, faculty, and disciplines along with interdisciplinary programs. There is more to do if the school is to fulfill its leadership role in helping Stanford develop solutions to the great resource and environmental challenges of the coming decades. In addition to faculty recruitment in several key areas—water/land management, end-to-end energy, and coastal ocean science—the school’s focuses for 2014/15 will be:

- developing professional master’s programs in sustainability science, energy, and resources,
- developing a new coterminal Master’s in Environmental Science Communication,
- pursuing opportunities to work with the Vice Provost for Online Learning (VPOL), both to transform instruction and to reach a broader population, and
- building development and communications capacity, allowing for significant growth in fundraising, in order to raise funds for a new science building.

Professional Master’s Programs

The 21st century holds many challenges in meeting the needs of people for food, energy, water, and other resources.

Tackling such challenges requires leaders who leverage knowledge and skills from a broad range of disciplines and can design and manage programs and policies. Global assessments by the National Academy of Sciences and the International Commission on Education for Sustainable Development Practice identify a critical shortage of leaders prepared with these competencies. At Stanford, campus-wide strategic planning has identified a growing demand by students for curricular programs that focus on sustainability challenges and solutions. During 2014/15, Earth Sciences is exploring this demand, as well as the competitiveness and viability of such programs. The school anticipates that this effort will yield a very high-profile professional master’s degree and, over time, an executive education program, new undergraduate courses, and potentially a minor or stand-alone bachelor’s degree.

Concurrently, the school is exploring the potential for a professional MS in energy and resources, which would bring together engineering, computational, and biophysical science expertise, along with resource economics and planning.

Science Communication

Over the past several years Earth Sciences has developed a handful of very popular courses centered on environmental science and policy communications. Five years ago the

school hired an environmental journalist who serves as a full-time lecturer and also contributes significantly to the MA in Journalism program. Student demand for education and training in this area has grown substantially, with many students interested in pursuing graduate study in environmental communication. In response, the Earth Systems Program will offer a coterminous MS in Environmental Science Communication starting in fall 2014.

Online Learning

Closely linked to the development of professional master's programs and the school's commitment to expanding its undergraduate programs is a desire to fully pursue opportunities with the VPOL. To date, only a few Earth Sciences faculty have pursued VPOL opportunities. There are significant impediments to transforming the school's traditional educational methods to work online. Many of these barriers relate to the difficulty in transforming Earth Sciences concepts (including those traditionally explored in the field and laboratory) into forms that can be taught in intriguing ways online. Despite a lack of in-house resources, Earth Sciences is committed to developing a handful of online educational experiences both to benefit Stanford students and potentially to reach students beyond campus.

Raising Earth Sciences' Visibility

Earth Sciences has grown substantially over the last decade, and its current footprint cannot support its research and teaching operations. A new building to replace Mitchell with some room for growth will cost approximately \$115 million. While the university will provide significant help, Earth Sciences still needs to raise at least \$70 million for the building and several tens of millions more for new faculty and program support. For a school with a small alumni base, this is a monumental undertaking, and it will require substantial investment in additional development staff. Closely coupled with this issue is the need to craft and disseminate more frequent, robust, and compelling communications. Earth Sciences invested in a chief communications officer last year and has recently added a science writer to tell its story. The change is remarkable. There are now rich and complex stories about Earth Sciences' teaching and how its research increases understanding of the planet and solves real problems. These stories must reach well outside the boundaries of the school's typical audience.

Consolidated Budget Overview

The 2014/15 consolidated budget shows total revenues and transfers of \$67.4 million, expenses of \$63.4 million, and transfers to endowment and plant of \$3.5 million, with a projected surplus of about \$475,000.

Restricted revenues in 2014/15 are expected to increase 2.9% over the estimated 2013/14 levels, growing by a combined \$1.4 million. While the majority of the endowment payout increase is attributable to the university's payout growth assumption, new gifts and pledge payments are anticipated to generate an additional \$200,000. Sponsored research revenue is projected to grow by \$227,000, or 1.7%. All other types of restricted revenue are expected to remain flat.

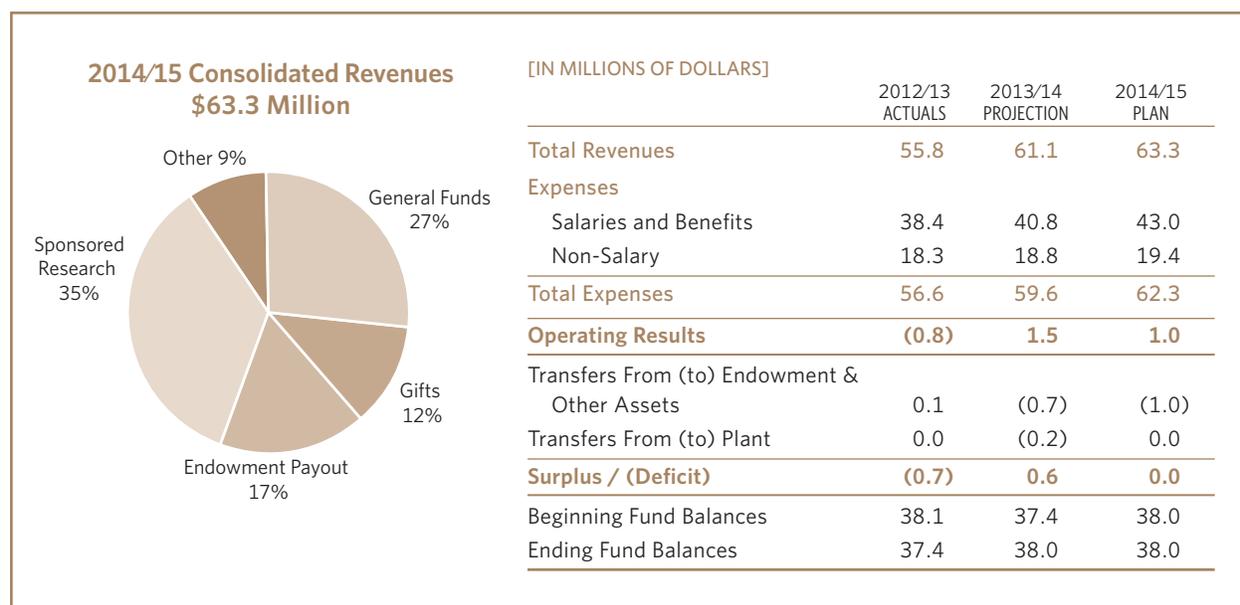
Total expenses are expected to grow by \$3.6 million, or 5.9%. Most of this growth will be in compensation cost, which is projected to increase by \$3.2 million, or 7.5%. Faculty salaries will see growth beyond the impact of the salary program. Not only will the recruitment of new faculty continue, but the full impact of personnel costs related to several midyear arrivals in 2013/14 will begin to manifest next year. Furthermore, to serve its short- and long-term goals as described above, the school plans a total of nine new staff positions in development, communication, technological instruction, and facilities planning, triggering substantial growth in staff salaries. Non-compensation expenses are projected to increase only slightly, by \$344,000, or 2.0%.

Combined cumulative fund balances are expected to increase modestly, by \$475,000, by the end of 2014/15. While the designated fund balances will increase by \$893,000, or 5.9%, mainly in the form of new faculty start-up funding from the provost, all of the year's endowment payout and gift revenue, plus some reserve balance, will be relied upon for operations.

Capital Plan

Through a generous gift from the O'Donohue family, Earth Sciences is responding to ever-increasing student demand for educational programs on sustainable agriculture by creating the O'Donohue Family Stanford Educational Farm. In summer 2014, the first phase of the farm's development will be completed, allowing it to be operational for fall planting and instruction. In 2015, Earth Sciences will embark on the second phase of the farm, which will include a barn, an outdoor kitchen, and demonstration fields.

THE GRADUATE SCHOOL OF EDUCATION



Programmatic Directions

The Graduate School of Education (GSE) provides academic leadership in cross-disciplinary research on global problems in education, as well as exemplary professional training for teachers, researchers, and educational leaders.

The school recently completed a strategic planning and priority-setting process, which produced a set of goals and plans that fall into three broad areas: priorities for school growth, efforts that further connect the GSE to educational practice and policy, and strategies for strengthening the GSE community.

Priorities for School Growth

While the school will remain agile in addressing emerging needs and opportunities, it has identified two strategic priorities for growth: the impact of technology on education and the education of low-income students.

Education's Digital Future (EDF), a groundbreaking series of discussions and classes instituted last year, is continuing to draw strong interest from the Stanford academic community and beyond. Local K-12 teachers, district leaders, software developers, venture capitalists, and policy experts remain engaged in this exploration of how digital education can most effectively be utilized.

In addition, the GSE is working with the School of Engineering and the Vice Provost for Online Learning to develop a joint center focusing on the interface between education and technology.

The school's commitment to growth in the area of educating low-income students is manifest in two faculty searches presently under way in partnership with the Center for Comparative Studies in Race and Ethnicity. The GSE seeks a faculty member who will focus on education and poverty and another who will focus on the education of linguistic minorities.

In addition, in fall 2013 the school launched a course and lecture series focused on policies and practices that impact students growing up in poverty. Following the highly successful EDF model, the Workshop on Poverty, Inequality, and Education (PIE) is structured around building knowledge about how to reduce inequality and ensure that all children have an equal chance to succeed in school and lead productive, fulfilling lives. The PIE workshops explore whether and how schooling can ameliorate the effects of poverty and inequality by examining social, economic, and cultural forces, as well as developmental and psychological issues. This effort includes a series of public lectures, panel discussions, film screenings, and conferences throughout the year.

Connection to Schools and Communities

While the GSE has long had myriad involvements and connections with schools, it aims to increase its impact.

An example of its efforts is the GSE's five-year partnership with San Francisco Unified School District (SFUSD). This partnership supports and promotes innovative practical research and engages practitioners, policy makers, and academics in a dialogue about research findings and implications for practice. It has always been distinctive among district-university partnerships in that the needs of the school district guide what university/GSE research and professional development are brought to it. Over 100 GSE and SFUSD personnel currently participate in about 25 distinct Stanford research and practice projects.

Version 2.0 of this partnership builds on these achievements and adds features to further incentivize faculty involvement and generate meaningful and visible impact. One such feature is an incentive fund to support faculty research that is conducted in the context of a sustained and deep collaboration with the district. To be awarded incentive funds, projects must be aligned with the district's research agenda and meet the GSE's standards for rigor and generalizability. By leveraging this funding source, GSE faculty can significantly reduce the time it takes to launch research projects and thus provide a much more timely response to district research needs.

Strengthening the GSE Community

In alignment with its strategic plan, the GSE is rethinking how its physical space can better support its goals for research, teaching, and impact on educational practice. It is launching a facilities visioning and planning study, with the objective of developing a scope and feasibility plan for a new education building. This initial phase will conclude in fall 2014, with programming and schematic design phases commencing in 2014/15.

A new building would positively impact all three areas identified in the strategic plan by providing:

- Collective space for several large centers,
- A place for convening large forums on education, and
- Space for new faculty research labs.

The current vision is for the new building to help bring the entire GSE community together, while also enabling

faculty to better collaborate with colleagues and practitioners. With a new building housing many of the school's centers, the GSE would have the capacity to create new and innovative teaching and learning spaces in existing buildings.

Consolidated Budget Overview

The GSE projects a balanced budget in 2014/15. The \$63.3 million consolidated budget includes an anticipated transfer of \$1.25 million from endowment income to student loan funds in support of master's students enrolled in the Stanford Teacher Education Program.

The school projects an overall operating surplus of \$1.5 million in the current year. However, this 2013/14 bottom line is buoyed by the receipt of a \$2.7 million royalty payment for a teacher performance assessment system developed by the Stanford Center for Assessment and Learning Equity (SCALE). This royalty payment will help support SCALE's activities over the next several years.

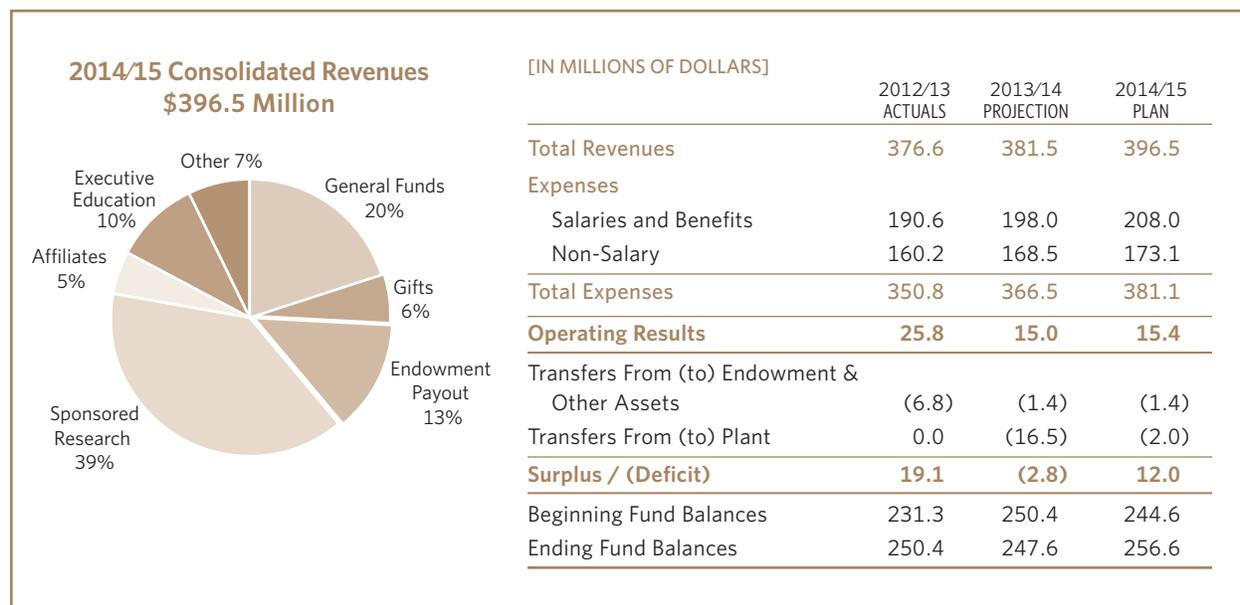
The school continues to leverage expendable gifts to fund several initiatives and augment graduate student support. The demand on its doctoral student aid budget will increase in 2014/15 as the school moves to a five-year guaranteed-funding model. This funding enhancement will bring the GSE's doctoral support model more in line with those of peer institutions and Stanford's School of Humanities & Sciences. A graduation-year partial fellowship should help facilitate timely degree completion. The provost has provided base general funds to mitigate the incremental cost of this initiative.

Designated income is projected to decline somewhat in 2014/15 from the unusually high level projected for the current year. However, new endowed gifts and pledge installments will boost endowment payout.

Research activity sponsored by both federal sources and foundations continues to be very robust at the GSE and is on pace to increase nearly 10% in the current year. The school projects that sponsored activity will continue to grow in 2014/15 at roughly 5%.

Total expenses are expected to increase about 5% in 2014/15, primarily because of sponsored research growth and an increase in the university benefits rate.

SCHOOL OF ENGINEERING



Programmatic Directions

The School of Engineering (SoE) is undergoing a significant leadership transition while remaining focused on the fundamental mission of supporting the faculty in groundbreaking research and educating students at the bachelor's, master's, and PhD levels who will contribute to society as Stanford engineers. For the first time in 15 years, the school will have a new dean in 2014/15, along with new chairs in several departments, and the new leadership will look to build on the school's long tradition of excellence in all the engineering fields.

Many of the school's long-term plans are coming to fruition now and are highlighted by the pending completion of the Science and Engineering Quad (SEQ). Other initiatives that began over the last few years are beginning to gain traction. In particular, many faculty in the school are experimenting with elements of online learning with support from the school and in partnership with the Vice Provost for Online Learning. Based on the results of a survey of undergraduate students and in cooperation with the Bing Overseas Study Program, there is a strong emphasis on helping undergraduate students balance the structured and often sequential requirements of their engineering majors with a desire to study abroad, and online education may facilitate this.

Another idea moving from the conceptual to the formative phase is the Stanford Data Sciences Initiative (SDSI). This group of faculty, students, and industry partners will seek to advance SoE's ability to manipulate and analyze very large data sets and then collaborate with other research areas around campus to bring these techniques to bear on their data-related research problems. The SDSI will include faculty from Computer Science, Electrical Engineering, Management Science and Engineering, Statistics, and the Institute for Computational and Mathematical Engineering.

As the SDSI illustrates, faculty in the school continue to innovate and solve problems with interdisciplinary groups that push against traditional departmental boundaries, and evidence of this shows throughout the school. The Bioengineering Department, a joint venture between the SoE and the School of Medicine, continues to grow by many important measures, including research volume and number of students. Likewise, as the role of computation expands in almost every field of study, the Computer Science Department is considering joint faculty appointments far beyond the traditional overlap with Electrical Engineering. On the student side, the Faculty Senate recently approved a joint major model called CS+X, where undergraduates would pursue integrated elements of both a computer science major and a less closely related major like English.

One of the challenges facing SoE is the growing number of undergraduates selecting an engineering major. In particular, computer science and product design are attracting large numbers of students, and over the last few years the number of engineering majors has grown from a historic average of 20% of undergraduates to over 35% today. In order to keep close contact with students in increasingly large classes, the school is diverting more resources to teaching assistants who conduct section discussions and problem-solving sessions. In 2014/15, the university provided a substantial increase in general funds to help meet these growing needs.

Consolidated Budget Overview

The SoE projects a 2014/15 consolidated budget with total revenues and transfers of \$396.5 million, expenses of \$381.1 million, and operating results of \$15.4 million. After transferring funds to assets, the projected surplus is \$12.0 million. Compared with 2013/14 year-end projections, 2014/15 revenue and expenses will both grow by 3%. Sponsored research remains the largest financial component of SoE activities at approximately 40% of revenues, and growth in 2014/15 is projected at the same 3% level, despite potential longer-term negative impacts from federal sequestration. A number of large new grants, including a Department of Energy grant in mechanical engineering, Navy and National Institutes of Health grants in bioengineering, and a corporate grant in electrical engineering, are driving the near-term growth.

Beyond sponsored research, other revenue and expense increases in 2014/15 are driven by increased general funds support for teaching assistants' salaries and tuition, adjustment of midcareer faculty salaries, an additional fundraising position, the cost of shared instrumentation, and support of the Architecture Design Program, along with \$2.5 million

in revenue growth at the Stanford Center for Professional Development.

Faculty and divisions or laboratories within departments control 63% of designated fund balances and 78% of expendable gift balances. Substantial percentages of expendable and designated funds are earmarked for research. Most of the school endowment income is restricted to faculty and student support.

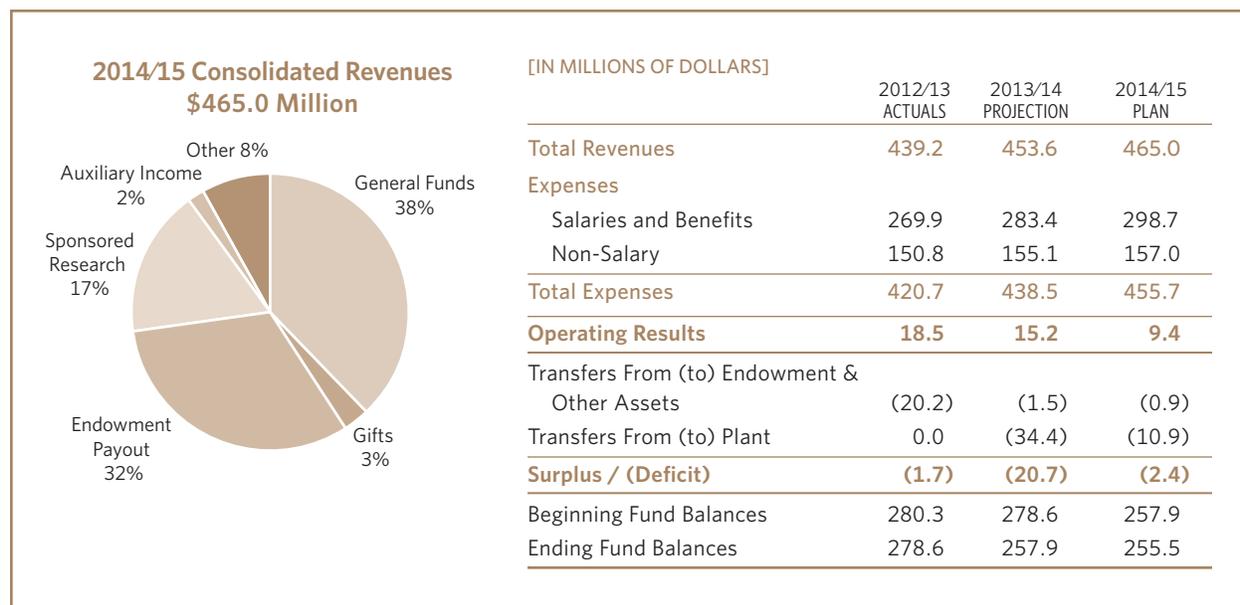
Capital Plan

The BioE/ChemE building will complete the Science and Engineering Quad 2 (SEQ 2), and the two departments will begin moving into the facility in the summer of 2014. The building will be jointly occupied by SoE and the School of Medicine, and it exemplifies the successful shared facilities and services model used throughout the SEQ. In addition to stellar research facilities for existing faculty, the building has more than 20,000 gross square feet of unfinished space available to accommodate future growth.

Buildings 520 and 524 are adjacent, early-campus-era buildings on the Panama Mall that are being renovated sequentially. Building 524 will be completed in the summer of 2014, Building 520 in 2015. When both buildings are done, they will house faculty and students from the Biomechanical, Mechanics and Computations, and Thermosciences groups in Mechanical Engineering in modern labs and office space that retain their historic exteriors with interior designs that evoke the buildings' original purposes.

With these two major projects nearing completion, the school is turning its attention to other facilities matters, including discussions and studies on programmatic needs in the Durand, Packard, Allen, and Gates buildings.

SCHOOL OF HUMANITIES & SCIENCES



Programmatic Directions

During the past three years the School of Humanities & Sciences (H&S) has focused on business fundamentals and enhancing competitiveness in key areas. It has concentrated financial resources on building the size and strength of the faculty, bolstering faculty salaries in anticipation of increased competition from other universities, and constructing new facilities. The school has made significant progress in each of these areas. The loss of tenured faculty to competitors has declined markedly, and the facilities for the arts and scientific research will be substantially improved. Continued faculty growth is not a part of the long-term strategy for H&S: the plan is to bring faculty additions and departures into balance at the current level.

H&S is engaged in several important new initiatives, several of which are collaborations with other Stanford schools. The Institute for Chemical Biology, a joint project with Engineering and Medicine, focuses on strengthening the chemical foundations of biomedical science and searching for molecular discoveries that will transform human health. The Center for Computational, Evolutionary, and Human Genomics, a partnership with the School of Medicine, seeks to translate genomic data into scientific advances improving

health, agriculture, and biotechnology. The Neurosciences Institute is a campus-wide initiative to create brain research collaborations across a broad array of disciplines. The stable financial foundation built during the past few years has allowed the school to actively participate and invest in these strategic initiatives.

The federal grant environment continues to be a major concern for H&S. During the past decade, total grant and contract funding in the school has remained flat, while costs of research operations, equipment, and graduate student support have risen steadily. Projections indicate flat funding for the foreseeable future. The continuation and widening of this funding gap will require the school to prioritize research-related activities as more of these move from grants and contracts to other funding sources. Sustaining levels of non-salary research support and funding of graduate students will be high priorities in the coming years.

In 2007/08, federal grant funding provided \$10.5 million of graduate student support. By 2012/13, this number had fallen to \$9.9 million, a 22% decline after adjusting for inflation. H&S has received help from the provost (most recently \$885,000 of incremental funding to offset tuition shortfalls on training grants), but for quite some time the

primary funding source for this growing gap has been department and faculty-controlled restricted funds, many of them one-time balances. This responsibility has fallen heavily on natural science departments (Chemistry, Biology, and Physics) and some social science departments. In 2012/13, for the first time in many years, departmental accumulated student support balances decreased. This trend is projected to continue, with several departments depleting balances in the next two years. Enrollment growth in several natural science departments exacerbates this problem as teaching needs and costs increase. The expectation will continue that departments and faculty will use their own resources whenever possible to fund these gaps. Over the longer term, as these resources are fully utilized and one-time sources decline, there will be an increased reliance on Dean's Office and university resources.

Consolidated Budget Overview

For 2014/15, H&S projects revenues and operating transfers of \$465.0 million and expenses of \$455.7 million, resulting in an operating surplus of \$9.4 million. After \$11.8 million of transfers to plant and capitalization of endowment payout, the school projects a \$2.4 million net use of accumulated balances. Dean's Office fund balances are projected to decrease by \$4.7 million to a total of \$75.1 million. Unrestricted reserves held by the Dean's Office have decreased for several years as a result of a planned spend-down and temporary bridge funding for capital projects. Reserves will decline from \$75 million in 2011/12 to a projected \$20.9 million in 2014/15. During this period, \$45 million has been used to fund construction of the McMurtry Art and Art History Building; of this amount, \$30 million is bridge funding until donor gift payments are received. Some \$15 million of Dean's Office reserves will be used to fund construction of the Bass Biology Building during 2013/14 and 2014/15.

In 2014/15, department, program, and faculty fund balances are projected to increase by \$3.4 million to a total of \$180.3 million. Annual growth of these balances has tapered off dramatically as departments have more fully utilized

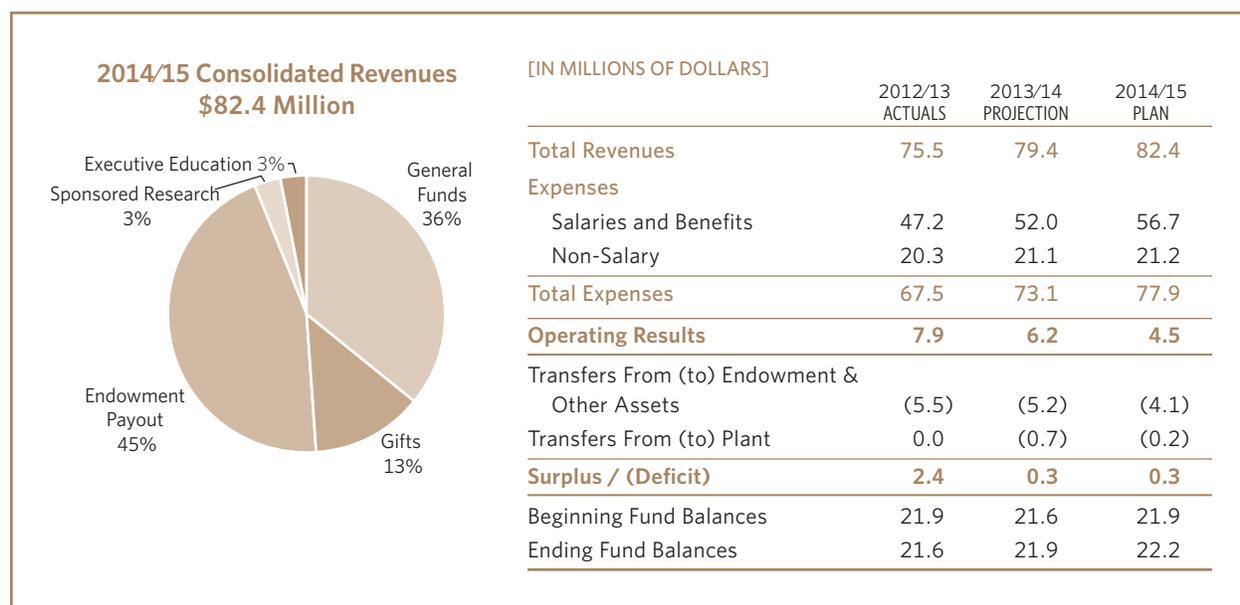
funding sources to cover grant and contract funding gaps, enrollment spikes, and other costs. Departmental student support balances decreased by \$2.6 million in 2012/13, reversing a six-year pattern of growth. While departmental balances are substantial, they are held by about 100 individual departments and programs. Balances are also very unevenly spread, with 10 units holding 50% of the total.

Total sponsored project expenses and indirect cost recoveries are projected to decline from \$82.9 million in 2012/13 to \$80.0 million in 2013/14. Sponsored volume in 2014/15 is projected to drop an additional 1.0% or \$800,000 to a total of \$79.2 million. Non-federal research funding declined 4% in 2013/14 and is projected to decrease an additional 8.5% in 2014/15. Federal research funding decreased 2.7% during 2013/14 and is projected to increase 0.5% in 2014/15. This continuing overall decline in research funding creates gaps in research and graduate aid funding, which are being covered by department and faculty-controlled reserves and Dean's Office bridge funding.

Capital Plan

The much-anticipated completion of the Anderson Collection at Stanford University is the highlight of 2014/15. H&S also will open the new Solar House at Jasper Ridge. The McMurtry Building is on track to be completed by summer 2015. The Science Teaching and Learning Center (Old Chem) will begin construction in summer 2014 with a projected completion date of summer 2016. The Roble Gym renovation will be completed by fall 2015. The project scope includes refurbished dance studios, a new black-box theater, and an "arts gym." The Bass Biology Building project will begin after the Science Teaching and Learning Center and will be completed by 2017. This building will house the Biology Department and a new world-class science core facility. The Bass Biology Building, including the new core facility, located on the Discovery Walk, will be a major draw for researchers throughout the university and attract undergraduate students. These projects represent the largest capital construction program since the founding of H&S.

SCHOOL OF LAW



Programmatic Directions

The state of Stanford Law School (SLS) is strong. The law school continues to attract extraordinary students, and nearly all of them have exceptional professional opportunities upon graduation. The faculty is excellent, with interdisciplinary strength in general and depth in empirical legal studies that is well known and well regarded in the legal academy. Last year was a very successful hiring year, as the law school recruited four excellent scholars and teachers to join the faculty. This year, faculty hiring efforts have been ramped up even further. SLS is now well integrated into the university, with nearly seamless transition in and out by students and faculty.

But there are challenges ahead. The market for legal services is changing, and the law school wants to help prepare its graduates to succeed in this new environment. The changes in the market are partly cyclical, but also partly about technology disruptions, outsourcing, and increased global competition for legal services. Another challenge is for the school to remain a leader in innovation and legal education. On this score, the two recent changes in our academic program—growth in and excellence of our clinical program, and greater integration with the rest of the university through harmonization of our academic calendars—are significant advances.

In the last several years, the law school has built a truly extraordinary clinical program. Students take a clinic full time for one quarter. While some of the clinics are litigation oriented, others focus on transactional and policy work. Students enrolled in the various clinics work side by side, enabling ongoing, informal cross-training on a daily basis. In addition, the clinical program is robust enough to serve every member of the student body.

The law school has two new curricular initiatives this year. The Law and Policy Lab encourages and assists faculty in providing opportunities for students to engage in policy analysis or regulatory drafting for policy makers. In 2013/14, there are 13 practicums offered through the lab. Core faculty work side by side with small groups of students, providing unique accessibility and mentoring. Many of the practicums are interdisciplinary in terms of both the students enrolled and the tools used in analyzing the problems presented.

The second initiative, the global initiative, comprises three elements. First, a new foundational course introduces students to the practice of law in a global context and addresses the mismatch between issues that young lawyers face in practice and their exposure to such issues in law school. It is taught primarily through complex case studies

drawn heavily from the experiences of general counsels and attorneys working in the global environment. Second, new overseas courses will provide students with opportunities to learn about practicing law in a transnational context. Next year, the law school plans to offer three such courses: one on international criminal justice in Europe and two on business transactions, one in South America and the other in China. Third, to integrate transnational law into the core curriculum, distinguished visitors will come to SLS to share their transnational expertise in existing courses.

Consolidated Budget Overview

The SLS 2014/15 consolidated budget encompasses total revenues and operating transfers of \$82.4 million and expenses of \$77.9 million, generating an operating surplus of \$4.5 million. After projected transfers to assets of \$4.2 million (\$2.8 million transferred to student loan to cover the SLS Loan Repayment Assistance Program obligations; \$1.2 million reinvested into funds functioning as endowment; and \$200,000 transferred to plant for the Crown Quadrangle renovation), the school projects a net consolidated surplus of \$300,000.

Consolidated revenue is projected to increase 4%. More specifically, expendable gift revenue is expected to be \$10.6 million, a 2% increase, while endowment payout income should rise by slightly more than 4%, to \$36.9 million. Designated income will grow by more than 5%, to \$4.2 million, due in significant part to the expansion of executive education offerings. Opportunities for sponsored research continue, and volume is expected to exceed \$2.2 million. In addition to the U.S. Department of State's \$7.2 million multiyear grant to support the Afghanistan Legal Education Project, SLS has received sponsored funding support in criminal justice, public service, international human rights, and energy policy and finance.

In 2014/15, consolidated budget expense totals are budgeted to grow by approximately 6%. The primary factor in this growth is compensation. SLS will supplement its existing academic and staff counts to advance the Law and Policy Lab and global legal practice initiatives. In addition, planned increases in faculty, sustained growth in the

research enterprise, and new programs will contribute to increased spending on compensation.

SLS consolidated fund balances will increase by \$300,000 to \$22.2 million. Of this amount, \$13.4 million is classified as noncash investments and therefore not available for use. The \$8.8 million available fund balance comprises \$6.2 million for restricted purposes, such as academic programs, centers, and financial aid, and \$2.6 million for unrestricted purposes.

Capital Plan

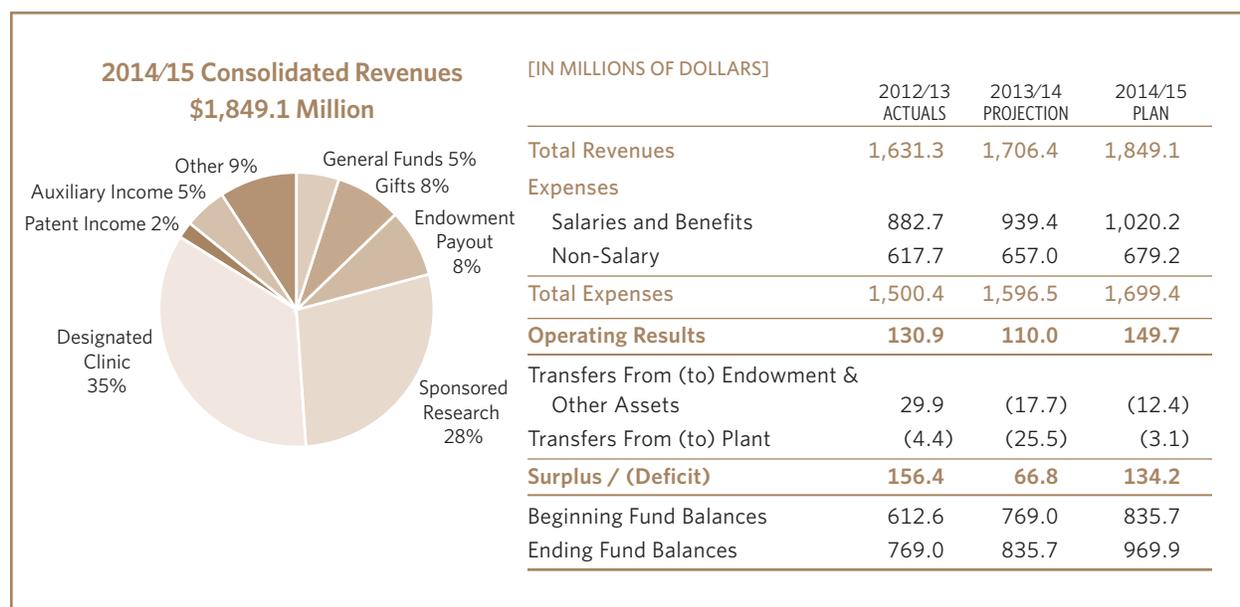
The law school master plan included three major components: the construction of two new projects, the Munger Graduate Residences and the William H. Neukom Building, and the renovation and modernization of Crown Quadrangle. Over the past few years, the two new construction projects have been completed, and the Crown Quadrangle renovation is currently under way.

The most extensive phase of the Crown project consists of renovating the entire third floor (30,000 square feet) and erecting a new central stairway that will be the centerpiece of the building. Also, the law library collection will be moved from the third floor to the basement, and library study spaces from the third floor to the second. The third floor will bring together the law school's research centers and programs. This phase of the renovation began in June 2013 and will be completed in spring 2014, at a cost of \$15 million.

The next phase will begin in summer 2015. This part of the renovation will modernize second-floor administrative offices and bring them in line with university space guidelines. Additionally, the library's second floor will be expanded to provide space for graduate student study areas. This phase of the remodel will cost \$3 million.

The final phase will focus on the basement and first floor. Those administrative office spaces will be updated, and more functional and appealing space will be created for student journals and organizations. This final piece of the Crown renovation is expected to cost \$5 million, which will bring the total Crown Quadrangle renovation cost to \$23 million.

SCHOOL OF MEDICINE



Programmatic Directions

The mission of the School of Medicine is to fuel innovation, empower future leaders, and transform patient care. Under the umbrella of Stanford Medicine, the school, Stanford Hospital and Clinics, and Stanford Children's Health (Lucile Packard Children's Hospital Stanford) are united in identity, purpose, and a commitment to excellence.

At a February 2014 meeting of the Stanford University Board of Trustees, Dean Lloyd B. Minor shared his thoughts about how Stanford Medicine will lead the biomedical revolution by achieving excellence in each of its mission areas—research, education, and patient care—and achieving preeminence as a whole by developing connections and collaborations across all mission areas.

In fundamental discovery—curiosity-driven research that uncovers the mysteries of biology—Stanford is an undisputed leader. But even so, the school plans to increase its support for high-risk, high-reward research and for the core spaces and core resources needed to address the many modern scientific challenges that require collaboration across academic divides.

To accelerate translational research, Stanford Medicine is committed to building up its clinical trials infrastructure.

Currently about 40% of new cancer patients are presented to a multidisciplinary tumor board to determine whether they could be enrolled in a clinical trial. Stanford Medicine plans to increase that to 90% of eligible patients over the next five years.

In March 2014, the school received a glowing review of its medical education program from its reaccreditation body. Nevertheless, the school is in the midst of a process to transform its medical curriculum to make sure it is meeting the needs of a new generation of learners, who will be expected to master an ever-expanding amount of biomedical knowledge and practice in an evolving health-care system. In 2013/14 the school established a goal to expand its cohort of MD/PhD students from about 80 to 120 over the next five years.

In patient care, the most important step toward excellence is recognizing the central role of that care within the school and its vital importance to the research and education missions as well as to the collective drive to preeminence. As outlined in the Principles for Stanford Medicine developed by President John Hennessy, the dean is engaged with the hospital CEOs in all levels of goal and strategy setting for the clinical enterprises and has primary oversight of the quality of physician practices and clinical networks.

Stanford Medicine is building a network of care that gets specialists out into the community and brings high-quality physicians in from the community. In January 2014, Stanford Medicine launched Stanford HealthCare Alliance, an accountable-care health plan with more than 9,000 enrollees from the Stanford University and Stanford Medicine community.

Stanford Medicine is committed to building a learning health-care system that generates and applies the best evidence for health-care choices and drives discovery as a natural outgrowth of patient care. This effort will harness the power of biomedical big data—the growing cache of information that includes everything from genomic sequences to electronic medical records.

Consolidated Budget Overview

The school projects total revenues and transfers of \$1,849.1 million in 2014/15 and expenses of \$1,699.4 million, yielding a surplus from operations of about \$150 million and a net change in current funds of \$134.2 million. One of the main contributors to the net change in current funds is the philanthropic gifts projected to stem from the school's development campaign and to be used in years after 2014/15.

Revenue

Revenues and transfers are projected to increase from \$1,706.4 million in 2013/14 to \$1,849.1 million in 2014/15. Key drivers include the following:

- Healthcare services revenue is projected to increase 7.9%, or \$53.1 million, from \$676.0 million in 2013/14 to \$729.1 million in 2014/15. The increase is driven primarily by growth in volume from clinical programs and incremental faculty, which drive revenue increases in professional services from both Stanford Hospital and Clinics and Stanford Children's Health.
- Gift revenue is projected to grow 82.4% and endowment income 7.1%, reflecting the projected success of the development campaign and the incremental philanthropy. If the incremental philanthropy does not occur, the net change in current funds will be about half of the projected amount.

- Increases in program expenses from prior years' philanthropy and growth in health-care services revenues contribute to higher internal income in 2014/15, and the 1.9% increase in sponsored research is driven mainly by incremental faculty.

Expense

Expenses are projected to increase 6.5%, or \$102.9 million, from 2013/14 to 2014/15. Major components of the increase are:

- The projected net recruitment of 60 faculty, 21 in the university tenure line, 35 in the medical center line, and 4 in the nontenure line, as well as 91 clinician educators.
- An \$80.8 million increase in annual compensation for faculty, clinicians, and staff, primarily due to incremental recruitments, clinical program growth, and annual compensation program increases.
- Increases in operation, maintenance, and utilities expenses, primarily driven by double-digit percentage rate increases for chilled water, electricity, and steam.
- Higher program expenses in cancer, basic science, and graduate student support, which are funded by philanthropic receipts from 2012/13.

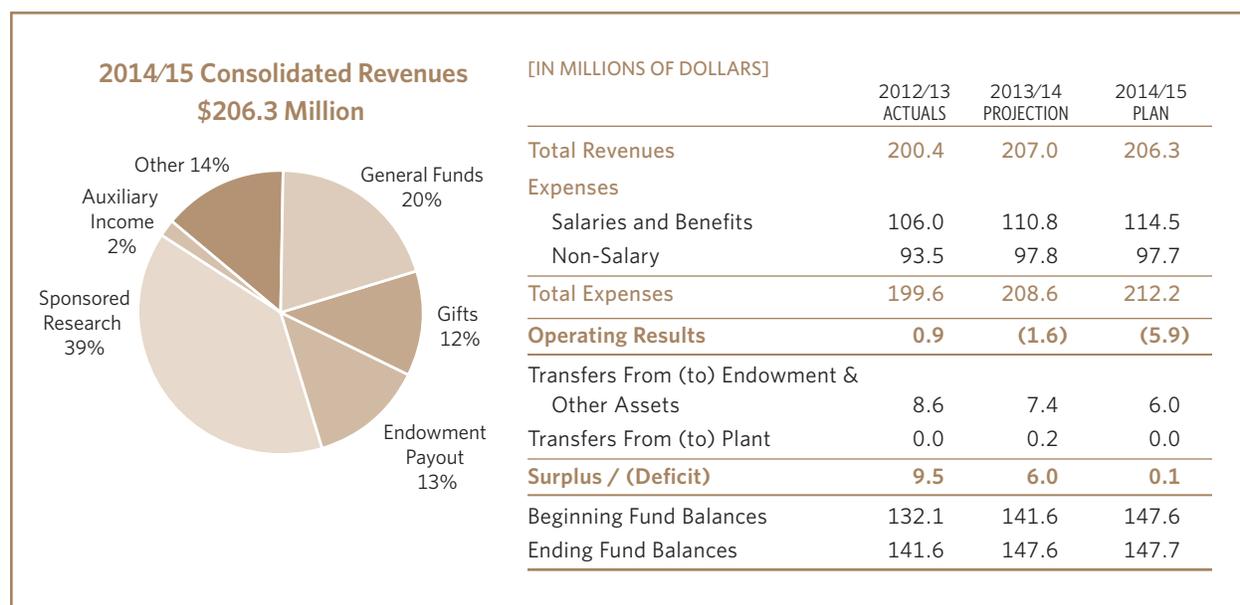
Transfers to Plant, Endowment, and Other Assets

The projected transfer to plant of \$3.1 million comprises \$5.8 million for BioMedical Building 1, \$4.5 million for seismic bracing work, and \$1.9 million for the Bioengineering and Chemical Engineering Building, offset by a \$9.2 million return of the school dean's funds that were used to bridge finance the Lorry I. Lokey Stem Cell Research Building. Transfers to other assets include departments' projected \$12.4 million transfer to funds functioning as endowment.

Capital Plan

Started in November 2013, renovation of 80,000 gross square feet of two research animal facilities will be complete in December 2014. Seismic bracing work will begin on the Edwards Research Building in June 2014 and is expected to be complete in October 2014. Renovation work on a 73,523-gross-square-foot building located at 1651 Page Mill Road will begin in October 2014 and be complete in summer 2015 at an estimated cost of \$40 million.

VICE PROVOST AND DEAN OF RESEARCH



The Office of the Vice Provost and Dean of Research (DoR) is responsible for research policies and facilitation of faculty research and scholarship across all schools and departments. It has oversight of independent laboratories, institutes, and centers and manages the compliance and administrative offices that support research. DoR also oversees major shared facilities that support a broad range of research and scholarly activities.

Programmatic Directions

The primary strategic goal of DoR is to support faculty competitiveness in research and scholarship, which is particularly important as obtaining extramural funding becomes more challenging. This goal will be pursued through four program objectives in 2014/15:

- Creating opportunities for interdisciplinary research through the independent laboratories, institutes, and centers,
- Providing state-of-the-art shared facilities,
- Minimizing compliance and administration burdens for faculty and staff, and
- Mitigating research-related safety risks.

Stanford has a valued tradition of faculty research and scholarly initiatives that address complex problems across

disciplinary boundaries. The academic role of the DoR is to facilitate these efforts through its oversight of the university's 18 independent laboratories, institutes, and centers. DoR's objective is to provide intellectual and physical environments for research that invite scientific and scholarly dialogue, enhance collaborations among faculty from many disciplines, and increase the success of faculty in obtaining research support.

DoR facilitates the advancement of new research areas and invests in critical infrastructure to ensure research competitiveness. In 2014/15 the DoR will focus on assisting the following five programs:

- **Newly launched interdisciplinary institutes:** Stanford Institute for Chemical Biology (SICB) serves to strengthen the chemical foundations of biomedical science and to accelerate molecular discoveries that transform human health. The Stanford Neurosciences Institute (SNI) aspires to unravel the deepest secrets of the human brain. SICB has successfully hired its first faculty member, who brings a unique mixture of scientific excellence and pharmaceutical industry experience. SNI has attracted significant interest from potential funders for its programs and for facilitating intellectual dialogue and community to enhance opportunities for Stanford neuroscientists.

- **SLAC-affiliated programs:** SLAC-related independent institutes, including the Kavli Institute for Particle Astrophysics and Cosmology, the Photon Ultrafast Laser Science and Engineering Center, the Stanford Institute for Materials and Energy Sciences, and the Sustainable Energy through Catalysis (SUNCAT) Center for Interface Science and Catalysis, offer expanding opportunities for collaborative research, joint faculty recruitments, and access to the remarkable tools at SLAC, placing Stanford faculty in a highly competitive position in many scientific disciplines.
- **Stanford Research Computing Center (SRCC):** Advances in the theoretical and computational sciences are revolutionizing all fields of research, and high-performance computing infrastructure is essential for individual faculty and university competitiveness. DoR and SRCC are seeking to ensure optimal use of the new SRCC facility as quickly as possible. This investment gives faculty a state-of-the-art facility and will propel Stanford into a leadership position in computation-intensive research across many disciplines.
- **Shared facilities:** Cutting-edge research now requires highly specialized instruments and facilities that are much too expensive for individual investigators to support and must be maintained by skilled, dedicated research scientists. These facilities are essential to preserve faculty competitiveness in the current research funding climate. A major 2014/15 shared-facility initiative is to expand the basic mass spectrometry services to support the critical field of proteomics, which is the structure and analysis of the proteins occurring in living organisms. In addition, DoR will continue to encourage researchers from disciplines that have not typically relied on the shared instruments to explore their capacities, thus often leading to novel applications to their research questions and increasing competitiveness. DoR will provide seed funding for proof-of-concept experiments that can enable faculty to compete for extramural grants. In 2014/15, DoR will distribute seed funding to encourage researchers from various disciplines to use the Stanford Mass Spectrometry Center, the Stanford Nano Center Shared Facilities, and the Center for Cognitive and Neurobiological Imaging.
- **Culture of safety:** In the academic environment, risk is present on many levels, including loss of life and

personal safety, damage or theft of property, legal liability, and loss of reputation. Several high-consequence and high-profile laboratory safety incidents at other institutions have accelerated the need for Stanford to review organizational and programmatic approaches to prevent incidents and enhance the culture of laboratory safety. The University Committee on Health and Safety has established a task force of senior faculty to examine how Stanford is managing safety issues, identifying opportunities for improvement and ways to instill a culture of safety broadly across all university units. Academic research laboratories are the first area of focus in this three-to-five-year initiative.

Consolidated Budget Overview

The 2014/15 consolidated budget for DoR shows total revenues of \$206.3 million and expenses of \$212.2 million, resulting in a net operating deficit of \$6 million. However, after estimated transfers of \$6 million from endowment and other assets, primarily for the Center for Ocean Solutions in the Woods Institute and the TomKat Center for Sustainable Energy, DoR will have a planned surplus of \$98,000.

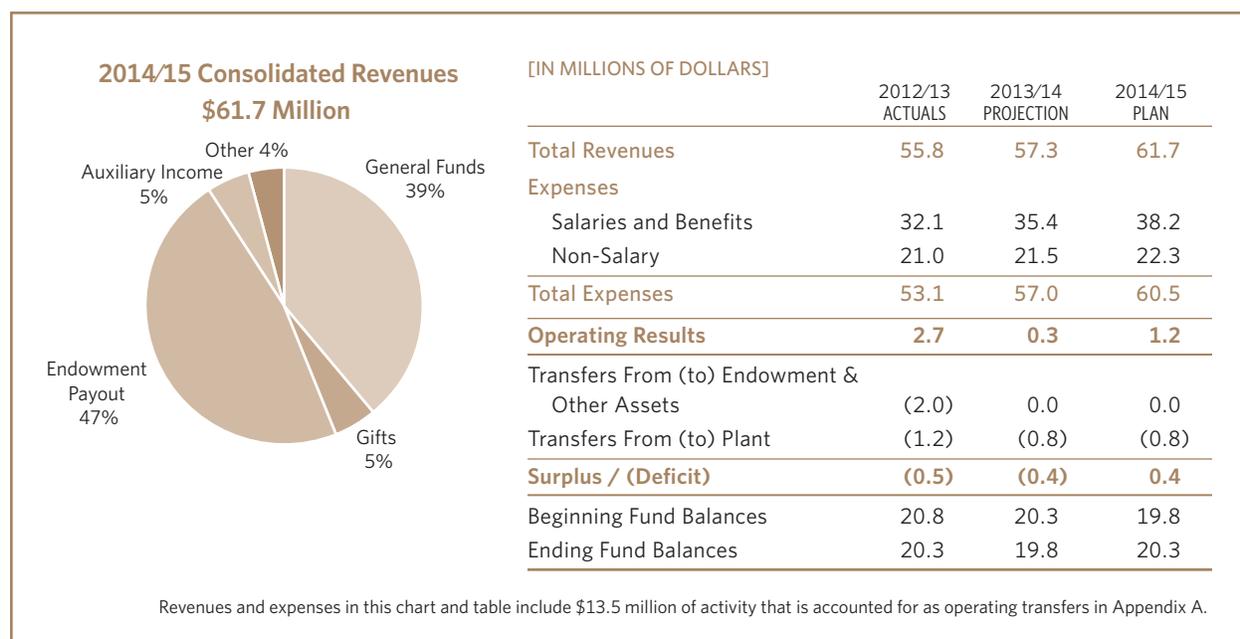
Total revenues in 2014/15 are projected to decrease by less than \$1 million, or less than 1%, from 2013/14. This decrease is due to a slight decrease in sponsored research funding of \$860,000, or 1%. Operating transfers are expected to decrease \$1.4 million, or 12%, from 2013/14, primarily because of a reduction in one-time funding for new initiatives.

Total expenses in 2014/15 are projected to increase by \$3.6 million, or 2%, primarily because of the growth of SICB, the Neurosciences Institute, and Worldview Stanford.

Transfers from endowments are projected to be \$6 million, or 19%, lower than in 2013/14 because independent laboratories, institutes, and centers have spent down term endowments.

Faculty and the independent labs, institutes, and centers control 80% of fund balances. Endowment and expendable funds are mainly focused on multiyear, multidisciplinary research programs. A percentage of expendable and endowment funds is earmarked for research and is expected to provide bridge funds for research programs if sponsored research funding continues to decline.

VICE PROVOST FOR UNDERGRADUATE EDUCATION



Programmatic Directions

Since its release in January 2012, the Study of Undergraduate Education at Stanford (SUES) report has been the focal point of the Vice Provost of Undergraduate Education (VPUE) programmatic efforts. During this time, VPUE has implemented a new freshman curriculum, Thinking Matters (TM), now in its second year; has launched new general education breadth requirements, Ways of Thinking/Ways of Doing (WAYS), with the class of 2017; and has supported pedagogical enhancements in large introductory courses. New in 2013/14 and reaching full implementation in 2014/15 are directors of community-engaged learning (D-CELS) and two integrated learning environments (ILEs), Immersion in the Arts: Living in Culture (ITALIC) and Science in the Making ILE (SIMILE). Accordingly, VPUE purposefully has planned 2014/15 as a time for evaluation and assessment of these and other SUES pilot programs. VPUE's strategy going forward is to explore innovations in teaching and learning, to adopt new and exciting academic pilot programs, to responsibly steward university resources, and to continually assess programs under its purview.

Because TM is one of the vanguard SUES programs, VPUE selected TM as the initial program for assessment last fall. TM replaced the previous yearlong Introduction to the Humanities (IHUM) and requires freshmen to enroll in

only one course during the academic year. Key differences from IHUM include a reduced impact on students' course schedules, course offerings outside humanities, and the adoption of generalized and flexible learning goals centered on critical thinking. In contrast to IHUM, TM has received extremely positive preliminary evaluations by students as well as faculty members in the program. TM received high marks for discussion sections and achieving student learning objectives. In addition, a majority of participating faculty reported that the program goals influenced their approach to teaching. This year the TM course offerings were reduced in number to realize more appropriate section sizes and to contain costs. The governance board has approved 23 courses for 2014/15.

Under the new breadth system, WAYS, students will complete a total of 11 courses in eight areas: Aesthetic and Interpretive Inquiry, Applied Quantitative Reasoning, Creative Expression, Engaging Diversity, Ethical Reasoning, Formal Reasoning, Scientific Method and Analysis, and Social Inquiry. Concerted efforts across the university resulted in over 1,300 courses being certified for WAYS in 2013/14, some 500 more than anticipated in this report last year. VPUE is working with Institutional Research & Decision Support to develop a multimodal evaluation plan that includes data from the new course evaluation form, direct measures of student learning in select areas and

courses, student survey data, and exit interviews. While the full scope of WAYS cannot be assessed until the first class under the new system graduates, we will evaluate preliminary data from classes each year beginning with the current one, 2013/14. VPUE expects to have a clear and nuanced understanding of the educational and budgetary implications and needs of WAYS by the 2016/17 budget cycle.

VPUE continues to support the enhancement of large-enrollment, introductory-level courses that are foundational to the undergraduate liberal education experience at Stanford. Our funding for computer science, mathematics, economics, psychology, chemistry, and statistics courses has enabled smaller section sizes and fostered pedagogical improvements. VPUE invests allocated general funds in course directors, head teaching assistants, and programmatic efforts that improve the quality of undergraduate learning experiences in these large lecture courses. This year VPUE partnered with the School of Humanities & Sciences (H&S) to add two more departments that have introductory courses with growing yearly enrollments, Physics and Biology, to this program.

Bing Overseas Studies Program's (BOSP's) goal for 2014/15 remains to increase undergraduate students' participation in overseas programs from 50% to over 60%. BOSP is expanding Cape Town's capacity by five students and offering an additional quarter in summer with a service-learning component. Overseas seminars generate high student interest, especially from athletes and STEM majors; therefore, BOSP will increase the number of these seminars to nine, and expand offerings in Oaxaca to two. BOSP will suspend the Moscow program, but as it will offer a new quarter long program in Istanbul, this suspension should not negatively impact overall BOSP enrollment. A pilot overseas seminar in Istanbul was very popular and successfully executed, so we expect high student demand for the quarter-length program.

VPUE has also initiated new programs in 2013/14 that encourage learning beyond the classroom. The recently hired D-CELS will work with students and faculty to develop service-learning classes, internships, and community-based research with community partners. SUES emphasized the transformative potential of community-based learning that helps students "carry the knowledge, skills, and values they are developing into our world." The D-CELS program will endeavor to carry out this mission. It is the result of a partnership among VPUE, the Haas Center, and H&S.

Consolidated Budget Overview

The 2014/15 consolidated budget shows total revenues and operating transfers of \$61.7 million and expenses of \$60.5 million, yielding an operating surplus of \$1.2 million. After \$800,000 in transfers to plant for the Sweet Hall garden-level renovation, VPUE will end with a projected surplus of \$400,000.

Revenues and transfers are expected to grow by \$4.5 million, or 7.8%, including \$1.5 million in new gifts in the VPUE Innovation Fund and \$1.2 million in increased endowment payout. Over the past three years, VPUE has strategically reinvested \$10 million in operating surplus back into endowment principal, and this reinvestment now yields over \$500,000 annually in additional payout. The remaining income increase comes from university support for pilot programs.

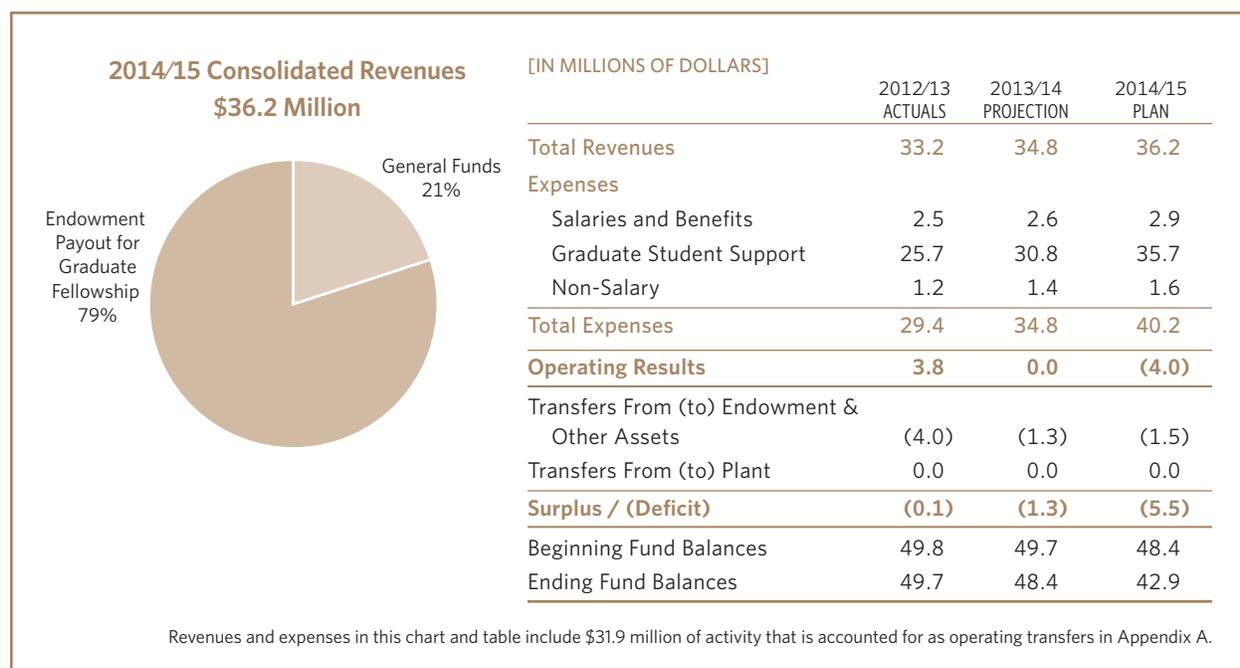
Expenses are expected to grow by \$3.5 million, or 6.2%, due to program expansion in Stanford Introductory Studies (SIS) and BOSP and support for large introductory courses in Physics and Biology. SIS's expense increase is in SUES-related programs: TM, SIMILE, ITALIC, Leadership Intensive, and Introductory Seminars. The new center in Istanbul and program expansions outlined above are the source of BOSP expense increases. In addition, a new lease at the Oxford center will increase annual costs by £160,000.

Fund balances remain sufficient to respond to large expense variances such as currency exchange rate changes.

Capital Plan

VPUE is executing three capital projects in 2014/15. Two projects begun in 2013/14, Oxford and Santiago, will finish in 2014, while a new Sweet Hall project will begin in fall 2014/15. BOSP relocated its Santiago facility closer to the university area and is allocated roughly \$378,000 from the facilities reserve for renovation of this new space. The lease for the BOSP Oxford center was renegotiated, and a \$4 million renovation supported through the capital facilities fund was put on contract for summer 2014. This construction will update the habitability and accessibility of the Oxford space and add a new classroom to support 45 students per quarter. Finally, the university granted VPUE 2,000 square feet of the Sweet Hall garden level vacated in the ITS server consolidation. VPUE will commit \$1.2 million of its fund balance to renovate the space and the adjoining BOSP spaces on that level. The renovation will upgrade global teleconferencing capability and increase meeting and office space to accommodate VPUE growth.

VICE PROVOST FOR GRADUATE EDUCATION



Programmatic Directions

The Vice Provost for Graduate Education (VPGE) plays a key leadership role, working collaboratively across the university's seven schools to enhance the quality of graduate education for almost 9,000 students pursuing degrees in 90 programs and departments. VPGE addresses several critical university priorities, administering university-wide fellowships, advancing diversity, facilitating interdisciplinarity, and fostering innovation by providing opportunities for students' professional development and local graduate program initiatives. VPGE programs and fellowships reach roughly 3,000 graduate students (over 600 on fellowships) annually.

Stability in funding sources for graduate students remains a major goal across the university. Financial support for graduate students reached a high of \$330 million in 2012/13, with 27% coming from external grants and contracts, 38% from restricted funds, 9% from designated funds, and 26% from general and school funds. VPGE contributes about 10% of this total, mostly as doctoral fellowships (full tuition and stipend) paid from one of six university-wide fellowship programs. The largest is the Stanford Graduate Fellowships (SGF) Program in Science and Engineering, used to attract the best students in the world to doctoral study at Stanford. The Stanford Interdisciplinary Graduate Fellowships (SIGFs) have gained momentum, with 96 fellows named so far. The

fundraising goal for SIGF is 100 fellowships, and funds for 58 have been raised to date. There is now a programmatic dimension, with workshops and seminars for fellows to gain insight into managing the challenges of interdisciplinary research and careers.

The DARE (Diversifying Academia, Recruiting Excellence) Doctoral Fellowship Program had the most visible change this past year: with its expansion to a cohort of 22 fellows, it reached a milestone of 100 fellows (six cohorts) and over 100 faculty mentors. Given increased enthusiasm for the program's success, VPGE works on several challenges: preserving the intimate small-cohort experience as the cohort size increases; involving DARE alumni to foster cross-cohort community building and peer mentoring; exploring how to take what works in DARE to other Stanford students; making DARE a fundraising priority so that it can be self-sustaining; and assisting peer universities in launching their own versions of DARE.

In addition to fellowships, VPGE provides funds for initiatives that diversify the academic pipeline. These supplement school activities and develop university-wide programs for recruiting, enhancing the educational experience of current students, and cultivating interest in academic careers. In alignment with those initiatives, VPGE now administers the Enhancing Diversity in Graduate Education

(EDGE) Fellowship Program. EDGE provides mentoring and professional development resources to support the academic success of new doctoral students. Piloted with National Science Foundation funds in five Humanities & Sciences departments in the social and behavioral sciences, EDGE has been rapidly scaled up to span several schools, including the Graduate School of Education as well as STEM fields in H&S natural sciences, Earth Sciences, and Engineering.

VPGE expands opportunities for graduate students to explore beyond their disciplines to better prepare them for their careers after graduation. These programs enable students to engage in cross-disciplinary dialogues and establish more extensive intellectual ties across schools as well as professional networks beyond their academic specializations.

The VPGE-sponsored interdisciplinary program with greatest participation is the Stanford Graduate Summer Institute (SGSI), which offers free, noncredit courses in September. SGSI is now in its eighth year, and its offerings have expanded beyond academic subjects (e.g., Agriculture and Sustainable Food Systems, Energy @ Stanford and SLAC, Entrepreneurship Safari, and Digital Storytelling for Researchers) to include skills-based courses (e.g., Public Policy Negotiation and Designing the Professional). Last summer SGSI offered 11 courses to 326 students. New courses for 2014/15 include Ethical Dilemmas in Research and Jumpstart your Academic Job Search. Other interdisciplinary programs include the monthlong Stanford Ignite (formerly Stanford Institute for Entrepreneurship), run by the GSB (50% of enrollees are Stanford graduate students and a handful postdocs), and two miniversions of SGSI: 12@12, faculty-led lunches, and 12@6, faculty-led dinners, held throughout the academic year. These foster cross-disciplinary learning and teamwork, help build networks, and reduce isolation. A parallel faculty-led lunch series engages international graduate students.

To further improve the educational experience of graduate students, VPGE tackles a perennial challenge in graduate education—to strengthen student-faculty advising relationships. VPGE has increased the advising workshop offerings so that both students and faculty gain skills in setting expectations, giving feedback, and resolving conflict.

In collaboration with colleagues around the university, VPGE has developed and is now disseminating a framework for graduate professional development that depicts six domains: specialized content knowledge and skills; teaching;

communication; leadership and management; career development; and personal development. Each domain identifies skills that will enable students to be successful while here at Stanford and in various career pathways. The framework will help graduate students select among the opportunities relevant to their own particular goals and needs. It will also help VPGE and collaborating units examine where there are either unmet needs or redundancies—and plan accordingly.

VPGE is committed to extending the reach of its programs, launching new pilots and scaling up what works, as well as communicating widely about these valuable opportunities and resources.

Consolidated Budget Overview

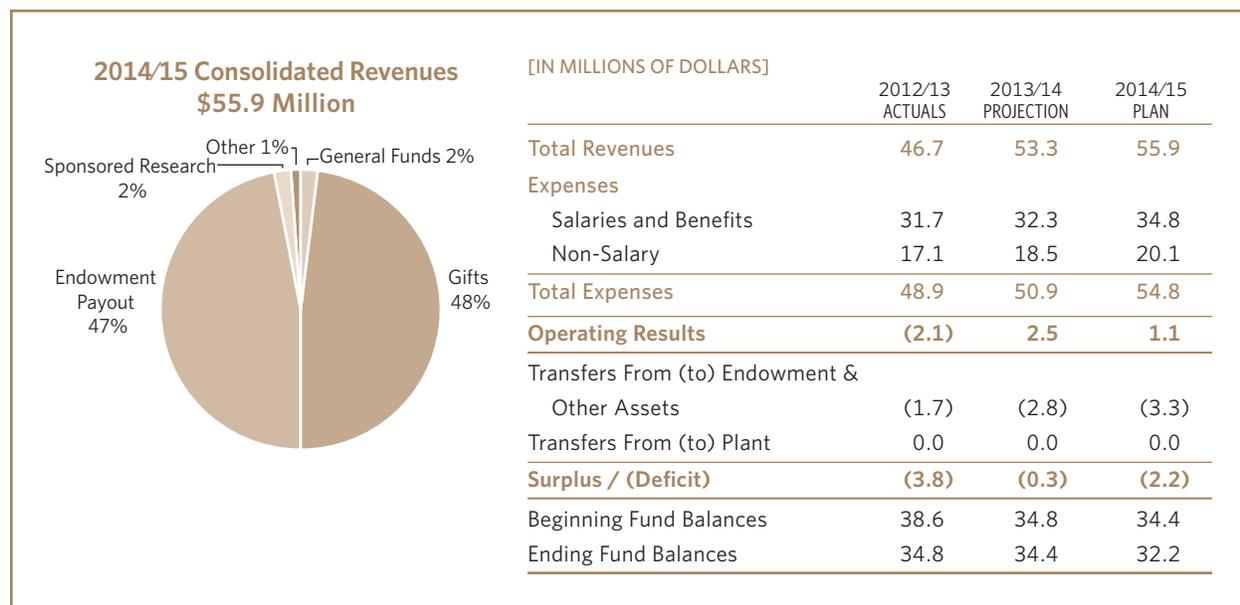
VPGE projects revenues of \$36.2 million, expenses and funds transferred to schools for graduate student funding of \$40.1 million in 2014/15, for a deficit of \$4.0 million. This planned use of reserves for fellowships along with reinvestment of \$1.5 million endowment income decreases the overall fund balance by \$5.4 million to \$43.1 million for 2014/15.

The 2014/15 consolidated expense budget for VPGE comprises 90% direct graduate student support, 8% compensation and benefits, and 2% programmatic non-compensation expenses. As VPGE's graduate student funding increases from \$30.8 million in 2013/14 to \$35.7 million in 2014/15, compensation and non-compensation expenses increase slightly to \$2.8 million and \$1.6 million, respectively. VPGE's operational funding to graduate students will continue to increase as programs are expanded to reach more graduate students.

Of the \$43.1 million fund balance, \$21 million is endowment income that is restricted to graduate student funding. The greatest portion is restricted to the SGF program. The number of fellows has been and will continue to increase with the intent to draw down the endowment fund balance to \$16 million by 2015/16. Expenses for 2014/15 will increase by 11% over 2013/14 as the number of fellows remains steady. The goal is to fund a steady-state number of fellowships through the yearly payout and maintain a reserve to cover unanticipated fluctuations.

The \$17.8 million designated fund balance (detailed on page 97 of Appendix A) will continue to be used for direct graduate student funding for the fellowships derived from general funds. A portion of designated funds will be used to expand pilot programs in priority areas and to maintain a reserve for responding to emerging needs.

HOOVER INSTITUTION



Programmatic Directions

With its eminent scholars and world-renowned archives, the Hoover Institution seeks to improve the human condition by advancing ideas that promote economic opportunity and prosperity, while securing and safeguarding peace.

Hoover's program is organized around three broad areas: scholarly research in public policy, a library and archives, and communication of the output of the scholars and library and archives. The institution is in a period of strategic growth in each of its program areas and will continue to invest in its priorities in fiscal year 2014/15.

Recruiting senior scholars and encouraging collaborative research amongst teams of fellows are top priorities. For 2014/15, the addition of one new senior fellow is anticipated, supplemented with term and visiting appointments to facilitate cooperation on projects and topics aligned with the priorities of the existing resident fellowship.

New scholars are expected to engage collaboratively, and Hoover continues to develop and expand a research model centered on scholarly teams. The institution seeks to use these groups to leverage the resident fellowship and multiply research output in a relevant and timely fashion. To complement existing teams, Hoover has recently launched several new initiatives that are expected to grow in 2014/15. Among them are teams studying comprehensive

immigration reform, foreign policy, and regulation and the rule of law.

Under the leadership of a new director of the library and archives, a strategic plan for the department has been developed. Growth in the library and archives will align with this plan in the coming years. For 2014/15, the library and archives will expand their collections in areas that have not received recent focus, including the Middle East and Africa, as well as seeking the papers by economists and others that have thematic relevance to the broader institution. They will also launch a comprehensive digital plan with a goal of both preserving digital materials and opening material that is in the public domain to a broader audience. Further, the library and archives will expand recently launched speakers' series and conferences centered on utilizing their collections. Undergraduate and graduate fellowships supporting students whose research significantly involves Hoover holdings will also be developed in the coming year.

The institution recently completed an overhaul of its website with updated back-end infrastructure. The website is now readily accessible via desktop, tablet, and smartphone, with streamlined navigation. Utilizing this new platform, Hoover plans to launch a number of education and outreach initiatives, including interactive video, blogs and podcasts, and comprehensive online educational journals, similar to the recently launched Strategika, that combine

editorials, discussion questions, and study guides to create unique teaching and learning aids.

In October 2013, the institution occupied a 10,000-square-foot office space in Washington, DC, to support Hoover fellows visiting the area by providing offices and facilities for meetings, small workshops, and policy briefings. Given the interest of the fellows in using this facility, Hoover secured the lease for the remaining 2,500 square feet of space available on the same floor. Renovation of this new space is now under way, with completion anticipated later this year.

The institution is concurrently expanding its resident DC staff. An expanded DC-based public affairs and logistical staff will coordinate the activities of the scholars and provide liaison with the local policy and scholarly communities and the media. A series of scholar-led conferences, workshops, and policy briefings is planned for 2014/15.

Given the planned growth in each of Hoover's three program areas, investments are required in the development and administrative functions. Under the leadership of a new associate director of development, Hoover is rebuilding its development office, primarily via staff additions. Since the economic downturn of 2008/09, support staff growth has not kept pace with program growth. Several new positions are planned for 2014/15, particularly in the finance and administrative areas.

Consolidated Budget Overview

For 2014/15, the Hoover Institution projects total revenues of \$55.9 million and total expenses of \$54.8 million, for an operating surplus of \$1.1 million. A planned \$3.3 million transfer to the capital facilities fund will reduce fund balances by \$2.2 million to \$32.2 million.

Revenues are projected to increase \$2.5 million, or 4.8%, from 2013/14 to 2014/15. Endowment income is expected to grow 3.9%, including the payout on new endowment gifts and transfers. Ongoing expendable giving is expected to grow 6%.

Expense growth is expected to track higher than revenue growth, with expenses growing by \$4 million, or 8%. Real growth in expenses results from the following program additions:

- In the research area, a new appointment at the senior level is anticipated next year, with additional appointments expected in future fiscal years. Program growth will also occur in expanded research initiatives in regula-

tion and the rule of law, foreign policy, and immigration policy.

- Library and archives expansion will primarily occur via new staff hires. Increased expenditures on collections, events, and fellowships are also anticipated.
- Increased facility and program costs for the Washington, DC, office will be realized in 2014/15. Staff additions are also planned to support Hoover's redesigned website and associated communication vehicles.
- New staff hires are expected in the development and administrative functions.

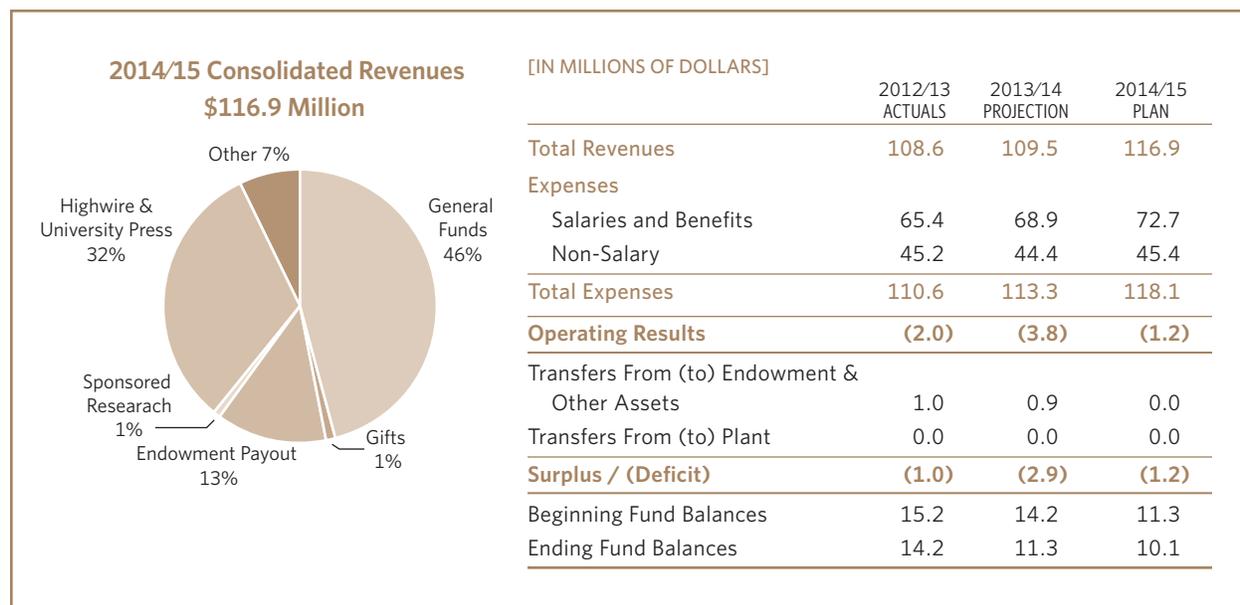
Given these investments, Hoover plans to draw down accumulated reserves, anticipating that long-term funding for new programs will be forthcoming. Investments in the development function will require the use of reserves in the short term but are expected to drive expendable gift growth in future years. However, the majority of the current funds decline results from the drawdown of accumulated restricted funds raised for specific projects of limited duration.

The institution plans to transfer \$3.3 million to the capital facilities fund in early 2014/15, bringing the balance of the reserve to approximately \$24.8 million. As per the funding agreement for the McMurtry Art Building, Hoover will submit a \$20 million subvention to the university when the Art Department has vacated the Cummings Art Building. This payment will be made from the capital facilities fund and is estimated to occur in summer 2015.

Capital Plan

Plans for a new Hoover facility on the site of the Cummings Art Building continue on pace. The need for a fourth building on the Hoover campus results from steady growth in the institution since the opening of the Herbert Hoover Memorial Building in 1978, as well as anticipated growth in the future. The new building will provide 50,340 square feet of new capacity in both offices and conferencing facilities. The project cost of \$45.6 million, or \$906 per square foot, remains unchanged from last year's Capital Plan. The project will be funded with expendable gifts, and fundraising is largely complete. Hoover has completed an initial programming assessment and has recently selected William Rawn Associates as the architect. The current project plan estimates concept approval by the Board of Trustees in 2013/14, groundbreaking in 2014/2015, and occupancy in 2016/17.

STANFORD UNIVERSITY LIBRARIES



Programmatic Directions

The provision of academic information resources and associated support services is a core mission of the Stanford University Libraries (SUL), and 2014/15 will bring several exciting projects. In 2013/14, for the first time, SUL's expenditures on digital resources exceeded its expenditures on physical materials, and that trend is expected to continue. To support that change, and with support from President Hennessy, SUL is implementing the second phase of the Digital Library build-out, which will significantly enhance SearchWorks, the online public catalog; the Stanford Digital Repository, a well-respected archive for data sets; and SUL's website archiving, digitization, and digital services programs, including Geoportal and the Self-Archiving Legacy Tool.

Physical materials nevertheless remain an important part of SUL's program. In some regions of the world, digital publishing is not yet well established, and printed information resources are required to support teaching and research; SUL provides them in depth. In addition, certain fields have not yet been well served by network publishing, including art and art history, music, and aspects of anthropology. Stanford struggles to maintain purchasing power for all formats of academic information resources, which increase in cost faster than consumer price indices.

The growth of SUL's Special Collections (rare books and manuscripts, archives of persons and institutions, and recorded sound) is significant in academic terms, for numerous Stanford faculty and their students use the collections for teaching and research. Indeed, SUL encourages and desires all Stanford students to handle rare and special items as evidence, perhaps unexamined by others, for their research papers. SUL's Special Collections are also part of the university's patrimony of culture artifacts, protected, preserved, and made available to visitors to Stanford, particularly visiting scholars, but also in numerous exhibits. New versions of the Matthew Parker Online Library, a collaborative project with Corpus Christi College of Cambridge University, and the French Revolution Digital Archive, a collaborative project with the Bibliothèque nationale de France, along with advances in the International Image Interoperability Framework and the Shared Canvas project, which together make scholarly functions possible on digital avatars of ancient, medieval, and early modern manuscripts, are expected. SUL's Special Collections grow entirely on the basis of endowment and special funding, but SUL has regularly received foundation funding for projects such as digitizing and hosting materials, or developing tools for collaboration using these digital resources. The nature of research in the humanities and social sciences is

changing in innovative ways. The work SUL does in collecting rarities combined with digital programs make possible collaborations between Stanford scholars and those far from the Farm.

With the completion of the move from the well-worn floors of Meyer Library to the freshly renovated Lathrop Library (formerly GSB South) in September 2014, the year will be something of a shakedown cruise for staff working in new spaces. There will be extensive work on realigning and rationalizing the collections in the central campus libraries so that core materials are present, and space for incoming new items is available as well. In addition, substantial work will be under way in trimming collections in biology, math, and chemistry in preparation for occupying the Combined Science Library in the new Science Teaching and Learning Center, now set for 2016. New term staff will be added to make possible these massive physical shifts, but the excellent librarians on the permanent staff of SUL will exert the real effort in selection, planning, and management.

Stanford's new and growing program in South Asian studies requires a new unit in SUL to select, acquire and catalog academic information resources, and serve them to faculty and students in the South Asian Center. The first of several new positions in SUL's South Asian unit, the South Asian studies librarian, will be filled in 2014/15. Other important positions to be filled will be an electronic document delivery coordinator, a permanent post, and a map cataloger, who will be devoted to providing access to a backlog of 50,000+ maps. In the three-year term of this position, only ~9,000 of those maps will be cataloged, but the results will still be significant, as most of the backlog consists of unusual and arcane maps, which are prime targets for new scholarship. Electronic delivery of information resources owned and held by Stanford will ease the occasionally frustrating wait between ordering and receipt of items from SAL3 in Livermore.

SUL's Academic Computing Services and Enterprise Systems and Programming units support over 2,000 instructors in over 4,000 courses with CourseWork. Enhancements to CourseWork arising from requests from instructors, as well as constant effort to maintain this Web-based course support environment, which has been in use for over eight years, requires constant tuning and adaptation. In addition, SUL supports over 2,000 students enrolled in Language Center courses through the Digital

Language Lab and the various network-based placement and final exams given by instructors in the center. A major rewrite of the Simulated Oral Proficiency Interview tests for the Language Center will be completed, tested, and implemented. There will also be new emphasis on support for digital research in the humanities and social sciences because of an endowment received from a forward-thinking donor, initial projects having received substantial and much-deserved fame.

Finally, SUL is working to maintain its own organizational effectiveness. An ongoing program of cross-training, known internally as the Concierge Program, has been successful and is continuing. Such programs improve staff's understanding of SUL's service portfolio and ultimately make the wide spectrum of support services, deep technical experience, and substantial subject expertise more transparently available to students and faculty.

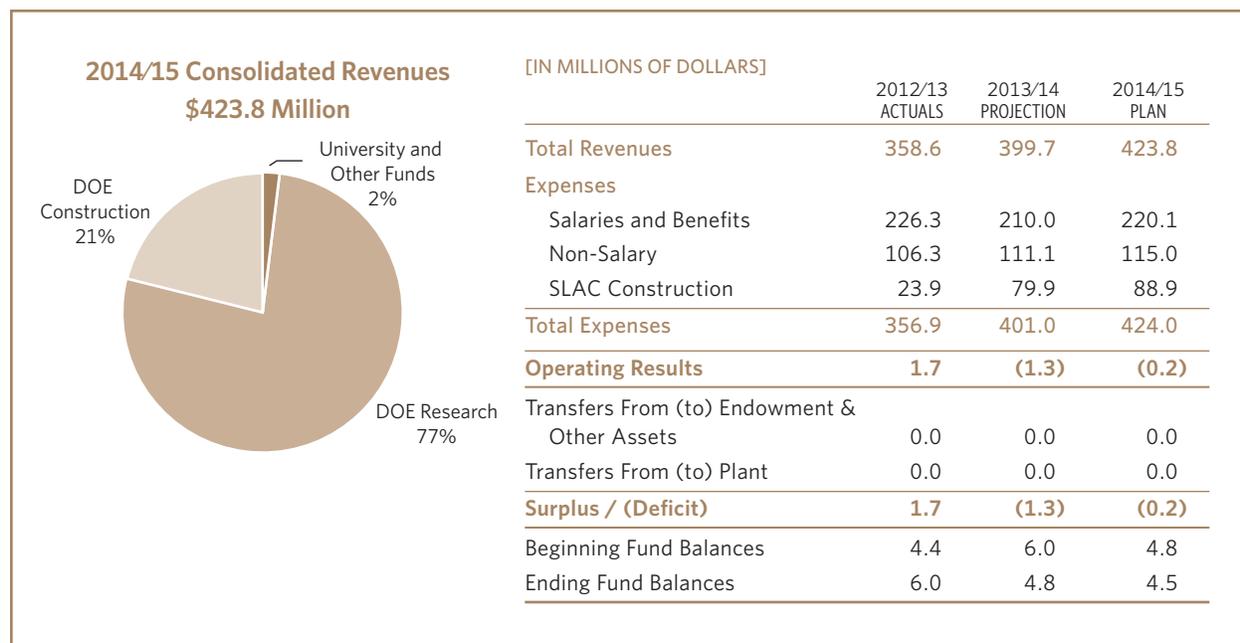
Consolidated Budget

Consolidated revenue and transfers are expected to total \$116.9 million: \$53.2 million in general funds, \$35.4 million in auxiliary revenue, and \$28.3 million in restricted funds. Consolidated expenses are projected to total \$118.1 million, resulting in a planned operating deficit of \$1.2 million. Compensation expenses are budgeted at \$72.7 million, operating expenses at \$23.3 million, and library materials acquisitions at \$22.1 million. Restricted fund balances will cover the operating deficit. SUL's consolidated budget includes three auxiliaries—HighWire Press, Stanford University Press, and LOCKSS (Lots of Copies Keep Stuff Safe)—representing one-third of the total consolidated budget.

SUL's base operating budget is projected to grow 5.3% from the 2014/15 level, but budgeted decreases in auxiliary spending are projected to reduce overall growth to 4.0%. SUL will also receive the second installment of \$2.6 million in one-time presidential funds to continue its digital efforts.

Fund balances at the end of 2014/15 are expected to be \$10.1 million. SUL projects balances of \$2.1 million in restricted expendable funds, \$4.5 million in restricted endowed funds, \$500,000 in designated funds, \$2.2 million in LOCKSS auxiliary reserves, and \$800,000 in LOCKSS auxiliary operations.

SLAC NATIONAL ACCELERATOR LABORATORY



Programmatic Directions

SLAC is a national laboratory operated through a management and operating contract by Stanford University for the Department of Energy (DOE). This contract has been renewed through September 30, 2017. In 2010, the DOE renewed the land lease at SLAC through September 30, 2043. This lease extension guarantees the full usage of the Office of Science's Linac Coherent Light Source (LCLS) facility.

SLAC hosts DOE scientific user facilities allowing more than 3,000 scientists annually from around the world to conduct research in photon science, astrophysics, particle physics, and accelerator science.

Scientific User Facilities

SLAC operates three DOE Office of Science user facilities: Stanford Synchrotron Radiation Lightsource (SSRL), LCLS, and Facility for Advanced Accelerator Experimental Tests (FACET).

SSRL provides X-ray beams and advanced instrumentation for research ranging from energy storage and environmental remediation to drug discovery and magnetism in thin films. In 2013, approximately 1,600 unique scientific users performed research using SSRL's X-ray beam lines. Also in

2013, SSRL achieved routine delivery of its highest operation current (500 milliamperes), which is among the highest of the intermediate energy X-ray light sources in the world. The increased current makes SSRL's X-ray beam lines brighter, enhancing experimental capabilities and reducing the time needed for data collection, thus adding capacity.

LCLS is the world's first hard X-ray free electron laser and is one of only two in the world currently operational. LCLS probes the structure and dynamics of matter at nanometer-to-atomic dimensions and on femtosecond time scales. This is opening new frontiers of discovery in areas including atomic physics, imaging of nonperiodic nanoscale materials, nanocrystallography, ultrafast structural and electrodynamic, and matter under extreme conditions.

The expansion of LCLS, aka LCLS-II, was rescoped by DOE at more than twice its original budget and is under construction. Its current plan has early commissioning in 2018/19 with a 2021 completion date. LCLS-II will significantly enhance SLAC's scientific capability and capacity. LCLS and LCLS-II will maintain SLAC's position as a world leader in ultrafast X-ray science, an area expected to see significant growth and impact in 2014/15 and beyond.

FACET brings an important complementary capability for advanced accelerator R&D. FACET is key to sustaining SLAC's core capabilities in advanced accelerators and serving a national need for access to a unique test bed for developing new acceleration concepts.

Photon Science Program

SLAC's photon science program is growing in the chemical and materials science areas. In addition to the Photon Ultrafast Laser Science and Engineering Center (PULSE) and the Stanford Institute for Materials and Energy Sciences (SIMES), SLAC coordinates with Stanford's Department of Chemical Engineering on SUNCAT Center for Sustainable Energy through Catalysis. Finally, planning is under way for a new initiative in the biosciences in partnership with the Schools of Medicine, Engineering, and Humanities & Sciences.

High-Energy Physics Program

SLAC's multifaceted program in particle physics and astrophysics explores frontier questions about the nature and origin of the universe through experiments on the Earth's surface at accelerator-based facilities, deep underground, and on satellites in space.

SLAC is a major partner in the ATLAS experiment at the Large Hadron Collider at the European Organization for Nuclear Research (known as CERN), which continues to explore the properties of the Higgs boson discovered in 2012 while also searching for physics beyond the Standard Model of particle physics. SLAC is also a leading contributor of R&D for the International Linear Collider's accelerator and detector. The Enriched Xenon Observatory continues its search for some of the rarest processes in nature as signatures for whether the neutrino is its own anti-particle or not.

SLAC's cosmic frontier program includes the Fermi Gamma-ray Space Telescope; R&D efforts for the next generation of dark matter experiments, such as the Super Cryogenic Dark Matter Search (CDMS) experiment and the liquid-xenon (LZ) experiment; and construction of the ground-based Large Synoptic Survey Telescope (LSST). SLAC hosts the Instrument Science Operations Center for Fermi's main instrument, the Large Area Telescope. The LSST is designed to determine the properties of dark energy with high precision by measuring the expansion rate history of the universe, and SLAC is leading the construction of the DOE-funded, 3.2-gigapixel camera for the project. Super

CDMS and LZ will be the next-generation underground experiments seeking to directly observe relic dark matter from the Big Bang. The Kavli Institute for Particle Astrophysics and Cosmology provides the intellectual center for these activities and a vital link to Stanford campus researchers in these fields.

Consolidated Budget Overview

The 2014/15 SLAC consolidated budget projects total revenues of \$423.8 million and total expenses of \$424.0 million, reducing the fund balances by about \$200,000. Ninety-eight percent of the SLAC expenses budget, \$413.2 million, is funded by the DOE Office of Science, including \$324.3 million for direct research and \$88.9 million for construction costs. In addition to DOE funded direct research and construction, there is approximately \$11 million in the SLAC consolidated budget that comes from university general funds and other research grants and contracts.

The 2014/15 consolidated expenses will have a 5.7% increase over the 2013/14 year-end projection of \$401 million. However, The DOE funded research component of the budget is expected to increase by only 4% due to federal budget constraints, which result in decreases in the government discretionary spending that SLAC relies on. SLAC has been actively pursuing and implementing contingency plans over the past two fiscal years to prepare for potential budget reductions. Actions taken have included workforce restructuring and aggressive focusing on strategic growth outside of the DOE Office of Science. The construction component of the budget will have a 11.3% increase as the construction of various DOE-funded buildings is making progress, as described below.

Capital Plan

The SLAC 2010 Long-Range Development Plan was developed with a vision of supporting future scientific program direction by consolidating research activities, upgrading infrastructure, renovating facilities, and demolishing sub-standard structures. This plan serves as a working document and resource guide beyond the immediate future of planned capital projects. In addition, SLAC is developing a long-range campus plan to address future growth and laboratory space.

The \$97 million DOE-funded Research Support Building and Infrastructure Modernization Project commenced in

2008/09 and is planned to be complete in late 2015. The project includes construction of a new 64,000-square-foot building to house accelerator research staff and a control room, the renovation of 4,000 square feet of existing lab space to create two new biology labs and a materials lab, the renovation of two administrative buildings (64,000 square feet), demolition of substandard buildings and trailers (64,000 square feet), and the upgrade of an aging protective relay system for a main transformer that provides power to SLAC.

Additional planned projects include three DOE-funded projects—the \$65 million Science and User Support Building (SUSB), the \$55 million Photon Sciences Laboratory Building (PSLB), and the \$895 million LCLS-II Experimental Complex.

SUSB construction started in July 2013, with occupancy planned for 2015. The SUSB project includes the demolition of the existing auditorium and cafeteria, which will be replaced with a new auditorium, cafeteria, and user center. This will create a new “front door” serving as the first stop for researchers and visitors. The DOE funding for the PSLB is currently planned for 2014/15, with groundbreaking tentatively scheduled for 2016 and occupancy for 2018. This environmentally sustainable facility will include laboratory space, offices, and collaboration space to support SLAC’s photon science mission.

The LCLS-II project consists of underground tunnels, aboveground tunnel access structures and an underground experimental hall to house technical and experimental apparatus. LCLS-II will significantly enhance SLAC’s scientific capability and capacity and is expected to be fully operational in 2021.