THE REGENTS OF THE UNIVERSITY OF CALIFORNIA

November 15, 2012

The Regents of the University of California met on the above date at UCSF-Mission Bay Community Center, San Francisco.

Present: Regents Blum, De La Peña, Gould, Kieffer, Lansing, Makarechian, Mendelson,

Pattiz, Reiss, Rubenstein, Ruiz, Schilling, Stein, Torlakson, Varner, Yudof, and

Zettel

In attendance: Regents-designate Feingold and Flores, Faculty Representatives Jacob and Powell, Secretary and Chief of Staff Kelman, Associate Secretary Shaw, General Counsel Robinson, Chief Investment Officer Berggren, Provost Dorr, Executive Vice President Brostrom, Chief Financial Officer Taylor, Senior Vice Presidents

Dooley and Stobo, Vice Presidents Beckwith, Duckett, Lenz, and Mara, Chancellors Block, Blumenthal, Drake, Katehi, White, and Yang, and Recording

Secretary Johns

The meeting convened at 11:45 a.m. with Chairman Lansing presiding.

1. APPROVAL OF MINUTES OF PREVIOUS MEETING

Upon motion duly made and seconded, the minutes of the meeting of September 13 and the meetings of the Committee of the Whole of September 11, 12, and 13, 2012 were approved.

2. **REPORT OF THE PRESIDENT**

The President presented his report concerning University activities and individuals. Seven UC faculty members were among 70 distinguished scientists recently elected to the Institute of Medicine of the National Academies, one of the greatest honors in the medical and health science fields. Since 1970, the Institute of Medicine has elected more than 200 members who are affiliated with UC. UC Riverside Professor Emerita of Art Uta Barth and UCLA Assistant Professor of Microbiology, Immunology, and Molecular Genetics Elissa Hallem were awarded fellowships by the MacArthur Foundation. The MacArthur fellowships are also sometimes referred to as "genius awards" and recognize exceptional creativity. The Heinz Family Foundation has selected Professors Richard Jackson of UCLA and Jay Keasling of UC Berkeley and the Lawrence Berkeley National Laboratory as recipients of the Heinz Award, a prestigious award in five subject areas. Professor Jackson was recognized for his environmental and public health research and Professor Keasling for his research on the use of natural systems in producing inexpensive, environmentally friendly compounds for a variety of applications, including anti-malarial drugs and biofuel substitutes for gasoline, diesel, and jet fuel.

3. REPORT OF THE COMMITTEE ON COMPENSATION

The Committee presented the following from its meeting of November 15, 2012:

A. Salary Adjustments for Members of the Senior Management Group at Lawrence Berkeley National Laboratory

The Committee recommended that salary adjustments for Senior Management Group members at the Lawrence Berkeley National Laboratory, as proposed by the Laboratory Director and as presented below, be approved.

NAME	JOB TITLE	PREVIOUS BASE SALARY	PERCENT INCREASE	NEW BASE SALARY	
Simon, Horst D.	Deputy Laboratory Director	\$338,340	1.0% across-the- board	\$341,712	
Blair, Jeffrey A.	Management III – Laboratory Counsel	\$271,308	1.0% across-the- board	\$274,020	
Keasling, Jay D.	Associate Laboratory Director for Biosciences	ratory Director \$361,584 1.0% across-the-		\$365,196	
DePaolo, Donald J.	Associate Laboratory Director for Energy & Environmental Sciences	\$339,024	1.0% across-the- board	\$342,408	
Symons, T. James	Associate Laboratory Director for General Sciences	\$277,476	1.0% across-the- board	\$280,248	
Yelick, Katherine A.	Yelick, Katherine A. Associate Laboratory Director for Computing Sciences		\$278,112 1.0% across-the-board		

These increases are funded by the Department of Energy. The effective date of the increases is retroactive to October 1, 2012.

Except as expressly modified by the Regents above, the University's total compensation commitment for the aforementioned employees remains unchanged. Compensation recommendations and final actions will be released to the public as required in accordance with the standard procedures of the Board of Regents.

Submitted by: Laboratory Director Alivisatos

Reviewed by: President Yudof

Committee on Compensation Chair Ruiz Office of the President, Human Resources

B. Adoption of Revisions to Governance of Senior Management Group Compensation

The Committee recommended that:

- (1) The approval authority standards required for compensation actions for members of the Senior Management Group (SMG), as summarized in Attachment 1, be approved and applied to all SMG compensation actions.
- (2) The Market Reference Zones for SMG positions be approved as shown in Attachment 2.
- (3) The President be authorized to develop implementing procedures for the program.

C. Salary Adjustment for A. Paul Alivisatos as Director, Lawrence Berkeley National Laboratory

The Committee recommended that a 1.0 percent salary adjustment for Director A. Paul Alivisatos at the Lawrence Berkeley National Laboratory, as presented in the table below, be approved.

NAME	JOB TITLE	PREVIOUS BASE	PERCENT	NEW BASE	
	JOB IIILE	SALARY	INCREASE	SALARY	
A. Paul Alivisatos	Laboratory Director	\$434,805	1.0 %	\$439,153	

The salary increase for Director Alivisatos will be funded by the Laboratory with funds provided by the Department of Energy. The effective date of the increase is retroactive to October 1, 2012.

Except as expressly modified by the Regents above, the University's total compensation commitment for Director Alivisatos remains unchanged. Compensation recommendations and final actions will be released to the public as required in accordance with the standard procedures of the Board of Regents.

Submitted by: President Yudof

Reviewed by: Committee on Compensation Chair Ruiz
Office of the President, Human Resources

Upon motion of Regent Ruiz, duly seconded, the recommendations of the Committee on Compensation were approved.

4. REPORT OF THE COMMITTEE ON FINANCE

The Committee presented the following from its meeting of November 14-15, 2012:

- A. Status of 2012-13 Budget and Approval of University of California 2013-14 Budgets for Current Operations and for State Capital Improvements
 - (1) The Committee recommended that the budget plan included in the document, 2013-14 Budget for Current Operations, be approved.
 - (2) The Committee concurred with the recommendation of the Committee on Grounds and Buildings that the 2013-14 Budget for State Capital Improvements be approved.
- B. Participation in a Separate 501(c)(3) Entity, Transfer of the Center for Executive Education at the Haas School of Business to the Entity, and Extension of Loan to Entity, Berkeley Campus

The Committee recommended:

- (1) Approval of the University's participation in a separate non-profit entity (Entity) that shall own and operate the Haas School of Business (Haas) Center for Executive Education (CEE), subject to the following terms and conditions:
 - a. The Entity shall be organized exclusively for charitable, scientific, and educational purposes within the meaning of Section 501(c)(3) of the Internal Revenue Code of 1986 (the Tax Code), or corresponding section of any future federal tax code, and shall apply for, and maintain, tax exempt status under Section 501(c)(3) of the Tax Code. Should the Entity be dissolved, all assets shall revert to the University.
 - b. The Entity shall be governed by a seven-person Board of Directors (Board) including the Dean of Haas, the University of California Berkeley (Berkeley) Vice Chancellor of Administration and Finance (or a designee), and a member of the Haas or Berkeley Ladder Faculty as well as four independent Directors. The Chairman of the Board will be the Dean of Haas. The Directors shall receive no payments from the Entity other than reimbursement for travel expenses.
 - c. The Entity's organizational documents shall require a supermajority (at least five out of seven) of the Board to approve any of the following actions by the Entity:

- i. Any change in the affiliation agreement between the Entity and the University
- ii. Any change in the distribution of the net earnings of the Entity
- iii. Any change in the composition of the Board
- iv. Any amendment to the bylaws or articles of incorporation of the Entity
- v. Dissolution of the Entity
- (2) Approval of the transfer of the CEE program to the Entity, including assets (and corresponding liabilities) such as client contracts, accounts receivable, revenue accounts, client relationships, knowhow, and good will, subject to the following conditions:
 - The Entity shall enter into an affiliation agreement with the a. University, detailing the respective rights, duties, obligations, and economic terms of the parties in connection with the affiliation, including the Entity's use of the University's name and intellectual property. The affiliation agreement shall require the Entity to pay, on an annual basis, (i) the prevailing administrative full costing fee, which is currently set at seven percent of gross revenue, to Berkeley, and (ii) all of the Entity's net earnings to Haas. The affiliation agreement shall also provide that, in continuation of CEE's current practice, educational content will be reviewed and approved by a member of the Haas Ladder Faculty to ensure that the University and Berkeley's brand and reputation are protected. The University and the Board of the Entity shall receive an overview report on educational content at least annually. Amendments to the affiliation agreement shall require the consent of the University and the Entity.
 - b. The termination of the affiliation agreement shall result in the automatic dissolution of the Entity.
 - c. The University shall have the right to conduct a periodic review of the Entity's programs to ensure that the Entity is operating at a level consistent with the University's standards of excellence.
 - d. The Entity may act as a service organization to other University campuses, schools, and units interested in leveraging the Entity's executive education infrastructure and capabilities on a fee-for-

service basis or through the application of a sharing model when conducting joint programs.

- (3) Approval of an interest-free loan from Haas to the Entity for up to \$500,000, with repayment required within six months after the transfer of the CEE program to the Entity.
- (4) That the President be authorized, after consultation with the General Counsel, to approve and to execute (i) any documents reasonably required to accomplish the above; and (ii) any modifications, addenda, or amendments (collectively, "amendments") thereto, provided that such amendments do not materially increase the obligations of the University or materially decrease the payments to the University from the Entity; provided, however, that the authority to approve and to execute the affiliation agreement and any amendments thereto may not be delegated by the President.

C. University of California Financial Reports, Fiscal Year 2012

The Committee recommended adoption of the 2011-12 Annual Financial Reports for the University of California, the University of California Retirement System, and the five University of California Medical Centers.

Upon motion of Regent Varner, duly seconded, the recommendations of the Committee on Finance were approved, Regent Stein voting "no" on item A. above.

5. REPORT OF THE COMMITTEE ON GROUNDS AND BUILDINGS

The Committee presented the following from its meeting of November 13, 2012:

A. Approval of University of California 2013-14 Budget for State Capital Improvements and Acceptance of the 2012-22 Capital Financial Plan

The Committee recommended that:

- (1) Subject to concurrence of the Committee on Finance, the 2013-14 Budget for State Capital Improvements be approved.
- (2) The 2012-22 Capital Financial Plan be accepted.
- B. Approval of Design following Action Pursuant to California Environmental Quality Act, Mission Bay Block 25A Academic Building (Faculty Office Building), San Francisco Campus

Upon review and consideration of the environmental consequences of the proposed project, the Committee reported its:

- (1) Adoption of the final Mitigated Negative Declaration for the UC San Francisco Mission Bay Block 25A Academic Building (Faculty Office Building).
- (2) Adoption of the Mitigation Monitoring and Reporting Program and California Environmental Quality Act Findings.
- (3) Approval of the design of the Mission Bay Block 25A Academic Building (Faculty Office Building), San Francisco Campus.

[The Mitigated Negative Declaration and California Environmental Quality Act Documentation and Findings were mailed to Regents in advance of the meeting, and copies are on file in the Office of the Secretary and Chief of Staff.]

Upon motion of Regent Makarechian, duly seconded, the recommendation of the Committee on Grounds and Buildings was approved.

6. REPORT OF THE COMMITTEE ON HEALTH SERVICES

The Committee presented the following from its meeting of November 15, 2012:

A. Adoption of Policy on Student Health and Counseling Centers

The Committee recommended that:

- (1) The Policy on Student Health and Counseling Centers, as shown in Attachment 3, be adopted.
- (2) The Committee on Health Services be provided a Report on Student Health and Counseling Centers no less frequently than once a year.
- (3) The Senior Vice President Health Sciences and Services be authorized to develop policies and procedures, in consultation with the Chair of the Committee on Health Services, to implement the above policy.

B. Establishment of a Limited Liability Corporation with Dameron Hospital, Stockton, and UC Davis Medical Center, Davis Campus

The Committee recommended that:

- (1) The University forming and participating in a Limited Liability Company (LLC) with Dameron Hospital Association be approved under the following terms:
 - a. The LLC shall be a two-member nonprofit entity.
 - b. The University shall have a 25 to 30 percent interest in the LLC.

- c. The University shall have a right to appoint 50 percent of the LLC's Board of Managers and shall serve as Chair of the Board of Managers. In the event of a deadlock among the Board, the Chair will cast the deciding vote.
- d. The University may contribute up to \$10 million in cash to the LLC, as well as the University's brand, trade name, programs, and expertise. Any further capitalization contribution, loan, or loan guarantee by the University must be approved by the Regents. The University will have no further obligation to contribute capital to the LLC or to fund working capital or pay for debts or other liabilities of the LLC.
- e. Dameron Hospital Association shall contribute hospital assets worth approximately \$97.5 million to the LLC.
- f. The LLC's formational documents shall provide that both members of the LLC must consent to a sale, exchange, or disposition of all of the LLC's assets; a sale, merger, or consolidation of the LLC; a dissolution of the LLC; receipt of financing other than non-recourse; and any requirement that the members contribute additional capital.
- g. The LLC's formational documents shall provide that the first \$10 million of net cash generated by a sale of assets in the event the LLC is dissolved will be paid to the Regents.
- h. Any distributions to the members shall be in proportion to the members' ownership.
- (2) The President or his designee be authorized to withdraw from the transaction prior to closing if Dameron Hospital's business, assets, or liabilities are not acceptable to the University.
- (3) The President or his designee be authorized, following consultation with the General Counsel, to execute any documents reasonably required for the University to form and participate in the LLC.
- (4) The University shall have access to all legal and financial records maintained by the LLC. UC Davis shall provide the President or his designee an annual report of the LLC's performance.

Upon motion of Regent De La Peña, duly seconded, the recommendations of the Committee on Health Services were approved.

7. REPORT OF THE COMMITTEE ON INVESTMENTS

The Committee presented the following from its meeting of September 25, 2012:

University of California Retirement Plan / General Endowment Pool Investment Policy and Guideline Review and Recommendations

The Committee recommended that the changes to the University of California Retirement Plan (UCRP) Investment Policy Statement (as shown in Attachment 4), the University of California General Endowment Pool (GEP) Investment Policy Statement (as shown in Attachment 5), and the Appendices to Investment Policy Statements of UCRP and GEP (as shown in Attachment 6), be approved, effective November 15, 2012.

Regent Gould introduced an amendment to the item in Attachment 6, Appendix 7J, so that Appendix 7J would have an effective date of January 1, 2013.

Upon motion of Regent Gould, duly seconded, the recommendation of the Committee on Investments was approved as amended.

8. REPORT OF THE COMMITTEE ON OVERSIGHT OF THE DEPARTMENT OF ENERGY LABORATORIES

The Committee presented the following from its meeting of November 15, 2012:

Resolutions to Exclude Access to Federal Classified Information

The Committee recommended that the two resolutions pertaining to the University's Department of Energy and Department of Defense Facility Security Clearances be approved as shown in Attachments 7 and 8.

Upon motion of Regent Pattiz, duly seconded, the recommendation of the Committee on Oversight of the Department of Energy Laboratories was approved.

9. REPORT OF INTERIM AND CONCURRENCE ACTIONS

Secretary and Chief of Staff Kelman reported that, in accordance with authority previously delegated by the Regents, interim or concurrence action was taken on routine or emergency matters as follows:

A. The Chair of the Committee on Finance and the President of the University approved the following recommendation:

Authorization for External Financing for an Office Building in Riverside, California, and Financing of Tenant Improvements for UCPath, University of California, Office of the President

- (1) The President be authorized to obtain external financing for the acquisition of the Intellicenter Building at 14350 Meridian Parkway, Riverside, California (Property), plus the due diligence costs, closing costs, and working capital in an amount not to exceed \$17.7 million (Acquisition Costs). The President shall require that:
 - a. As long as the debt is outstanding, the portion of the Systemwide Assessment (UC General Fund portion excluding tuition and State operating appropriations) attributed to UCPath shall be maintained in amounts sufficient to pay the debt service and to meet the related requirements of the authorized financing.
 - b. The general credit of the Regents shall not be pledged.
- (2) Pursuant to Standing Order 100.4 (nn)(1), the President approve external financing in an amount not to exceed \$10 million for the associated tenant improvements for UCPath. The President shall require that:
 - a. Before such external financing is disbursed, the Budget for Capital Improvements and the Capital Improvement Program be amended to include the tenant improvements to the Property.
 - b. As long as the debt is outstanding, the portion of the Systemwide Assessment (UC General Fund portion excluding tuition and State operating appropriations) attributed to UCPath shall be maintained in amounts sufficient to pay the debt service and to meet the related requirements of the authorized financing.
 - c. The general credit of the Regents shall not be pledged.
- (3) The President or his designee be authorized to execute all documents necessary in connection with these transactions.
- (4) Authorize the occupancy of 25,000 gross square feet.
- (5) Based upon an independent review and consideration of the Master Environmental Impact Report, Final Focused Environmental Impact Report, Addendum, and the proposed California Environmental Quality Act (CEQA) Findings, adopt the CEQA Findings in support of (1) and (4) above.
- B. The Chair of the Committee on Compensation and the Provost of the University approved the following recommendation:

Extension of Term Appointment of and Stipend for Margarita Baggett as Acting Chief Operating Officer – Health System, San Diego Campus

Background to Recommendation

Action under interim authority was requested for the extension of the term appointment of Margarita Baggett as Acting Chief Operating Officer – Health System, San Diego campus through December 31, 2012. This action reflected no changes to Ms. Baggett's current compensation.

As an exception to policy, the campus requested approval to continue Ms. Baggett's annual administrative stipend of \$81,900 associated with this term appointment through December 31, 2012, in recognition of the importance of the position, the market value of the position, internal comparisons and Ms. Baggett's qualifications. This constitutes an exception to policy because the stipend extension will exceed the one year allowed under policy. Ms. Baggett's current stipend, like the current term appointment, was effective October 4, 2011 through September 30, 2012.

Ms. Baggett will continue to receive an annual base salary of \$252,000. The proposed annual administrative stipend increases Ms Baggett's total annual salary to \$333,900. The total annual salary of \$333,900 is 35.1 percent below the prior incumbent's annual base salary of \$514,700 and 31.8 percent below the average base salary of \$489,537 for the chief operating officers at the other UC medical centers.

Ms. Baggett began this term appointment after Mona Sonnenshein, the former Chief Operating Officer at the UC San Diego Health System, retired on October 4, 2011. Ms. Baggett has been serving as the Acting Chief Operating Officer – Health System since then.

Due to the resignation of UC San Diego Health System's Chief Executive Officer during this same time period, a new Chief Operating Officer has not been identified.

In June 2012, Paul Viviano was appointed to the position of Chief Executive Officer for the UC San Diego Health System.

Action under interim authority was requested to ensure stability as the new Chief Executive Officer reviews the leadership model at UC San Diego Health System; it is important that the interim role Ms. Baggett holds as the Chief Operating Officer – Health System remain unchanged. Approval of this action needed to be secured before the next scheduled Regents meeting in November because Ms. Baggett's current term appointment and stipend ended on September 30, 2012.

The source of funding for this position is exclusively clinical funds. No State or UC general funds will be used.

Recommendation

The following items were approved in connection with the appointment of and stipend for Margarita Baggett as Acting Chief Operating Officer – Health System, San Diego campus:

- (1) Per policy, continued appointment as the Acting Chief Operating Officer Health System, San Diego campus.
- (2) Per policy, continued annual base salary of \$252,000.
- (3) As an exception to policy, continued annual administrative stipend of 32.5 percent of base salary (\$81,900) while serving as Acting Chief Operating Officer. This constitutes an exception to policy because the stipend exceeds the one-year period allowed under policy. Ms. Baggett's base salary plus stipend totals \$333,900. This position is slotted at SLCG Grade 113 (Minimum \$333,900, Midpoint \$431,500, Maximum \$529,100).
- (4) Per policy, continued eligibility to participate in the Clinical Enterprise Management Recognition Plan (CEMRP), with a target award of 15 percent of base salary plus stipend (\$50,085) and a maximum potential award of 25 percent of base salary plus stipend (\$83,475). Actual award will be determined based on performance against pre-established objectives.
- (5) Per policy, continuation of a five percent monthly contribution to the Senior Management Supplemental Benefit Program.
- (6) Per policy, continuation of standard pension and health and welfare benefits and standard senior management benefits (including senior management life insurance and executive salary continuation for disability).
- (7) Per policy, this appointment is at 100 percent time and effective October 1, 2012 through December 31, 2012.

Recommended Compensation

Effective Date: October 1, 2012 Annual Base Salary: \$252,000

Stipend: \$81,900

Total Annual Salary: \$333,900

CEMRP: \$50,085 (at 15 percent target rate) **Target Cash Compensation:*** \$383,985

Grade Level: SLCG Grade 113

(Minimum \$333,900, Midpoint \$431,500, Maximum \$529,100)

Funding: non-State-funded

Budget &/or Prior Incumbent Data

Title: Chief Operating Officer **Annual Base Salary:** \$514,700

CEMRP: \$77,205 (at 15 percent target)
Target Cash Compensation:* \$591,905

Grade Level: SLCG Grade 113

(Minimum \$333,900, Midpoint \$431,500, Maximum \$529,100)

Funding: non-State-funded

COMPETITIVE ANALYSIS

Percentiles	BASE SALARY MARKET PERCENTILES			TARGET CASH MARKET PERCENTILES						
	25^{th}	50 th	Mean	75^{th}	90 th	25^{th}	50 th	Mean	75th	90th
Market Data	\$405.0	\$498.0	\$512.0	\$595.0	\$735.0	\$434.0	\$588.0	\$662.0	\$729.0	\$1,272.0
% Difference										
from Market	-17.6%	-33.0%	-34.8%	-43.9%	-54.6%	-11.5%	-34.7%	-42.0%	-47.3%	-69.8%

Survey Source: Mercer Council of Teaching Hospitals and Health Systems (COTH) Custom Analysis Module 4A

The compensation described above shall constitute the University's total commitment until modified by the Regents and shall supersede all previous oral and written commitments. Compensation recommendations and final actions will be released to the public as required in accordance with the standard procedures of the Board of Regents.

Submitted by: UC San Diego Chancellor Khosla

Reviewed by: President Yudof

Committee on Compensation Chair Ruiz Office of the President, Human Resources

10. REPORT OF COMMUNICATIONS RECEIVED

Secretary and Chief of Staff Kelman reported that, in accordance with Bylaw 16.9, Regents received a summary of communications in reports dated October 1 and November 1, 2012.

11. REPORT OF MATERIALS MAILED BETWEEN MEETINGS

Secretary and Chief of Staff Kelman reported that, on the dates indicated, the following were sent to the Regents or to Committees:

^{*} Target Cash Compensation consists of base salary and, if applicable, incentive and/or stipend.

To Members of the Committee on Compensation

A. From the President, Annual Report on Compensation for Calendar Year 2011: Deans and Faculty Administrators. (October 15, 2012)

To Members of the Committee on Educational Policy

- B. From the President, report on the fee levels for self-supporting graduate degree programs approved for 2012-13. (September 10, 2012)
- C. From the Chair of the Academic Council, Board of Admissions and Relations with Schools Report on Comprehensive Review. (October 4, 2012)
- D. From the President, Annual Report on Proposals Seeking Research Funding from the Tobacco Industry. (October 11, 2012)

To Members of the Committee on Finance

- E. From the Vice President and General Counsel, Bi-Monthly Report of New Litigation for Reporting Period of 6/4/12 7/30/12. (August 20, 2012)
- F. From the Vice President and General Counsel, Bi-Monthly Report of New Litigation for Reporting Period of 7/30/12 10/1/12. (October 24, 2012)

To Members of the Committee on Grounds and Buildings

G. From the President, Annual Report on Chancellors' Residences and Office Capital Projects for Fiscal Year 2011-12. (September 28, 2012)

To the Regents of the University of California

- H. From the Secretary and Chief of Staff, summaries of correspondence sent to the Regents for the month of August. (September 4, 2012)
- I. From the President, report of External Relations activities for the period of July-August. (September 5, 2012)
- J. From the President, Response to Protests on UC Campuses, final report from the Vice President and General Counsel and Dean of the Berkeley School of Law. (September 13, 2012)
- K. From the Secretary and Chief of Staff, summaries of correspondence sent to the Regents for the month of September. (October 1, 2012)
- L. From the President, announcement of the Chancellor of the Riverside campus decision to accept the position of Chancellor of the California State University system. (October 4, 2012)

Regent Torlakson referred to the item in the report of the Committee on Finance, *Status of 2012-13 Budget and Approval of University of California 2013-14 Budgets for Current Operations and for State Capital Improvements*. He stated that this item provides a framework for the University's budget: it reflects the University's priorities and vision for how funds will be spent if funds are available. He emphasized that this item does not specify fee increases; it assumes only the direction the University wishes to go. It was important to develop a framework so that students, faculty, and other citizens could respond and present ideas for modifying the budget framework.

Chairman Lansing stressed that the Board of Regents does not wish to increase student fees.

12. **RESOLUTION IN APPRECIATION – TIMOTHY P. WHITE**

Upon motion of Regent Varner, duly seconded, the following resolution was adopted:

WHEREAS, the Regents of the University of California wish to honor and commend Timothy P. White as he prepares to step down as the eighth Chancellor of the University of California, Riverside following a distinguished tenure marked by clear vision, thoughtful stewardship, and unwavering commitment to the University's historic mission of teaching, research, and public service; and

WHEREAS, in only four years, he has made an indelible imprint upon the Riverside campus, meticulously building upon the foundation laid down by his predecessors, as well as forging a bold and challenging new blueprint for the campus that has broadened and deepened its reputation nationally and internationally, and bringing uncommon sensitivity to the University's relationship with the local and campus communities resulting in improved town-gown relations; and

WHEREAS, with foresight and vision, he has overseen the growing eminence of the faculty and the increased enrollment of more than 21,000 students engaged in undergraduate, graduate, and professional studies, all the while retaining a campus atmosphere of friendliness and warmth; and

WHEREAS, with great tenacity, passion, and a firm purpose of commitment, he pursued full accreditation for the new state-of-the-art UC Riverside School of Medicine, ensuring that it not only received the necessary accreditation to move forward, but also that it is on track to fulfill the critical need for more physicians in the underserved Inland Empire and;

WHEREAS, firm in the knowledge that tomorrow's excellence rests with the young people of today, he has consistently demonstrated a deep devotion to the well-being of Riverside's students, championing the rich diversity the campus has come to be known for, engaging one on one with students on difficult issues that affect them on a daily basis, and listening with heartfelt compassion and concern, always ready to extend a helping hand;

NOW, THEREFORE, BE IT RESOLVED that the Regents of the University of California express their profound appreciation to Timothy P. White for the personal integrity, moral courage, resolute spirit, and exceptional service he has given the University; their deep regret at his leaving; and their delight at his appointment as the seventh Chancellor of the California State University System;

AND BE IT FURTHER RESOLVED that the Regents extend to Tim and Karen White their best wishes, secure in the knowledge that they will continue to serve as strong advocates on behalf of California public higher education; and direct that a suitably inscribed copy of this resolution be presented to him as an expression of the Board's lasting affection and high regard.

Regent Varner praised Chancellor White's work for the betterment of the Riverside campus during his tenure. Even more important than the growth of the student body at UC Riverside to 21,000 students was the progress seen in graduation rates and diversity. The campus has a special feeling about it, which is a tribute to Chancellor White. Chancellor White enjoys strong support from the Riverside community, and this support contributed to the successful accreditation of the new medical school at UCR. Regent Varner recalled that Chancellor White, upon assuming his position, almost immediately convened a meeting with the leaders of California State University, San Bernardino and the University of Redlands in order to engage in a discussion and promote collaboration with other institutions of higher education, public and private. Regent Varner congratulated Chancellor White on his new position as the Chancellor of the California State University system, but stressed that he would be missed at the University of California.

Chairman Lansing noted that the meeting was concluding on a bittersweet note with the departure of Chancellor White, but anticipated that the University would continue to work with him in his new position at the California State University.

The meeting adjourned at 11:55 a.m.

Attest:

Secretary and Chief of Staff

Attachment 1 – Approval Authority for SMG Compensation Transactions

The Regents will be responsible for approving individual compensation transactions for the President, all direct reports to the Regents and/or President, and the five chief executive officers of the medical centers (collectively referred to as "Level One" SMG members).

For the remaining SMG members (collectively referred to as "Level Two" SMG members), the approval authority for all individual compensation transactions within policy will be as follows, subject to the additional limitations set forth below:

- If the proposed base salary is at or above the 75th percentile of the position's MRZ, Regental approval is required.
- If the proposed base salary is at or above the 60th percentile and below the 75th percentile of the position's MRZ, Presidential approval is required.
- If the proposed base salary is below the 60th percentile of the position's MRZ:
 - o Approval of the Chancellor is required for positions at a campus or medical center.
 - o Approval of the Laboratory Director is required for positions at the Laboratory.
 - o Approval of the President is required for positions at the Office of the President.

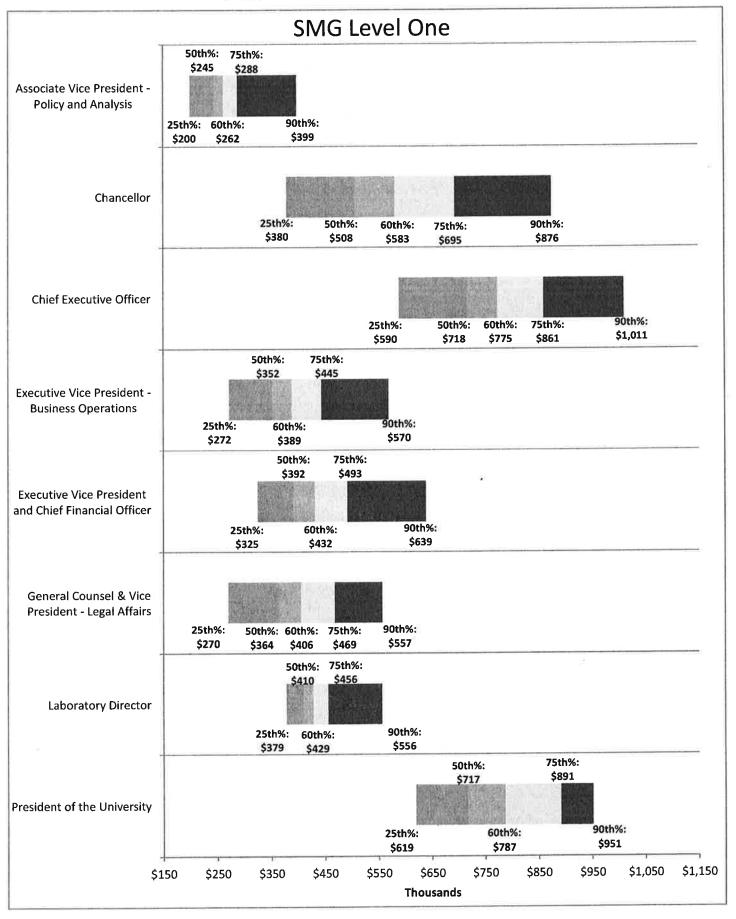
The following additional limitations apply to transactions involving Level Two SMG members:

- If the transaction would otherwise be subject to Presidential review, Regental review will be required if the transaction either:
 - o Results in a cumulative or annualized increase in base salary that is ten percent or more in any calendar year for an incumbent; or
 - o Results in a base salary for a new hire that is ten percent or more than the previous incumbent's base salary.
- If the transaction would otherwise be subject to the approval of the Chancellor or Laboratory Director, Presidential approval will be required if the transaction either:
 - o Results in a cumulative or annualized increase in base salary that is ten percent or more in any calendar year for an incumbent; or
 - o Results in a base salary for a new hire that is ten percent more than the previous incumbent's base salary.

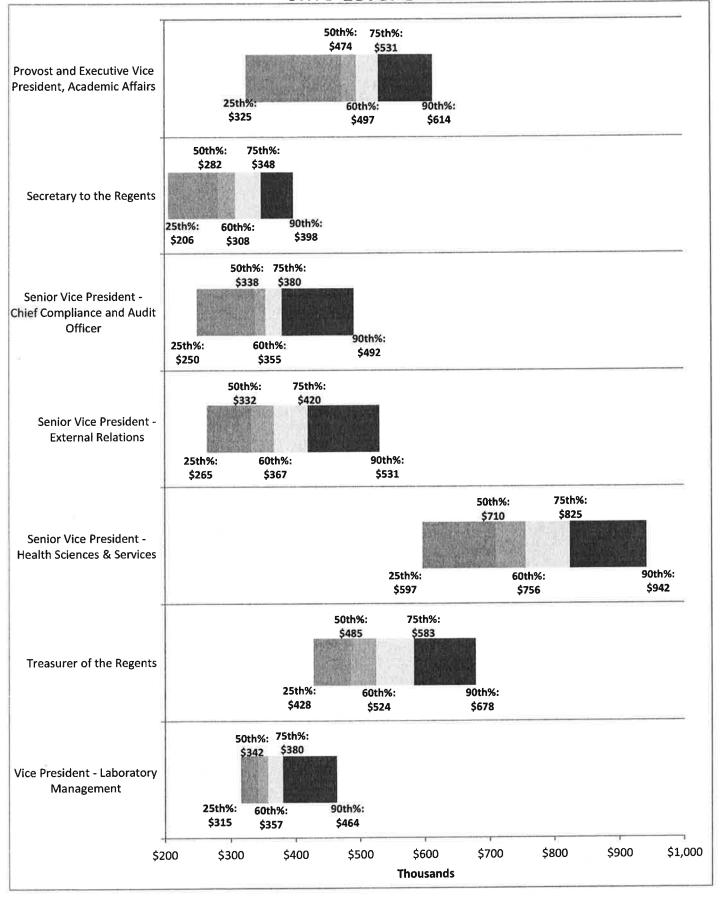
Regental approval will continue to be required for all transactions for SMG members that constitute exceptions to policy.

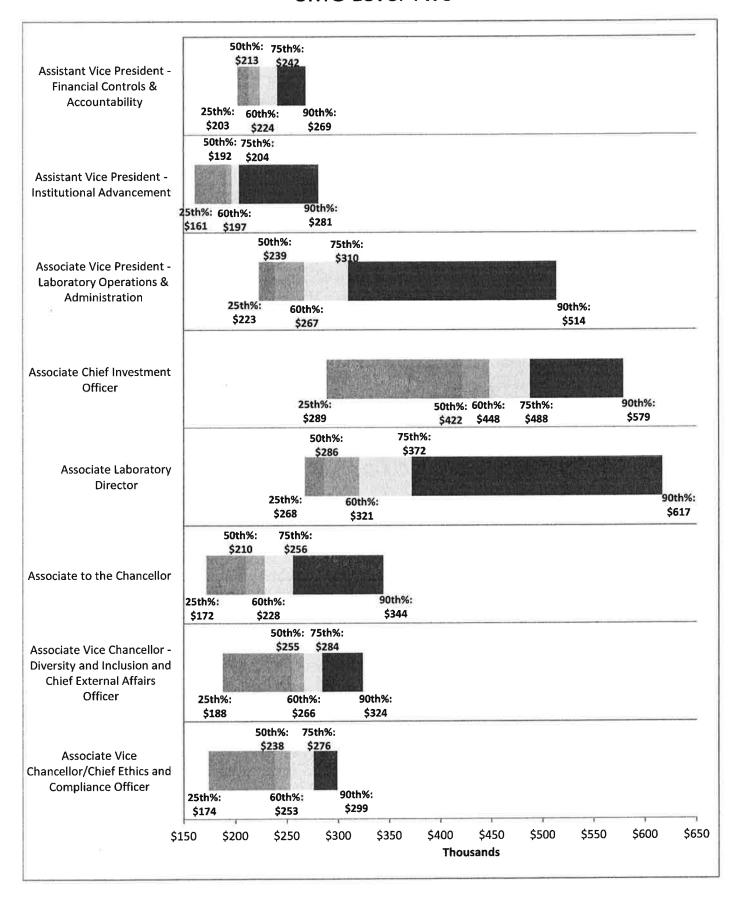
Notwithstanding the foregoing, the approval authority and process for approval stated in *Regents Policy 7712 – Incentive Awards* will continue to apply to incentive awards for Level One and Level Two SMG members, rather than the approval authority stated above.

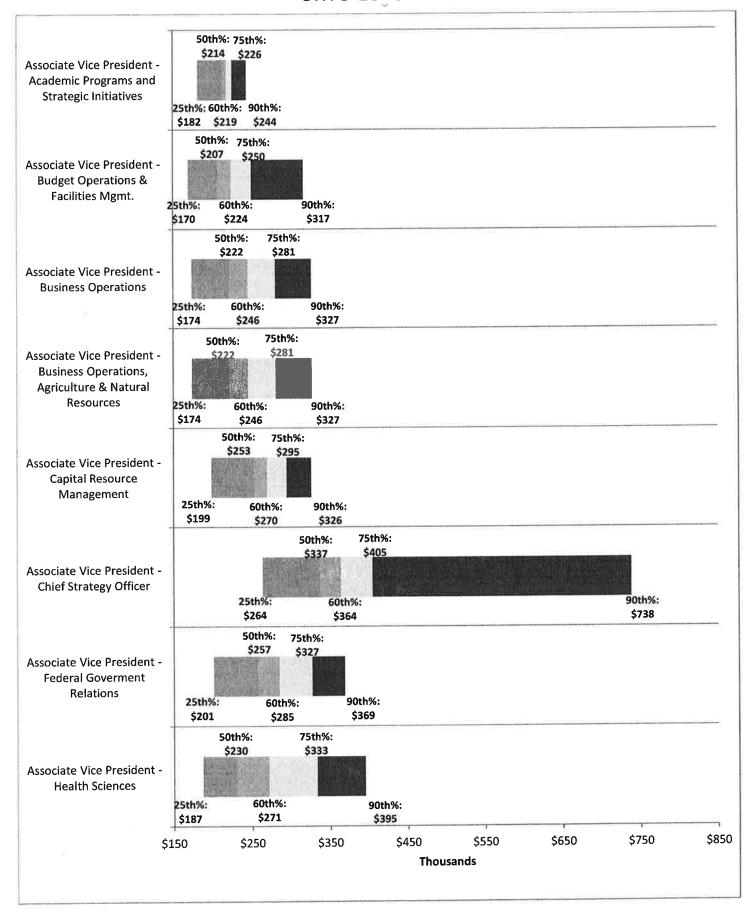
The Regents will approve the addition of positions to the SMG and elimination of Level One positions from the SMG, upon the recommendation of the President. The President will approve the elimination of Level Two positions from the SMG, after consulting with the Chair of the Committee on Compensation.

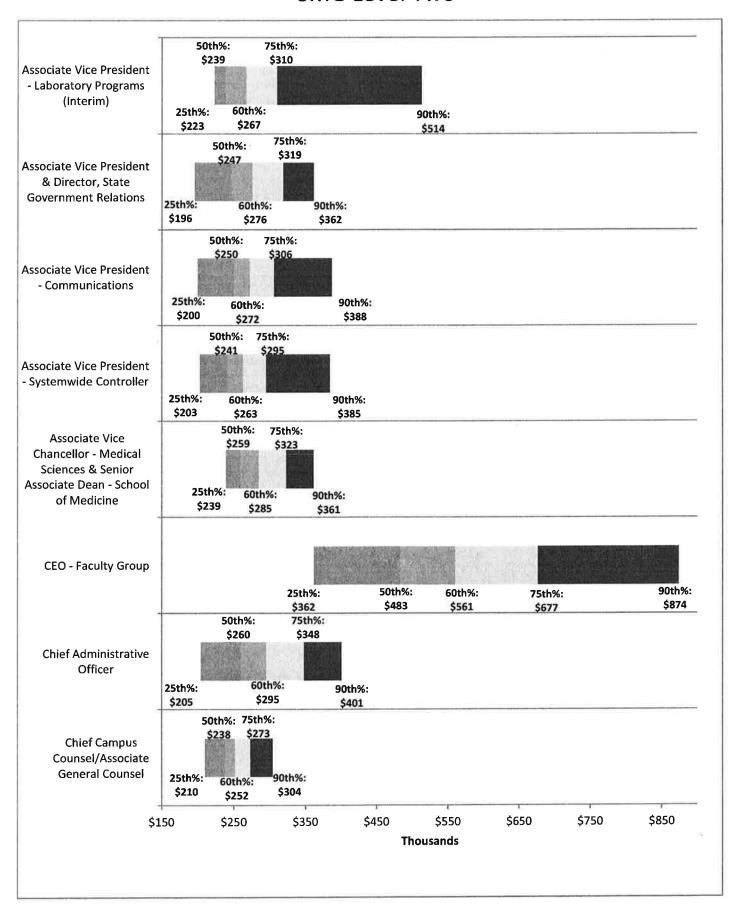


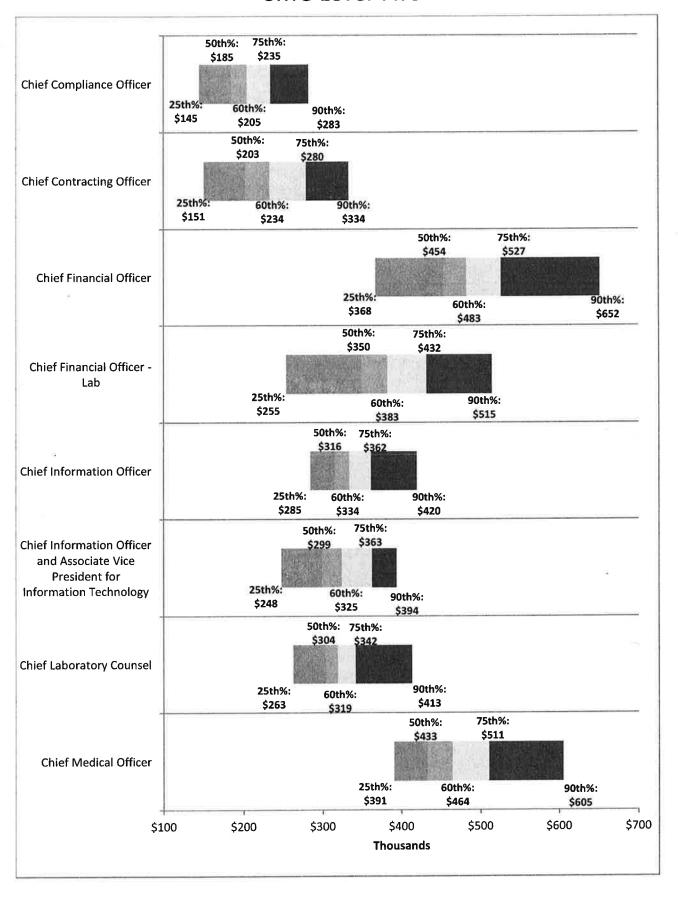
SMG Level One

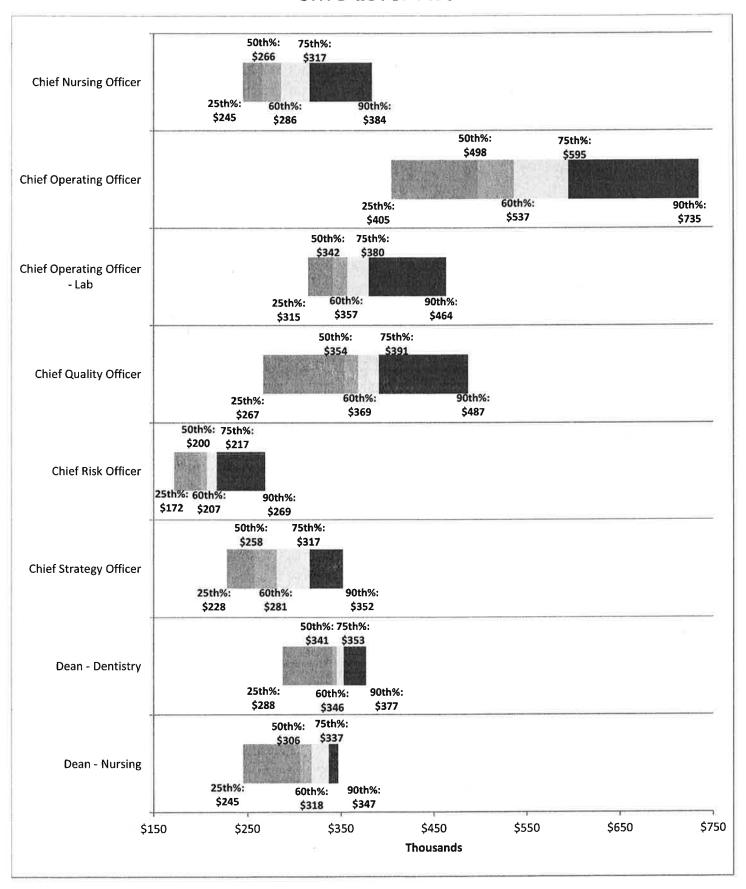


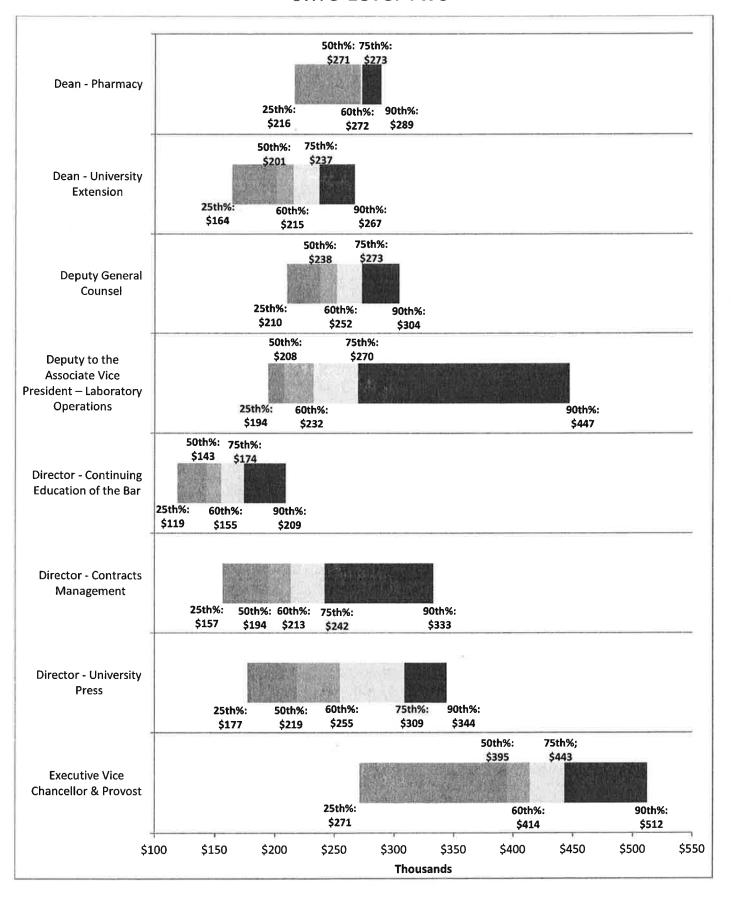


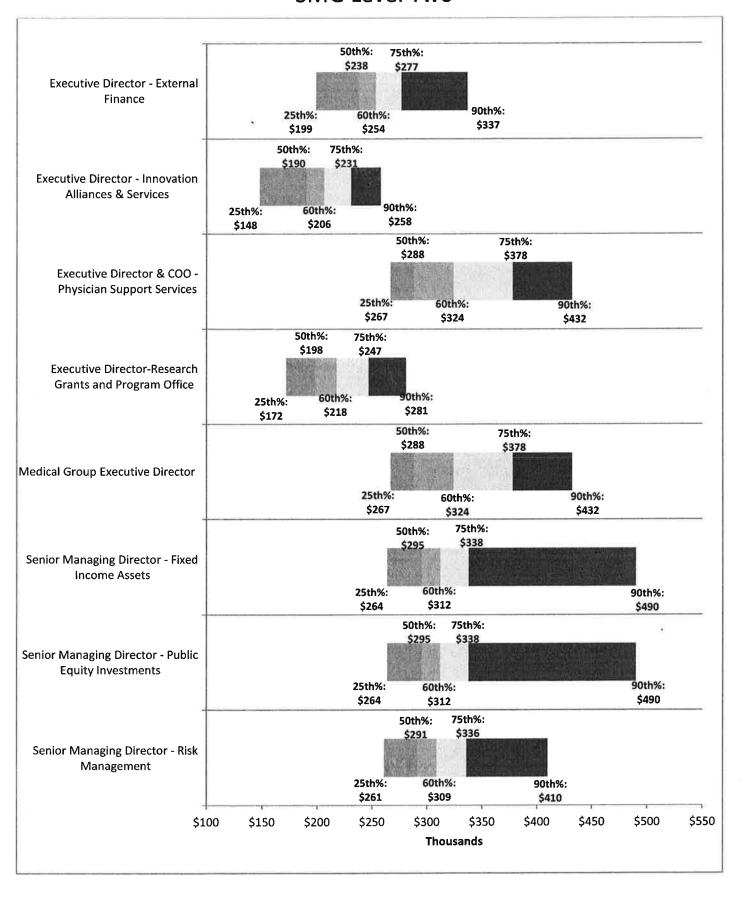


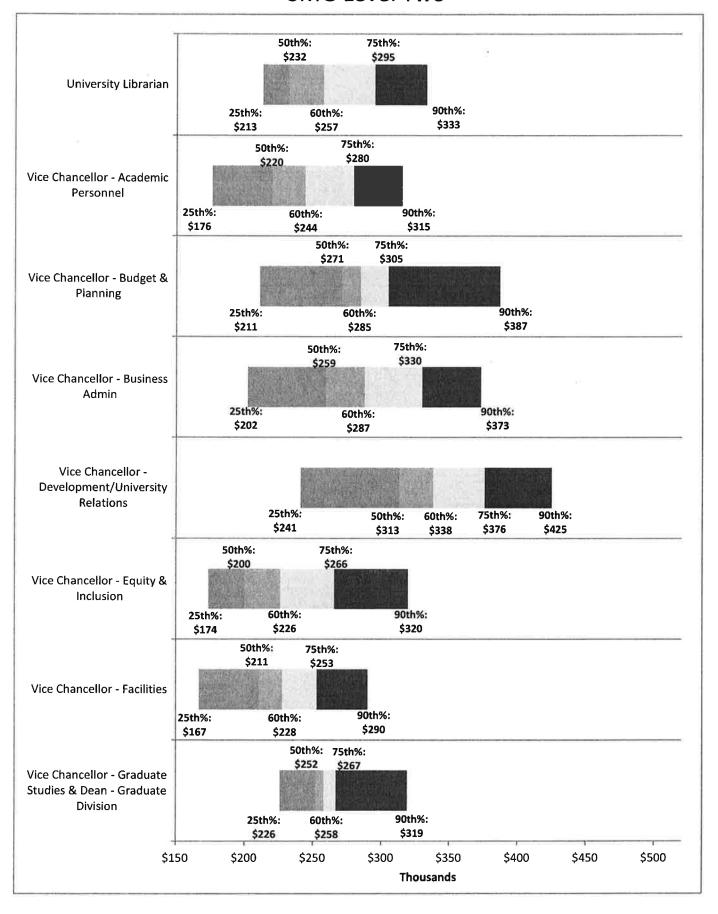


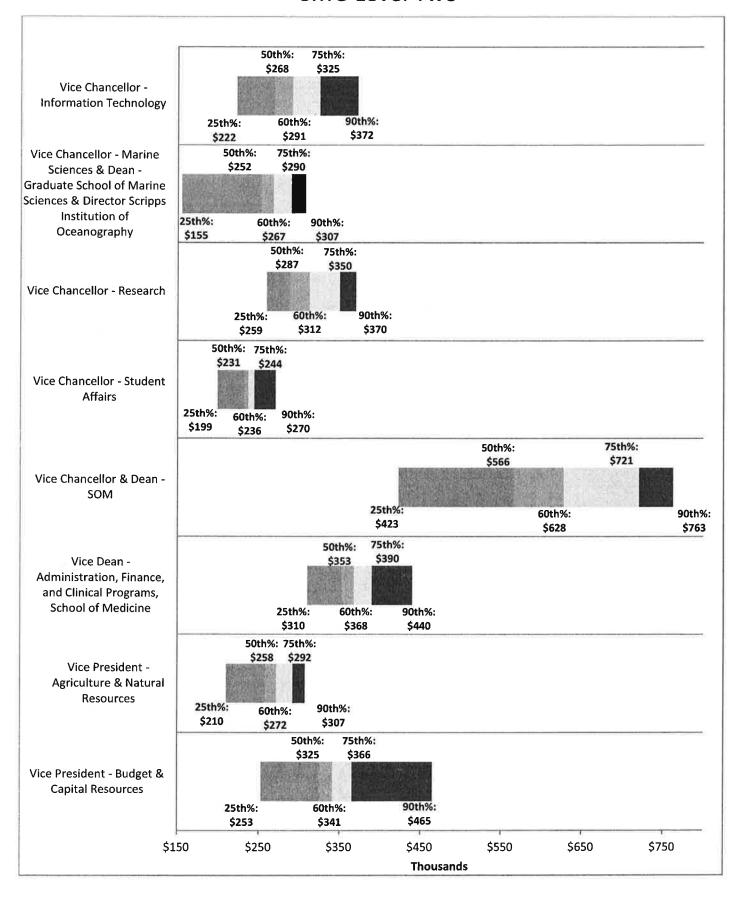


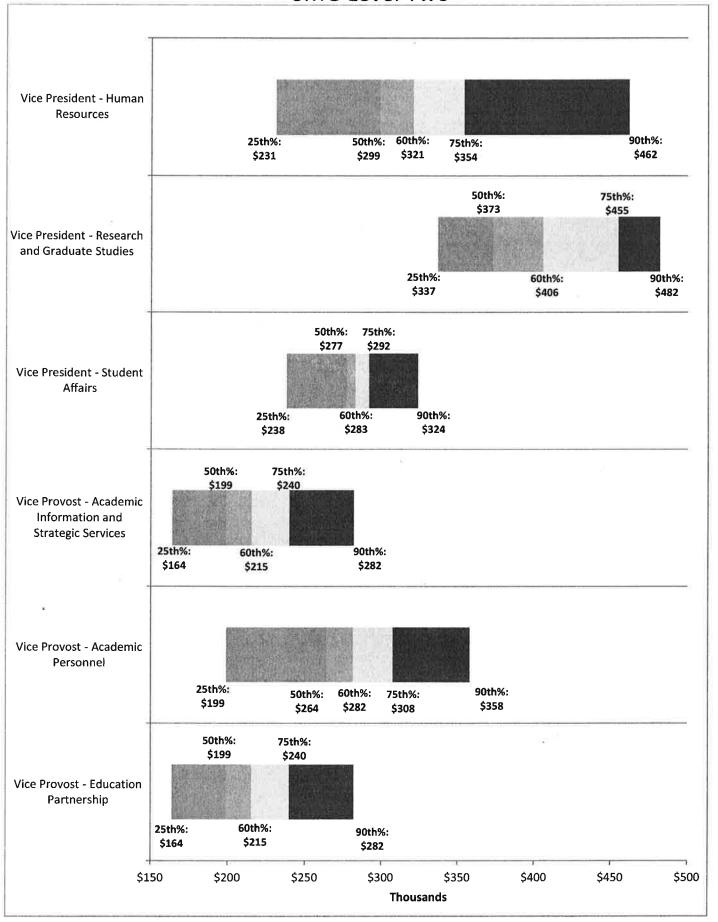












Policy on Student Health and Counseling Centers

The Regents are committed to delivering high quality health and counseling services to the students of the University of California in a coordinated, consistent and integrated fashion, including through the University of California Student Health Insurance Plan (UC SHIP), and adopt the following in furtherance of that goal:

- 1. Each Student Health and Counseling Center ("Center") shall have a governing body, ultimately reporting to and acting under the direction of the Chancellor, which body shall include no fewer than three members, at least one of whom shall be a licensed physician, at least one member who has a health care administrative background and, for counseling centers, at least one member who is a licensed psychologist. Exceptions for members other than the licensed physician may be approved by the Senior Vice President, Health Sciences and Services.
- 2. Each Center shall have a written set of bylaws or comparable documents which shall be reasonably consistent for all Centers.
- 3. The credentials of each health care practitioner employed at each Center shall be verified by the University before such practitioner begins working at the University and at an interval of no more than every three years thereafter. Verification shall be performed on the University's behalf by a single credentialing verification organization selected by the Senior Vice President, Health Sciences and Services in consultation with the Chair of the Committee on Health Services.
- 4. All Centers shall employ one electronic medical records health information system shared across all locations and managed in compliance with University policy. The application shall have a unified administration, common templates, nationally standardized coding systems as specified in the Health Insurance Portability and Accountability Act and implementing regulations (HIPAA), and standard billing practices for patient services, and shall be selected by the Senior Vice President, Health Sciences and Services in consultation with the Chair of the Committee on Health Services.
- 5. The Senior Vice President, Health Sciences and Services, in consultation with the Chair of the Committee on Health Services, shall direct an external organization to conduct an annual audit and/or risk review of the services provided at the Centers, the results of which shall be reported to the Committee on Health Services. The Senior Vice President, Health Sciences and Services shall also meet on a regular basis, but no less than biannually, with the Center Directors.

UNIVERSITY OF CALIFORNIA RETIREMENT PLAN

INVESTMENT POLICY STATEMENT



Approved March 29, 2012 November 15, 2012
Replaces version approved December 13, 2011 March 29, 2012

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PLEASE NOTE:

* These Appendices and Guidelines are in separate documents and are incorporated by reference. Appendices (4-8) to Investment Policy Statements of UCRP and GEP

Introduction and Purpose

This Investment Policy Statement ("Policy" or IPS") provides the framework for the management of the investments of the University of California Retirement Plan ("UCRP" or the "Plan"). The purpose of a policy statement is to document the investment management process by

- Identifying the key roles and responsibilities relating to the ongoing management of the Plan's assets:
 - o Recognize and ameliorate the agency issues among the parties responsible for various aspects of investment management;
- Setting forth an investment structure for the Plan's assets;
 - This structure includes various asset classes and acceptable ranges that, in aggregate, are expected to produce a sufficient investment return over the long term while prudently managing risk;
 - This strategy should provide guidance in all market environments, and should be based on a clear understanding of worst case outcomes;
- Establishing formalized criteria to measure, monitor, and evaluate Plan performance results on a regular basis; and
- Encouraging effective communication among all fiduciaries, including external parties engaged to execute investment strategies.

The document is divided into five sections. There are also a number of Appendices, which are integral parts of this document

1. Investment Goals, Key Responsibilities, and Philosophy

The investment **goals** state the mission of the Plan and its investment program.

- a. The mission of the Plan is to provide retirement benefits, as described in the Plan document, to its participants and their beneficiaries.
- b. The overall investment goal of the Plan is to maximize the probability of meeting the Plan's liabilities subject to The Regents' funding policy. Other goals include:
 - To maintain the ability to pay all benefits and obligations when due
 - To maintain flexibility in determining the future level of contributions
 - To maximize return within reasonable and prudent levels of risk
 - To preserve the real (i.e. inflation adjusted) purchasing power of assets

Key **responsibilities** in the oversight and management of the Plan are as follows:

- c. Under Section 11.02 of the Plan, as adopted by the Board of Regents of the University of California ("The Regents"), The Regents is the designated trustee of the assets of the Plan, which are held in the University of California Retirement Fund ("Retirement Fund"). As trustee, The Regents has full responsibility for investment of the Retirement Fund's assets.
- d. Under the authority granted in University Bylaw Sections 10.1.b and 12.5.a, The Regents has appointed a standing Committee on Investments ("Committee"), which is charged

with oversight responsibility for the management of investments on behalf of The Regents, which includes the establishment of investment policies for the Plan and oversight of the management of the Plan's assets.

- e. Under the Bylaw Section 12.5.c, the Committee is directed to establish a system of custodianship for all securities.
- f. Under University Bylaw Section 21.4, The Regents has delegated to the Chief Investment Officer general responsibility for all investment matters, including the implementation of investment policies established by the Committee for the Retirement Fund. References to the "Chief Investment Officer" below shall be understood, depending on the context, to mean the "Office of the Chief Investment Officer."
- g. Under Section 4.01 of the Plan, The Regents will authorize periodic contributions to the Retirement Fund as necessary, to "maintain the Plan on an actuarially sound basis." The Regents policy for funding the Plan is found in Appendix 3.

The **philosophy** for the management of the Retirement Fund assets is as follows.

- h. The investment philosophy of the Committee is to create a management process with sufficient flexibility to capture investment opportunities as they may occur, yet maintain reasonable parameters to ensure prudence and care in the execution of the investment program.
- i. The Committee seeks a return on investment consistent with levels of investment risk that are prudent and reasonable given medium- to long-term capital market conditions and the investment objectives of the Plan (see part 4 below). While the Committee recognizes the importance of the preservation of capital, it also recognizes that to achieve the Plan's investment objectives requires prudent risk-taking, and that risk is the prerequisite for generating excess investment returns. Therefore the Committee's policy regarding investment risk, consistent with modern portfolio theory, is that risk cannot be eliminated but should be managed, and that fiduciaries have the obligation to utilize risk efficiently. Risk exposures should be identified, measured, monitored and tied to responsible parties; and risk should be taken consistent with expectations for return. Further articulation of the Committee's risk policy, including appropriate budgets and ranges for various types of risk are found in Appendix 2.

The **principal risks** that impact the Plan, and the parties responsible for managing them are as follows:

- j. Capital market risk is the risk that the investment returns (in excess of the risk-free rate) associated with the Committee's asset allocation policy are not sufficient to provide the required actuarial return. Responsibility for determining the overall level of capital market risk lies with the Committee.
- k. *Investment style risk* is associated with an active management investment program. It is the performance differential between an asset class's market target and the aggregate of the managers' benchmarks within the asset class weighted according to a policy allocation specified by the Chief Investment Officer. This risk is an implementation risk and is the responsibility of the Chief Investment Officer.
- 1. *Manager value-added risk* is also associated with an active management investment program. It is the performance differential between the aggregate of the managers' actual (active) portfolios and the aggregate of the managers' benchmarks, both at policy

- allocation. This risk is an implementation risk and is the responsibility of the Chief Investment Officer (and indirectly the investment managers retained by the Chief Investment Officer).
- m. *Tactical/strategic risk* is the performance differential between (1) policy allocations for the Retirement Fund's asset categories and its investment managers and (2) the actual allocations. This risk is the responsibility of the Chief Investment Officer.
- n. *Total active risk* refers to the volatility of the difference between the return of the Retirement Fund policy benchmark (see Appendix 1) and the actual return. It incorporates the aggregate of the risks in (k), (l) and (m) above, and is thus the responsibility of the Chief Investment Officer.
- o. *Total investment risk* refers to the volatility of the return of the total Retirement Fund assets. It incorporates all elements of investment risk as enumerated above, and is thus the joint responsibility of the Committee and the Chief Investment Officer.
- p. Surplus risk refers to the volatility of the change in the dollar value of Retirement Fund assets versus the change in the dollar value of the Plan's liabilities. The latter represents the ultimate investment objective of the Plan. Because the asset allocation articulates the Committee's risk tolerance, and because The Regents determine the Plan's benefits and liabilities, this risk is the joint responsibility of The Regents and the Committee.
- q. *Peer risk* refers to the difference in Retirement Fund performance relative to peer institutions. The Committee acknowledges that similar institutions may have different liabilities and different levels of investment risk. Comparisons of performance with other institutions are meaningful *only* after adjusting for differences in investment policy and risk among peers. This risk is the responsibility of the Committee.

2. Investment Policies

The policies of the investment program establish the investment strategy and guide its implementation.

- a. The investment policies of the Retirement Fund shall be based on a financial plan that will consider:
 - i. The financial condition of the Plan, i.e., the relationship between the current and projected assets of the Plan and the projected benefit payments, and the current Funding Policy (see Appendix 3)
 - ii. Future growth of active and retired participants; expected service costs and benefit payments; and inflation and the rate of salary increases (together these are the principal factors determining liability growth)
 - iii. The expected long term capital market outlook, including expected volatility of and correlation among various asset classes
 - iv. The range of possible investment outcomes associated with different policies
 - v. The Committee's risk tolerance, that is, the trade-off between the desire to achieve high returns (and the associated high volatility) and the desire to avoid unacceptable outcomes (and the associated necessity for reduced volatility).

- b. The Committee will consider alternative investment policies and will measure their potential impact on the financial condition of the Plan and assess their suitability in meeting the objectives of the Plan.
- c. The Committee's financial plan will result in a risk budget, that is, an expected amount of volatility associated with a given expected level of investment returns offered by the capital markets including the expected active return.
- d. Based on the risk budget, the Committee, with input from the Chief Investment Officer and other consultants, will approve a specific allocation of the investments (the asset allocation policy) among the various asset classes considered prudent given the Plan's liability structure, and considering multiple measures of investment and surplus risk. The asset allocation policy shall be expressed in terms of a normal percentage allocation, and ranges for each asset class. These normal weights and ranges are found in Appendix 1. Criteria for including an asset class in the strategic allocation are also in Appendix 1.
- e. The asset allocation policy shall be sufficiently diversified to enable the appropriate fiduciary to manage risk without imprudently sacrificing return. The Chief Investment Officer is delegated the responsibility of managing total and active risk within the ranges set by the Committee (see Appendices 1 and 2). Within the limits of prudent diversification and established risk budgets, capital market and active risk exposures are fungible, and the Chief Investment Officer may allocate risk exposures within and between asset classes in order to optimize return. When necessary, the Chief Investment Officer may use appropriate risk management strategies to protect portfolio value.
- f. The Committee will approve performance benchmarks for each asset class, based on a pre-approved set of criteria, which are found in Appendix 1, and will approve overall investment guidelines for each asset class, which are found in Appendix 7.
- g. The Plan's equity and fixed income assets shall at all times avoid the use of economic leverage (subject to exceptions below). Economic leverage, in the context of portfolio management, is defined as a net dollar exposure to assets in excess of the dollar amount of invested capital, as measured by current market value. The term "net dollar exposure" is defined in the Derivatives Policy, Appendix 4. A very small, inadvertent, or temporary violation of this restriction that may occur in the normal course of portfolio management shall *not* be construed as leverage. Notwithstanding the general prohibition against leverage, leverage may be used in Private Equity, Real Estate, Real Assets, and Absolute Return strategies, per the limits and guidelines set forth in Appendix 7 and in the conduct of the Securities Lending Program (see section 21. below). All leverage shall be non-recourse to the Regents, as trustee of UCRP, with respect to UCRP investments.
- h. The Chief Investment Officer will implement the asset allocation policy as approved by the Committee. The Chief Investment Officer will select investment professionals ("managers") with demonstrated experience and expertise who will be responsible for managing specific portfolios consistent with the Guidelines in Appendices 6 and 7. Each investment manager will function under a formal contract that delineates its responsibilities, investment style and process, performance expectations, administrative requirements, and compensation. Where appropriate, each manager's contract will include a benchmark and range of probable outcomes relative to that benchmark. The Chief Investment Officer shall establish and implement procedures for the selection, monitoring, evaluation, and termination of investment managers, which are found in Appendix 6.

- i. The Chief Investment Officer will allocate funds across managers to develop an efficient investment structure, within the constraints of the prudence requirement, for each asset class, and will monitor whether the aggregate characteristics of all portfolios in an asset class comply with the investment guidelines for that class. The Chief Investment Officer will determine a policy allocation for each manager to be used in the evaluation of the active management program.
- j. The Chief Investment Officer shall establish and implement procedures to provide efficient management of liquidity (including timely payment of benefits) for the Plan.
- k. The Chief Investment Officer shall be responsible for administering the investments of the Retirement Fund at the lowest possible cost, being careful to avoid sacrificing quality. These costs include, but are not limited to, management and custodial fees, consulting fees, transaction costs and other administrative costs chargeable to the Retirement Fund. The Chief Investment Officer may establish directed brokerage arrangements with the custodian for the Retirement Fund or other qualified third parties in order to reduce overall commissions cost for the Retirement Fund.
- 1. The Chief Investment Officer may participate in securities lending programs, as a means to augment income, with the custodian or other qualified third parties. Cash collateral received from borrowers will be invested by the Chief Investment Officer or the lending agent, in a short-term investment pool, in accordance with guidelines established by the Chief Investment Officer. Current guidelines are included in Appendix 7.
- m. The Committee considers the active voting of proxies an integral part of the investment process. Proxy voting will occur in accordance with the Proxy Voting Policy found in Appendix 5.
- n. The investment program shall comply with existing and future applicable state and federal laws and regulations and the prudence requirement.
- o. All transactions undertaken on behalf of the Retirement Fund will be undertaken solely in the interests of Plan participants and their beneficiaries.

3. Fiduciary Oversight Procedures

The procedures for the management of the Retirement Fund's assets outline the specific responsibilities of the Committee and other fiduciaries.

- a. The Committee, in developing the investment policy for the Retirement Fund assets, shall act with the care, skill, prudence, and diligence under the circumstances then prevailing that a prudent person acting in a like capacity and familiar with such matters would use in the conduct of an enterprise of a like character and with like aims.
- b. The Committee will exercise its fiduciary responsibilities in regard to the investment program in accordance with the provisions of the Plan document and University Bylaws.
- c. The Committee shall review the asset allocation policy, asset class guidelines, and current capital market assumptions at least annually to ensure that the current asset mix can reasonably be expected to achieve the long-term goals of the Plan.
- d. The Committee will review the Plan's updated actuarial valuation and financial projection annually, including the recommended Funding Policy for each year.

- e. The Committee may appoint investment consultants to review investment performance of the Retirement Fund in whole or with respect to specific asset classes, to assist in the development of the Retirement Fund's investment policies and asset allocation, to monitor and report on investment risks, and to provide independent assessment of investments proposed by the Chief Investment Officer.
- f. The Committee has appointed a standing Investment Advisory Committee ("IAC") of selected Regents, investment professionals, faculty, and UC Foundation members to provide input to the Committee on decisions and assist in oversight of the Chief Investment Officer. The Chair of the Committee shall also be the Chair of the IAC.
- g. The Committee shall review the investments of the Retirement Fund no less than quarterly to assess whether policy guidelines continue to be appropriate and are met. The Committee shall monitor investment risk, as well as monitor investment returns on an absolute and benchmark relative basis.
- h. The Chief Investment Officer shall prepare quarterly and annual reports for the Committee and The Regents on the investment program, including
 - i. The achievement of overall performance objectives
 - ii. The type and amount of risk taken to achieve those objectives
 - iii. Attribution of returns to various investment decisions and risks
 - iv. Adherence to budgets set for total and active risk
 - v. Compliance with policy guidelines, particularly asset allocation policy, and
 - vi. The costs of managing the Retirement Fund's assets.
- i. Investment performance results shall be calculated and verified at least monthly by an external, independent performance consultant.
- j. The Chief Investment Officer, in conjunction with the various investment consultants, will monitor the investment managers for compliance with their investment guidelines, achievement of specific objectives, and individual risk exposures.
- k. The Chief Investment Officer shall monitor the conduct of the custodian of the Retirement Fund.
- The Chief Investment Officer shall adopt the CFA Institute Code of Ethics and Standards of Professional Conduct for all employees of the Chief Investment Officer and relevant consultants and managers. These are found at http://www.cfainstitute.org/cfacentre/pdf/English2006CodeandStandards.pdf and incorporated by reference. The Chief Investment Officer shall develop and enforce other ethics guidelines for the Office of the Chief Investment Officer as needed, consistent with other University policies and guidelines.
- m. The Committee will review this Policy from time to time to determine if modifications are necessary or desirable.

4. Performance Objectives

Performance objectives shall be established for the total Retirement Fund, asset class composites and individual manager portfolios. These objectives will be incorporated in the quarterly reviews of the Retirement Fund's performance.

The investment strategy articulated in the asset allocation policy found in Appendix 1 has been developed in the context of long-term capital market expectations, as well as multi-year projections of actuarial liabilities. Accordingly, the investment objectives and strategies emphasize a long-term outlook, and interim performance fluctuations will be viewed with the corresponding perspective. The Committee acknowledges that over short time periods (i.e. one quarter, one year, and even three to five year time periods), returns will vary from performance objectives and the investment policy thus serves as a buffer against ill-considered action.

There are three principal factors that affect a pension fund's financial status: 1) contributions, 2) benefit payments and 3) investment performance. Only the last factor is dependent upon the investment policy and guidelines contained herein. However, the Committee's level of risk tolerance will take into account all three factors. At certain levels of funded status, it could be impossible for the investments to achieve the necessary performance to meet the promised liabilities. The result is that either benefits have to be reduced, contributions increased or risk tolerance changed.

Rates of return will be calculated based on a time-weighted rate of return formula as recommended by the CFA Institute. Returns will be calculated by the performance consultant and will be reported net of all fees and costs.

The performance of the overall Retirement Fund will be measured relative to:

- Actuarial rate of interest
- Funded status
- Inflation
- Policy benchmarks
- a. The Retirement Fund total return objective should be at least equal to the Plan's actuarial rate of return on a consistent basis over time.
 - This objective is to achieve a rate of return equal to or greater than the Plan's actuarial interest rate. If the Plan's assets grow at a rate equal to or greater than the actuarial rate, the Plan's funding condition will be maintained. Earning a lower return will generally result in increased levels of contributions. (Maintaining the Plan's funded status is conditioned, in part, on the successful implementation of a prudent funding policy.)
- b. Funded status should be in excess of 100%.
 - This objective is to maintain a status of full funding, meaning that the Plan's assets are at least as great as the Plan's liabilities, both as measured by actuarially acceptable methodologies. Full funding provides a higher level of assurance that all promised benefits can be paid from existing assets and expected investment returns. (The ability to maintain full funding is conditioned, in part, on the successful implementation of a prudent funding policy.)
- c. Total Retirement Fund return should exceed the Consumer Price Index on a consistent basis over time.
 - This objective is to achieve a positive return above inflation. The Plan's liabilities are sensitive to inflation, as benefits are partially determined by future salaries. Failing to

achieve the targeted real (i.e., purchasing power) return may also increase future contributions.

- d. Total Retirement Fund return should match or exceed the total Retirement Fund weighted benchmark return, net of all fees and expenses on a consistent basis over time. See Appendix 1 for the composition and calculation of the Retirement Fund policy weighted benchmark.
 - This objective is to match or exceed a passively managed fund with a similar asset mix, net of all fees and expenses. The value added above the policy benchmark measures the effectiveness of the Chief Investment Officer's implementation and management decisions.

Additional metrics with respect to risk are found in the Risk Policy Appendix 2.

5. Asset Class and Manager Guidelines

The general guidelines that apply to all investment managers are:

- a. Subject to constraints and restrictions imposed by the manager guidelines, all decisions regarding sector and security selection, portfolio construction, and timing of purchases and sales are delegated to the investment manager.
- b. The purchase of securities issued by tobacco companies is prohibited in separately managed accounts. The Regents have defined a tobacco company as "a company which derives its revenues from the manufacture and distribution of tobacco products or, if a diversified company, that no other business line contributes more revenues or earnings than tobacco products." The Chief Investment Officer will determine what constitutes a tobacco company based on standard industry classification of the major index providers (e.g., Russell, MSCI) and communicate this list to investment managers annually and whenever changes occur. The Committee recognizes that the establishment of social investing restrictions limits investment opportunities and should be accompanied by adjusting performance evaluation standards appropriately.
- c. The direct purchase of property owned or a security issued by the University, its subsidiaries and affiliates, is prohibited
- d. The purchase of non-negotiable securities is prohibited in the equity and fixed income asset classes.
- e. The use of derivative securities or contracts to create economic leverage in the portfolio is prohibited. Acceptable and prohibited uses of derivatives are found in the derivatives policy in Appendix 4.
- f. Transactions that involve a broker acting as a "principal," where such broker or an affiliate is also the investment manager, who is making the transaction, are prohibited.
- g. Transactions shall be executed at the lowest possible total cost, which includes commissions, efficiency of execution, and market impact.
- h. Any investment or action with respect to an investment not expressly allowed is prohibited, unless presented to and approved prospectively by the Committee. All guidelines must be adhered to; however, if from time to time a manager shall deem an

exception to the guidelines appropriate, the Chief Investment Officer shall seek review and approval by the Committee to make such an exception.

Managers are required to inform the Chief Investment Officer of significant matters pertaining to the investment of Retirement Fund assets, including at a minimum, substantive changes in investment strategy and portfolio structure; significant changes in ownership, organizational structure, financial condition or professional staffing; litigation or violation of securities regulations; significant account losses or growth of new business. Managers must inform the Chief Investment Officer in the event of discovering an unintended or involuntary violation of their guidelines or of any of the Policies herein pertaining to them.

Managers are required to submit periodic reports to the Chief Investment Officer summarizing investment activity and strategy, as per Appendices 6 and 7 and individual guidelines. Managers are required to reconcile investment returns with the custodian each month.

Specific guidelines for each major asset class will be found in Appendix 7. Manager guidelines will contain specific provisions to ensure that performance objectives and risk exposures are consistent with their particular investment mandate, which may be a style or subset of their larger asset class. However, all individual manager guidelines will be consistent with broad asset class guidelines and this Policy.

APPENDIX 1

Effective: July 19, 2012

Replaces Version Effective: January 1, 2012

ASSET ALLOCATION, PERFORMANCE BENCHMARKS, AND REBALANCING POLICY

Based on the risk budget for the Retirement Fund, the Committee has adopted the following asset allocation policy, including asset class weights and ranges, benchmarks for each asset class, and the benchmark for the total Retirement Fund.

Criteria for including an asset class in the strategic policy include:

- Widely recognized and accepted among institutional investors
- Has low correlation with other accepted asset classes
- Has a meaningful performance history
- Involves a unique set of investors.

The Current Policy Allocation recognizes the current underinvestment in illiquid asset classes (real estate, real assets) and the corresponding need to set rebalancing ranges around this effective policy allocation until such time as long-term policy weights in these classes are achieved. The allowable ranges for each asset class and in total have been chosen to be consistent with budgets and ranges for total and active risk (see Appendix 2).

A. Strategic Asset Allocation and Ranges

	Current	Long-Term	Allowable F	Ranges
	Policy <u>Allocation</u>	Target <u>Allocation</u>	<u>Minimum</u>	<u>Maximum</u>
U.S. Equity	25.75%	20.5%	20.75	30.75
Developed Non US Equity	19.25	19.0	14.25	24.25
Emerging Mkt Equity	6.75	7.0	4.75	8.75
Global Equity	2.0	2.0	1.0	3.0
US Fixed Income	12.0	12.0	9.0	15.0
High Yield Fixed Income	2.5	2.5	1.5	3.5
Emerging Mkt Fixed Income	2.5	2.5	1.5	3.5
TIPS	8.0	8.0	6.0	10.0
Private Equity	7.75	8.0	4.75	10.75
Absolute Return –	6.0	6.5	1.0	11.0
Diversified				
Absolute Return –	2.0	2.0	0.0	4.0
Cross Asset Class				
Real Assets	1.0	3.0	0.0	2.0
Real Estate	4.5	7.0	1.5	7.5
Liquidity	0.0	0.0	0.0	10.0
TOTAL	100%	100%		

Combined Public Equity	53.75	48.5	43.75	63.75
Combined Fixed Income	25.0	25.0	20.0	30.0
Combined Alternatives	21.25	26.5	14.25	28.25

B. Asset Class Performance Benchmarks

The Committee has adopted the following performance benchmarks for each asset class. Criteria for selection of a benchmark include:

- Unambiguous: the names and weights of securities comprising the benchmark are clearly delineated
- Investable: the option is to forego active management and simply replicate the benchmark
- Measurable: it is possible to readily calculate the benchmark's return on a reasonably frequent basis
- Appropriate: the benchmark is consistent with the Committee's investment preferences or biases
- Specified in Advance: the benchmark is constructed prior to the start of an evaluation period
- Reflects Current Investment Opinion: investment professionals in the asset class should have views on the assets in the benchmark and incorporate those views in their portfolio construction

Asset Class	Benchmark
U.S. Equity	Russell 3000 Tobacco Free Index
Developed Non US Equity	MSCI World ex-US (Net Dividends) Tobacco Free
Emerging Mkt Equity	MSCI Emerging Market Free (Net Dividends)
Global Equity	MSCI All Country World Index Net – IMI – Tobacco Free
Fixed Income	Barclays Capital US Aggregate Index
High Yield Fixed Income	Merrill Lynch High Yield Cash Pay Index
Emg Mkt Fixed Income	Dollar Denominated: JP Morgan Emerging Markets Bond Index Global Diversified
Emg Mkt Fixed Income	Local Currency: JP Morgan Government Bond Index Emerging
	Markets Global Diversified
TIPS	Barclays Capital US TIPS Index
Private Equity	N/A (See below note 2.)
Absolute Return Strategy	Diversified: HFRX Absolute Return Index (50%) +
	HFRX Market Directional Index (50%)
Absolute Return Strategy	Cross Asset Class: Aggregate UCRP Policy Benchmark
Real Assets	Commodities: S&PGSCI Reduced Energy Index
	All other: N/A (See below note 3.)
Real Estate	Public: FTSE EPRA NAREIT Global Index
Real Estate	Private: NCREIF Funds Index – Open End Diversified Core
	Equity (ODCE), lagged 3 months

Notes on asset class benchmarks:

- 1. Global Equity: The Chief Investment Officer will determine what constitutes a tobacco company based on standard industry classification of the major index providers (e.g., Russell, MSCI) and communicate this list to investment managers annually and whenever changes occur.
- 2. Private Equity: *Long-term* portfolio returns will be compared to investable public equity alternatives as well as non-investable peer group indices. There is no appropriate market benchmark to use for *short-term* performance evaluation or decision making.
- 3. Real Assets (all strategies ex-commodities): similar to Private Equity

C. Total Retirement Fund Performance Benchmark

This is the composition of the total Fund performance benchmark referred to in the Investment Policy Statement, Part 4(d). The percentages below add to 100%.

Percentage	Benchmark
28.5%	× Russell 3000 Tobacco Free Index
22%	× MSCI World ex-US (Net Dividends) Tobacco Free
5%	× MSCI Emerging Market Free (Net Dividends)
2%	× MSCI All Country World Index Net – IMI – Tobacco Free
12%	× Barclays Capital US Aggregate Index
2.5%	× Merrill Lynch High Yield Cash Pay Index
2.5%	× [JP Morgan Emerging Market Bond Index Global Diversified × 33%] + [JP
	Morgan Government Bond Index Emerging Markets Global Diversified × 67%]
8%	× Barclays Capital US TIPS Index
6%	× Actual return of private equity portfolio
6%	× [HFRX Absolute Return Index × 50%] + [HFRX Market Directional Index
	\times 50%] [Abs. Ret Diversified]
0.5%	× Aggregate UCRP Policy Benchmark [Abs. Ret Cross Asset Class]
1%	× Aggregate Real Assets benchmark (see section B), with components weighted
	by their actual weights within the total real assets portfolio
4%	× Aggregate of Public and Private Real Estate benchmarks (see section B), with
	components weighted by their actual weights within the total real estate
	portfolio

Notes on total fund benchmark:

- 1. The benchmark for private equity is replaced by the private equity portfolio's actual performance. This has the effect of neutralizing the active performance of this class for purposes of total fund performance evaluation. Similar comments apply to private real estate non-core strategies (closed end funds) and Real Assets (all strategies ex commodities).
- 2. The calculation of the total fund benchmark will assume a monthly rebalancing methodology.
- 3. In the event of a significant change in asset allocation, The Regents' generalist consultant may specify an alternative weighting scheme to be used during a transition period.

D. Rebalancing Policy

There will be periodic deviations in actual asset weights from the long-term/current policy asset weights specified above. Causes for periodic deviations are market movements, cash flows, and varying portfolio performance. Significant movements from the asset class policy weights will alter the intended expected return and risk of the Fund. Accordingly, the Investment Committee authorizes the Chief Investment Officer to rebalance the Fund when necessary to ensure adherence to the Investment Policy.

The Chief Investment Officer will monitor the actual asset allocation at least monthly. The Committee directs the Chief Investment Officer to take all actions necessary, within the requirement to act prudently, to rebalance assets to within the policy ranges in a timely and cost effective manner when actual weights are outside the prescribed ranges. The Chief Investment Officer may utilize derivative contracts (in accordance with Appendix 4) to rebalance the portfolio.

The Chief Investment Officer shall assess and manage the trade-off between the cost of rebalancing and the active risk associated with the deviation from policy asset weights. With approval from the Chair of the Committee, the Chief Investment Officer may delay a rebalancing program when the Chief Investment Officer believes the delay is in the best interest of the Plan. Results of rebalancing will be reported to the Committee at quarterly meetings.

APPENDIX 2

RISK MANAGEMENT POLICY

RISK PHILOSOPHY

In its broadest sense, risk refers to the unpredictability of future asset value, and specifically, the chance that assets may decrease, as well as increase, in value. Investment principles and practical experience both support the notion that expected returns are proportional to market risk taken. The Committee recognizes that the assumption of risk is necessary to meet Plan objectives; that is, there are no "risk free" assets, which are sufficient to generate the Plan's required rate of return. (Even if future benefit payments were known with certainty [and they are not], and surplus risk could be eliminated by an appropriate mix of nominal and inflation protected bonds, such a policy would result in unacceptably larger funding costs to the University and to Plan participants). Thus Plan risk management does not require the elimination of risk, but the balancing of risk and expected return. Risk in itself is intrinsically neither good nor bad; it is a resource used to generate investment returns. The Committee recognizes that "The essence of investment management is the management of risks, not the management of returns."

RISK POLICY

The Committee's policy regarding investment risk, consistent with modern portfolio theory, is that risk cannot be eliminated but should be managed. That is, plan fiduciaries are responsible for understanding the risks in various investment strategies, ensuring that they are properly compensated for these risks, and measuring and monitoring them continually. In particular, the level of risk taken should be consistent with the return objectives of the Plan.

Fiduciaries set the framework for risk management through the investment policy and guidelines, the strategic asset allocation, and the benchmarks used for performance objectives. However, tolerance for risk (alternatively, aversion to risk) may also be expressed in the form of various metrics for risk (volatility) and acceptable budgets and ranges for those metrics. Where appropriate, the Committee shall define these metrics and budgets for risk and establish acceptable ranges for them (see below).

The Chief Investment Officer is responsible for managing both total and active risk and shall implement procedures and safeguards so that the combined risk exposures of all portfolios in the aggregate are kept within limits established by the Committee (see definitions in section 1 of the Policy above). Further, within limits of prudent diversification and risk budgets, total and active risk exposures are fungible, that is the Chief Investment Officer may allocate risk exposures within and between asset classes in order to optimize return.

Although the management of investment portfolios may be outsourced, investment oversight and risk management are primary fiduciary duties of the Committee that are delegated to and performed by the Chief Investment Officer. The Chief Investment Officer shall report on risk exposures and the values of the several risk measures to the Committee, either quarterly or annually as required below.

RISK METRICS AND BUDGETS

There are different types of risk important at each level of plan investment management and thus different risk metrics are appropriate at each level.

- Plan level
 - o Surplus Risk (insufficient assets to meet liabilities)
 - o Measures the risk of inappropriate investment policy and strategy
- Asset class level
 - o Total Investment Risk (volatility of total return)
 - o Measures the risk of ineffective implementation of strategy
- Portfolio level
 - o Active Risk or "Tracking Error" (volatility of deviation from style or benchmark)
 - o Measures the risk of unintended exposures or inadequate diversification

• Surplus risk

There are several risk measures which focus on surplus risk. The Chief Investment Officer shall report on these measures to the Committee periodically. However, no objective levels (budgets) will be set for these metrics due to the separation of responsibility for investment management and funding policy. Thus results will be presented for information and use in policy reviews.

- Metric: Funded Ratio, defined as the ratio of plan assets to liabilities. Plan assets shall be measured at current market value as well as using actuarially smoothing. Liabilities shall be measured as the actuarial accrued liability (AAL). Liabilities, and hence this metric, are formally re-estimated only annually, but should be reviewed quarterly (change in liabilities estimated using liability duration and change in bond yields, as well as accruals for service cost and benefits paid).
- Longer term measures of forecast surplus risk shall be presented annually, in conjunction with asset liability and asset allocation reviews
 - The funded ratio projected over a ten year forecast period, using an actuarial model of assets and liabilities
 - The expected shortfall, defined as the expected loss experienced in worst case market scenarios

• Retirement Fund Total Investment Risk

The basis for the risk budget at the total asset level is the Policy benchmark, or neutral position. Thus the risk budget starts with the risk of the benchmark index. Assuming an expected benefit from active management, the impact of deviations from the benchmark is added to the benchmark risk to derive the total risk budget. The Chief Investment Officer shall report on this metric to the Committee quarterly.

- Metric: Retirement Fund Total Investment Risk is defined as the annualized standard deviation of the monthly plan returns, exponentially weighted over the previous 12 months. Benchmark Risk (i.e., the Capital Market risk of the strategic asset allocation) is measured similarly (using returns on the policy benchmark).
- o **Budget**: Retirement Fund Total Investment Risk shall be maintained at a level equal to the square root of the sum of the squares of Benchmark Risk and the Active Risk budget (see below).

o **Range**: If Retirement Fund Total Investment Risk is greater (less) than 20% above (below) the budgeted level at any quarterly measurement date, the Chief Investment Officer will take appropriate steps to reduce (increase) total Retirement Fund risk to its budget level, including but not limited to rebalancing asset class weights within allowable ranges. (For example, if the risk budget is 12%, the allowable range is +/-2.4% [20% x 12%].)

• Retirement Fund Active Risk

There is no neutral or natural budget for active risk. The budget for active risk is determined to be consistent with the tolerance for active risk and the expectation to earn active return due to market inefficiencies and/or investment skill. This budget for active risk includes all of the following types of variation from policy:

- 1. Temporary asset weights different from strategic policy, but within the allowed ranges [Tactical/strategic risk]
- 2. Aggregate manager benchmarks different than asset class benchmark [Investment style risk]
- 3. Aggregate active manager risks [Manager value-added risk], including
 - o Aggregate portfolio systematic exposures different from the benchmark
 - o Aggregate portfolio security selection decisions
 - o Aggregate portfolio currency exposures different from the benchmark

The Chief Investment Officer shall report on this metric to the Committee quarterly.

- o **Metric**: Tracking Error is defined as annualized standard deviation of the difference between monthly Retirement Fund returns and monthly policy benchmark returns, exponentially weighted over the previous 12 months
- o **Budge**t: Tracking Error budget shall be 3.0% annual standard deviation. It is understood that this budget may change when there is a change in
 - asset allocation, or
 - risk tolerance
- o **Range**: If Tracking Error is greater (less) than 1.0% (one percentage point) above the budget level at any quarterly measurement date, the Chief Investment Officer will take appropriate steps to reduce tracking error to its budget level, including but not limited to rebalancing asset class and/or manager weights within allowable ranges.

Both Total Investment Risk and Active Risk for the Retirement Fund shall be computed without the impact of Private Equity. For this calculation, it will be assumed that total fund performance excludes Private Equity performance and the total fund benchmark has no Private Equity component. Private Equity is the asset class defined in Appendix 7K.

APPENDIX 3

FUNDING POLICY

The Regents' funding policy for the Plan has been to establish annual contributions as a percentage of payroll by using the Entry Age Normal actuarial funding method. In fiscal year 1990-91, The Regents adopted a full funding policy. Under this policy, The Regents suspend contributions to the Plan when plan assets, defined as the smaller of

- Market value, or
- Actuarial value

exceed Plan liabilities, defined as the lesser of

- Actuarial accrued liability plus normal cost, or
- 150% of current liability plus normal cost.

This policy is consistent with Internal Revenue Code section 412. Also as part of this policy, The Regents redirected employee contributions to the Plan to a mandatory Defined Contribution Plan, according to the same formula as then existed.

There are three principal factors that affect a pension fund's financial status: 1) contributions, 2) benefit payments and 3) investment performance. Only the latter is dependent upon the investment policy and guidelines contained herein. However, the Committee's level of risk tolerance will take into account all three factors. At certain levels of funded status, it could be impossible for the investments to achieve the necessary performance to meet the promised liabilities. The result is that either benefits have to be reduced, contributions increased or risk tolerance changed.

Definitions:

- 1. Actuarial value of assets: the value of investments belonging to a retirement plan, as used by the actuary for the purpose of making contributions to the plan. Typically, the actuary calculates a smoothed value to reduce the impact on contributions of market volatility.
- 2. Market value of assets: the value of investments belonging to a retirement plan, valued at current market prices in accordance with generally accepted accounting principles
- 3. Actuarial accrued liability: the accumulated value of normal costs allocated to the years before the valuation date (for both current employees, terminated employees with vested benefits, and retirees)
- 4. Current liability: the actuarial present value of accumulated plan benefits
- 5. Normal cost: the portion of actuarial present value of plan benefits and expenses which is allocated to the current year by the actuarial cost method

UNIVERSITY OF CALIFORNIA GENERAL ENDOWMENT POOL

INVESTMENT POLICY STATEMENT



Approved March 29, 2012 November 15, 2012
Replaces version dated December 13, 2011 March 29, 2012

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PLEASE NOTE:

^{*} These Appendices and Guidelines are in separate documents and are incorporated by reference. Appendices (4-8) to Investment Policy Statements of UCRP and GEP

Introduction and Purpose

This Investment Policy Statement ("Policy" or IPS") provides the framework for the management of the investments of the University of California General Endowment Pool ("GEP"). The purpose of a policy statement is to document the investment management process by

- Identifying the key roles and responsibilities relating to the ongoing management of the GEP's assets;
 - o Recognize and ameliorate the agency issues among the parties responsible for various aspects of investment management;
- Setting forth an investment structure for the GEP's assets;
 - This structure includes various asset classes and acceptable ranges that, in aggregate, are expected to produce a sufficient investment return over the long term while prudently managing risk;
 - o This strategy should provide guidance in all market environments, and should be based on a clear understanding of worst case outcomes;
- Establishing formalized criteria to measure, monitor, and evaluate GEP performance results on a regular basis; and
- Encouraging effective communication among all fiduciaries, including external parties engaged to execute investment strategies.

The document is divided into five sections. There are also a number of Appendices, which are integral parts of this document.

1. Investment Goals, Key Responsibilities, and Philosophy

- a. The **mission** of the GEP is to provide a common investment vehicle, which will generate a stable and continuously growing income stream, for (most but not all of) the University's endowments and quasi-endowments, for which the University is both trustee and beneficiary.
- b. The overall investment **goal** of the GEP is to preserve the purchasing power of the future stream of endowment payout for those funds and activities supported by the endowments, and to the extent this is achieved, cause the principal to grow in value over time. Other goals include:
 - To maximize return within reasonable and prudent levels of risk
 - To maximize the value of the endowment while maintaining liquidity needed to support spending in prolonged down markets.

Key **responsibilities** in the oversight and management of the GEP are as follows:

c. Under the authority granted in University Bylaw Sections 10.1.b and 12.5.a, The Regents has appointed a standing Committee on Investments ("Committee"), which is charged with oversight responsibility for the management of investments on behalf of The Regents, which includes the establishment of investment policies for the GEP and oversight of the management of the GEP's assets.

- d. Under the Bylaw Section 12.5.c, the Committee is directed to establish a system of custodianship for all securities.
- e. Under University Bylaw Section 21.4, The Regents has delegated to the Chief Investment Officer general responsibility for all investment matters, including the implementation of investment policies established by the Committee for the GEP. References to the "Chief Investment Officer" below shall be understood, depending on the context, to mean the "Office of the Chief Investment Officer."

The **philosophy** for the management of the GEP assets is as follows.

- f. The investment philosophy of the Committee is to create a management process with sufficient flexibility to capture investment opportunities as they may occur, yet maintain reasonable parameters to ensure prudence and care in the execution of the investment program.
- g. The Committee seeks a return on investment consistent with levels of investment risk that are prudent and reasonable given medium- to long-term capital market conditions and the investment objectives of the GEP (see part 4 below). While the Committee recognizes the importance of the preservation of capital, it also recognizes that to achieve the GEP's investment objectives requires prudent risk-taking, and that risk is the prerequisite for generating excess investment returns. Therefore the Committee's policy regarding investment risk, consistent with modern portfolio theory, is that risk cannot be eliminated but should be managed, and that fiduciaries have the obligation to utilize risk efficiently. Risk exposures should be identified, measured, monitored and tied to responsible parties; and risk should be taken consistent with expectations for return. Further articulation of the Committee's risk policy, including appropriate budgets and ranges for various types of risk are found in Appendix 2.

The **principal risks** that impact the GEP, and the parties responsible for managing them are as follows:

- h. Capital market risk is the risk that the investment returns (in excess of the risk-free rate) associated with the Committee's asset allocation policy are not sufficient to provide the required returns to meet the GEP's investment objectives. Responsibility for determining the overall level of capital market risk lies with the Committee.
- i. *Investment style risk* is associated with an active management investment program. It is the performance differential between an asset category's market target and the aggregate of the managers' benchmarks within the asset category weighted according to a policy allocation specified by the Chief Investment Officer. This risk is an implementation risk and is the responsibility of the Chief Investment Officer.
- j. *Manager value-added risk* is also associated with an active management investment program. It is the performance differential between the aggregate of the managers' actual (active) portfolios and the aggregate of the managers' benchmarks, both at policy allocation. This risk is an implementation risk and is the responsibility of the Chief Investment Officer (and indirectly the investment managers retained by the Chief Investment Officer).
- k. *Tactical/strategic risk* is the performance differential between (1) policy allocations for the GEP's asset categories and its investment managers and (2) the actual allocations. This risk is the responsibility of the Chief Investment Officer.

- 1. Total active risk refers to the volatility of the difference between the return of the GEP policy benchmark (see Appendix 1) and the actual return. It incorporates the aggregate of the risks in (i), (j) and (k) above, and is thus the responsibility of the Chief Investment Officer.
- m. Total investment risk refers to the volatility of the return of the total GEP assets. It incorporates all elements of investment risk as enumerated above, and is thus the joint responsibility of the Committee and the Chief Investment Officer.
- n. Peer risk refers to the difference in GEP performance relative to peer institutions. The Committee acknowledges that similar institutions may have different objectives and different levels of investment risk. Comparisons of performance with other institutions are meaningful *only* after adjusting for differences in investment policy and risk among peers. This risk is the responsibility of the Committee.

2. Investment Policies

The policies of the investment program establish the investment strategy and guide its implementation.

- a. The investment policies of the GEP shall be based on a financial plan that will consider:
 - i. The financial condition of the GEP, i.e., the relationship between the current and projected assets of the GEP, projected donor contributions, and the desired spending policy [see Appendix 3]
 - ii. Future growth of faculty and students; and both general and educational inflation
 - iii. The expected long term capital market outlook, including expected volatility of and correlation among various asset classes
 - iv. The range of possible investment outcomes associated with different policies
 - v. The Committee's risk tolerance, that is, the trade-off between the desire to achieve high returns (and the associated high volatility) and the desire to avoid unacceptable outcomes (and the associated necessity for reduced volatility).
- b. The Committee will consider alternative investment policies and will measure their potential impact on the financial condition of the GEP and assess their suitability in meeting the objectives of the GEP.
- c. The Committee's financial plan will result in a risk budget, that is, an expected amount of volatility associated with a given expected level of investment returns offered by the capital markets including the expected active return.
- d. Based on the risk budget, the Committee, with input from the Chief Investment Officer and other consultants, will approve a specific allocation of the investments (the asset allocation policy) among the various asset classes considered prudent given the GEP's objectives, time horizon, and constraints, and considering multiple measures of investment risk. The asset allocation policy shall be expressed in terms of a normal percentage allocation, and ranges for each asset class. These normal weights and ranges are found in Appendix 1. Criteria for including an asset class in the strategic allocation are also in Appendix 1.
- e. The asset allocation policy shall be sufficiently diversified to enable the appropriate fiduciary to manage risk without imprudently sacrificing return. The Chief Investment

Officer is delegated the responsibility of managing total and active risk within the ranges set by the Committee (see Appendices 1 and 2). Within the limits of prudent diversification and established risk budgets, capital market and active risk exposures are fungible, and the Chief Investment Officer may allocate risk exposures within and between asset classes in order to optimize return. When necessary, the Chief Investment Officer may use appropriate risk management strategies to protect portfolio value.

- f. The Committee will approve performance benchmarks for each asset class, based on a pre-approved set of criteria, which are found in Appendix 1, and will approve overall investment guidelines for each asset class, which are found in Appendix 7.
- g. The GEP equity and fixed income assets shall at all times avoid the use of economic leverage (subject to exceptions below). Economic leverage, in the context of portfolio management is defined as a net dollar exposure to assets in excess of the amount of invested capital, as measured by current market value. The term "net dollar exposure" is defined in the Derivatives Policy, Appendix 4. A very small, inadvertent, or temporary violation of this restriction that may occur in the normal course of portfolio management shall *not* be construed as leverage. Notwithstanding the general prohibition against leverage, leverage may be used in Private Equity, Real Estate, Real Assets, and Absolute Return strategies, per the limits and guidelines set forth in Appendix 7 and in the conduct of the Securities Lending Program (see section 21. below). All leverage shall be non-recourse to the Regents, a public corporation, with respect to GEP investments.
- h. The Chief Investment Officer will implement the asset allocation policy as approved by the Committee. The Chief Investment Officer will select investment professionals (or "managers") with demonstrated experience and expertise who will be responsible for managing specific portfolios consistent with the Guidelines in Appendices 6 and 7. Each investment manager will function under a formal contract that delineates its responsibilities, investment style and process, performance expectations, administrative requirements, and compensation. Where appropriate, each manager's contract will include a benchmark and range of probable outcomes relative to that benchmark. The Chief Investment Officer shall establish and implement procedures for the selection, monitoring, evaluation, and termination of investment managers, which are found in Appendix 6.
- i. The Chief Investment Officer will allocate funds across managers to develop an efficient investment structure, within the constraints of the prudence requirement, for each asset class, and will monitor whether the aggregate characteristics of all portfolios in an asset class comply with the investment guidelines for that class. The Chief Investment Officer will determine a policy allocation for each manager to be used in the evaluation of the active management program.
- j. The Chief Investment Officer shall establish and implement procedures to provide efficient management of liquidity (including timely payouts) for the GEP.
- k. The Chief Investment Officer shall be responsible for administering the investments of the GEP at the lowest possible cost, being careful to avoid sacrificing quality. These costs include, but are not limited to, management and custodial fees, consulting fees, transaction costs and other administrative costs chargeable to the GEP. The Chief Investment Officer may establish directed brokerage arrangements with the custodian for the GEP or other qualified third parties in order to reduce overall commissions cost for the GEP.

- 1. The Chief Investment Officer may participate in securities lending programs, as a means to augment income, with the custodian or other qualified third parties. Cash collateral received from borrowers will be invested by the Chief Investment Officer or the lending agent, in a short term investment pool, in accordance with guidelines established by the Chief Investment Officer. Current guidelines are included in Appendix 7.
- m. The Committee considers the active voting of proxies an integral part of the investment process. Proxy voting will occur in accordance with the Proxy Voting Policy found in Appendix 5.
- n. The investment program shall comply with existing and future applicable state and federal laws and regulations and the prudence requirement.
- o. All transactions undertaken on behalf of the GEP will be undertaken solely in the interests of the University and according to the direction of donors.

3. Fiduciary Oversight Procedures

The following procedures for the management of the GEP's assets outline the specific responsibilities of the Committee and other fiduciaries.

- a. The Committee, in developing investment policy for the GEP assets, shall act with the care, skill, prudence, and diligence under the circumstances then prevailing that a prudent person acting in a like capacity and familiar with such matters would use in the conduct of an enterprise of a like character and with like aims.
- b. The Committee will exercise its fiduciary responsibilities in regard to the investment program in accordance with the GEP Mission [see section 1.a above] and University Bylaws.
- c. The Committee shall review the asset allocation policy, asset class guidelines, and current capital market assumptions at least annually to ensure that the current asset mix can reasonably be expected to achieve the long-term goals of the GEP.
- d. The Committee will review the GEP's financial condition annually, and recommend a Spending Policy for each year to the Finance Committee, which is responsible for approval.
- e. The Committee may appoint investment consultants to review investment performance of the GEP in whole or with respect to specific asset classes, to assist in the development of the GEP's investment policies and asset allocation, to monitor and report on investment risks, and to provide independent assessment of investments proposed by the Chief Investment Officer.
- f. The Committee has appointed a standing Investment Advisory Committee ("IAC") of selected Regents, investment professionals, faculty, and UC Foundation members to provide input to the Committee on decisions and assist in oversight of the Chief Investment Officer. The Chair of the Committee shall also be the Chair of the IAC.
- g. The Committee shall review the investments of the GEP no less than quarterly to assess whether policy guidelines continue to be appropriate and are met. The Committee shall monitor investment risk, as well as monitor investment returns on an absolute and benchmark relative basis.

- h. The Chief Investment Officer shall prepare quarterly and annual reports for the Committee and The Regents on the investment program, including
 - i. The achievement of overall performance objectives
 - ii. The type and amount of risk taken to achieve those objectives
 - iii. Attribution of returns to various investment decisions and risks
 - iv. Adherence to budgets set for total and active risk
 - v. Compliance with policy guidelines, particularly asset allocation policy, and
 - vi. The costs of managing the GEP's assets.
- i. Investment performance results shall be calculated and verified at least monthly by an external, independent performance consultant.
- j. The Chief Investment Officer, in conjunction with the various investment consultants, will monitor the investment managers for compliance with their investment guidelines, achievement of specific objectives, and individual risk exposures.
- k. The Chief Investment Officer shall monitor the conduct of the custodian of the GEP.
- 1. The Chief Investment Officer shall adopt the CFA Institute Code of Ethics and Standards of Professional Conduct for all employees of the Chief Investment Officer and relevant consultants and managers. These are found at http://www.cfainstitute.org/cfacentre/pdf/English2006CodeandStandards.pdf and incorporated by reference. The Chief Investment Officer shall develop and enforce other ethics guidelines for the employees of the Chief Investment Officer as needed, consistent with other University policies and guidelines.
- m. The Committee will review this Policy from time to time to determine if modifications are necessary or desirable.

4. Performance Objectives

Performance objectives shall be established for the total GEP, asset class composites and individual manager portfolios. These objectives will be incorporated in the quarterly reviews of the GEP's performance.

The investment strategy articulated in the asset allocation policy found in Appendix 1 has been developed in the context of long-term capital market expectations, as well as multi-year projections of contributions, spending, and inflation. Accordingly, the investment objectives and strategies emphasize a long-term outlook, and interim performance fluctuations will be viewed with the corresponding perspective. The Committee acknowledges that over short time periods (i.e. one quarter, one year, and even three to five year time periods), returns will vary from performance objectives and the investment policy thus serves as a buffer against ill-considered action.

There are four principal factors that affect an endowment fund's financial status: 1) contributions from donors, 2) annual payout to endowment recipients, 3) inflation, and 4) investment performance. Only the last factor is dependent upon the investment policy and guidelines contained herein. However, the Committee's level of risk tolerance will take into account all four factors. At certain levels of assets and a given spending policy, it could be impossible for

the investments to achieve the necessary performance to meet desired spending. The result is that either spending policy has to be changed, contributions increased or risk tolerance changed.

Rates of return will be calculated based on a time-weighted rate of return formula as recommended by the CFA Institute. Returns will be calculated by the performance consultant and will be reported net of all fees and costs.

The performance of the overall GEP will be measured relative to:

- Inflation
- Policy benchmarks
- a. Total GEP return should exceed the Consumer Price Index on a consistent basis over time.
 - This objective is to achieve a positive return above inflation. The GEP's assets are invested with an infinite time horizon, and failure to keep pace with inflation may jeopardize the endowments' intended purposes.
- b. Total GEP return should match or exceed the total GEP weighted benchmark return, net of all fees and expenses on a consistent basis over time. See Appendix 1 for the composition and calculation of the GEP policy weighted benchmark.
 - This objective is to match or exceed a passively managed fund with a similar asset mix, net of all fees and expenses. The value added above the policy benchmark measures the effectiveness of the Chief Investment Officer's implementation and management decisions. The policy benchmark should also be adjusted for the costs of passive investing.

Additional metrics with respect to risk are found in the Risk Policy Appendix 2.

5. Asset Class and Manager Guidelines

The general guidelines that apply to all investment managers are:

- a. Subject to constraints and restrictions imposed by the manager guidelines, all decisions regarding sector and security selection, portfolio construction, and timing of purchases and sales are delegated to the investment manager.
- b. The purchase of securities issued by tobacco companies is prohibited in separately managed accounts. The Regents have defined a tobacco company as "a company which derives its revenues from the manufacture and distribution of tobacco products or, if a diversified company, that no other business line contributes more revenues or earnings than tobacco products." The Chief Investment Officer will determine what constitutes a tobacco company based on standard industry classification of the major index providers (e.g., Russell, MSCI) and communicate this list to investment managers annually and whenever changes occur. The Committee recognizes that the establishment of social investing restrictions limits investment opportunities and should be accompanied by adjusting performance evaluation standards appropriately.

- c. The direct purchase of property owned or a security issued by the University, its subsidiaries and affiliates, is prohibited
- d. The purchase of non-negotiable securities is prohibited in the equity and fixed income asset classes.
- e. The use of derivative securities or contracts to create economic leverage in the portfolio is prohibited. Acceptable and prohibited uses of derivatives are found in the derivatives policy in Appendix 4.
- f. Transactions that involve a broker acting as a "principal," where such broker or an affiliate is also the investment manager, who is making the transaction, are prohibited.
- g. Transactions shall be executed at the lowest possible total cost, which includes commissions, efficiency of execution, and market impact.
- h. Any investment or action with respect to an investment not expressly allowed is prohibited, unless presented to and approved prospectively by the Committee. All guidelines must be adhered to; however, if from time to time a manager shall deem an exception to the guidelines appropriate, the Chief Investment Officer shall seek review and approval by the Committee to make such an exception.

Managers are required to inform the Chief Investment Officer of significant matters pertaining to the investment of GEP assets, including at a minimum, substantive changes in investment strategy and portfolio structure; significant changes in ownership, organizational structure, financial condition or professional staffing; litigation or violation of securities regulations; significant account losses or growth of new business. Managers must inform the Chief Investment Officer in the event of discovering an unintended or involuntary violation of their guidelines or of any of the Policies herein pertaining to them.

Managers are required to submit periodic reports to the Chief Investment Officer summarizing investment activity and strategy, as per Appendices 6 and 7 and individual guidelines. Managers are required to reconcile investment returns with the custodian each month.

Specific guidelines for each major asset class will be found in Appendix 7. Manager guidelines will contain specific provisions to ensure that performance objectives and risk exposures are consistent with their particular investment mandate, which may be a style or subset of their larger asset class. However, all individual manager guidelines will be consistent with broad asset class guidelines and this Policy.

APPENDIX 1

Effective: July 19, 2012

Replaces Version Effective: January 1, 2012

ASSET ALLOCATION, PERFORMANCE BENCHMARKS, AND REBALANCING POLICY

Based on the risk budget for the GEP, the Committee has adopted the following asset allocation policy, including asset class weights and ranges, benchmarks for each asset class, and the benchmark for the total GEP.

Criteria for including an asset class in the strategic policy include:

- Widely recognized and accepted among institutional investors
- Has low correlation with other accepted asset classes
- Has a meaningful performance history
- Involves a unique set of investors

The Current Policy Allocation recognizes the current under-investment in illiquid asset classes (real estate, real assets) and the corresponding need to set rebalancing ranges around this effective policy allocation until such time as long-term policy weights in these classes are achieved. The allowable ranges for each asset class and in total have been chosen to be consistent with budgets and ranges for total and active risk.

A. Strategic Asset Allocation and Ranges

	Current Policy Allocation	Long-Term	Allowable Ranges	
		Target Allocation	<u>Minimum</u>	Maximum
U.S. Equity	18.5%	13.5%	13.5	23.5
Developed Non US Equity	16.0	8.0	11.0	21.0
Emerging Mkt Equity	6.0	7.0	4.0	8.0
Global Equity	2.0	0.0	1.0	3.0
US Fixed Income	5.75	5.0	2.75	8.75
High Yield Fixed Income	3.0	2.5	2.0	4.0
Emerging Mkt Fixed Income	3.0	2.5	2.0	4.0
TIPS	4.0	2.5	2.0	6.0
Private Equity	9.0	9.0	6.0	12.0
Absolute Return – Diversified	23.5	23.5	18.5	28.5
Cross Asset Class	2.0	5.0	0.0	7.0
Opportunistic Equity	0.0	10.0	0.0	12.0
Real Assets	1.25	3.0	0.25	2.25
Real Estate	6.0	8.5	3.0	9.0
Liquidity	0.0	0.0	0.0	10.0
TOTAL	100%	100%		

Combined Public Equity	42.5	28.5	32.5	52.5
Combined Fixed Income	15.75	12.5	10.75	20.75
Combined Alternatives*	41.75	59.0	26.75	56.75

^{*} Alternatives category including, but not limited to: Real Estate, Private Equity, Real Assets, and Absolute Return Strategies

B. Asset Class Performance Benchmarks

The Committee has adopted the following performance benchmarks for each asset class. Criteria for selection of a benchmark include:

- Unambiguous: the names and weights of securities comprising the benchmark are clearly delineated
- Investable: the option is to forego active management and simply replicate the benchmark
- Measurable: it is possible to readily calculate the benchmark's return on a reasonably frequent basis
- Appropriate: the benchmark is consistent with The Committee's investment preferences or biases
- Specified in Advance: the benchmark is constructed prior to the start of an evaluation period
- Reflecting Current Investment Opinion: investment professionals in the asset class should have views on the assets in the benchmark and incorporate those views in their portfolio construction

Asset Class	Benchmark
U.S. Equity	Russell 3000 Tobacco Free Index
Non US Eq. Devel.	MSCI World ex-US Net Tobacco Free
Emerging Mkt Eq.	MSCI Emerging Market Free Net
Global Equity	MSCI All Country World Index Net – IMI – Tobacco Free
Fixed Income	Barclays Capital US Aggregate Bond Index
High Yield Fixed Income	Merrill Lynch High Yield Cash Pay Index
Emg Mkt Fixed Income	Dollar Denominated: JP Morgan Emerging Markets Bond Index Global Diversified
Emg Mkt Fixed Income	Local Currency: JP Morgan Government Bond Index Emerging
	Markets Global Diversified
TIPS	Barclays Capital US TIPS Index
Private Equity	N/A (See below note 2.)
Absolute Return	Diversified: HFRX Absolute Return Index (50%) +
	HFRX Market Directional Index (50%)
Cross Asset Class	Aggregate GEP Policy Benchmark
Opportunistic Equity	To be determined by Regents' Investment Consultant
Real Assets	Commodities: S&PGSCI Reduced Energy Index
	All other: N/A (See below note 3.)
Real Estate	Public: FTSE EPRA NAREIT Global Index return
Real Estate	Private: NCREIF Funds Index – Open End Diversified Core
	Equity (ODCE), lagged 3 months

Notes on asset class benchmarks:

- 1. Global Equity: The Chief Investment Officer will determine what constitutes a tobacco company based on standard industry classification of the major index providers (e.g., Russell, MSCI) and communicate this list to investment managers annually and whenever changes occur.
- 2. Private Equity: *Long term* portfolio returns will be compared to investable public equity alternatives as well as non-investable peer group indices. There is no appropriate market benchmark to use for *short term* performance evaluation or decision making.
- 3. Real Assets (all strategies ex-commodities): similar to Private Equity

C. Total GEP Performance Benchmark

This is the composition of the total GEP performance benchmark referred to in the Investment Policy Statement, Part 4(b). The percentages below add to 100%.

Percentage	Benchmark
18.5%	× Russell 3000 Tobacco Free Index
16.0%	× MSCI World ex-US Net Tobacco Free
6.0%	× MSCI Emerging Market Free Net
2.0%	× MSCI All Country World Index Net – IMI – Tobacco Free
5.75%	× Barclays Capital US Aggregate Bond Index
3.0%	× Merrill Lynch High Yield Cash Pay Index
3.0%	× [JP Morgan Emerging Market Bond Index Global Diversified × 33%] + [JP
	Morgan Government Bond Index Emerging Markets Global Diversified × 67%]
4.0%	× Barclays Capital US TIPS Index
9.0%	× Actual return of private equity portfolio
23.5%	× [HFRX Absolute Return Index × 50%] + [HFRX Market Directional Index
	× 50%] [Abs. Ret Diversified]
2.0%	× Aggregate GEP Policy Benchmark [Cross Asset Class]
0.0%	To be determined by Regents' Investment Consultant [Opportunistic Equity]
1.25%	× Aggregate Real Assets benchmark (see section B), with components weighted
	by their actual weights within the total real assets portfolio
6.0%	× Aggregate of Public and Private Real Estate benchmarks (see section B), with components weighted by their actual weights within the total real estate portfolio

Notes on Total Fund benchmark:

- 1. The benchmark for private equity is replaced by the private equity portfolio's actual performance. This has the effect of neutralizing the active performance of this class for purposes of total fund performance evaluation.
- 2. The calculation of the Total Fund benchmark will assume a monthly rebalancing methodology.
- 3. In the event of a significant change in asset allocation, The Regents' generalist consultant may specify an alternative weighting scheme to be used during a transition period.

D. Rebalancing Policy

There will be periodic deviations in actual asset weights from the long-term/current policy asset weights specified above. Causes for periodic deviations are market movements, cash flows, and varying portfolio performance. Significant movements from the asset class policy weights will alter the intended expected return and risk of the GEP. Accordingly, the Investment Committee authorizes the Chief Investment Officer to rebalance the GEP when necessary to ensure adherence to the Investment Policy.

The Chief Investment Officer will monitor the actual asset allocation at least monthly. The Committee directs the Chief Investment Officer to take all actions necessary, within the requirement to act prudently, to rebalance assets to within the policy ranges in a timely and cost effective manner when actual weights are outside the prescribed ranges. The Chief Investment Officer may utilize derivative contracts [in accordance with Appendix 4] to rebalance the portfolio.

The Chief Investment Officer shall assess and manage the trade-off between the cost of rebalancing and the active risk associated with the deviation from policy asset weights. With approval from the Chair of the Committee, the Chief Investment Officer may delay a rebalancing program when the Chief Investment Officer believes the delay is in the best interest of the GEP. Results of rebalancing will be reported to the Committee at quarterly meetings.

APPENDIX 2

RISK MANAGEMENT POLICY

RISK PHILOSOPHY

In its broadest sense, risk refers to the unpredictability of future asset value, and specifically, the chance that assets may decrease, as well as increase, in value. Investment principles and practical experience both support the notion that expected returns are proportional to market risk taken. The Committee recognizes that the assumption of risk is necessary to meet GEP objectives; that is, there are no "risk free" assets, which are sufficient to generate the return needed to support planned spending. Thus GEP risk management does not require the elimination of risk, but the balancing of risk and expected return. Risk in itself is intrinsically neither good nor bad; it is a resource used to generate investment returns. The Committee recognizes that "The essence of investment management is the management of risks, not the management of returns."

RISK POLICY

The Committee's policy regarding investment risk, consistent with modern portfolio theory, is that risk cannot be eliminated but should be managed. That is, GEP fiduciaries are responsible for understanding the risks in various investment strategies, ensuring that they are properly compensated for these risks, and measuring and monitoring them continually. In particular, the level of risk taken should be consistent with the return objectives of the GEP.

Fiduciaries set the framework for risk management through the investment policy and guidelines, the strategic asset allocation, and the benchmarks used for performance objectives. However, tolerance for risk (alternatively, aversion to risk) may also be expressed in the form of various metrics for risk (volatility) and acceptable budgets and ranges for those metrics. Where appropriate, the Committee shall define these metrics and budgets for risk and establish acceptable ranges for them (see below).

The Chief Investment Officer is responsible for managing both total and active risk and shall implement procedures and safeguards so that the combined risk exposures of all portfolios in the aggregate are kept within limits established by the Committee (see definitions in section 1 of the Policy above). Further, within limits of prudent diversification and risk budgets, total and active risk exposures are fungible, that is the Chief Investment Officer may allocate risk exposures within and between asset classes in order to optimize return.

Although the management of investment portfolios may be outsourced, investment oversight and risk management are primary fiduciary duties of the Committee that are delegated to and performed by the Chief Investment Officer. The Chief Investment Officer shall report on risk exposures and the values of the several risk measures to the Committee, either quarterly or annually as required below.

RISK METRICS AND BUDGETS

There are different types of risk important at each level of GEP investment management and thus different risk metrics are appropriate at each level.

- GEP level
 - o Spending Risk (insufficient assets to meet planned spending)
 - o Measures the risk of inappropriate investment policy and strategy
- Asset class level
 - o Total Investment Risk (volatility of total return)
 - o Measures the risk of ineffective implementation of strategy
- Portfolio level
 - o Active Risk or "Tracking Error" (volatility of deviation from style or benchmark)
 - o Measures the risk of unintended exposures or inadequate diversification

• Spending risk

The Chief Investment Officer shall report on this measure to the Committee annually, in conjunction with endowment financial reviews. However, no objective levels (budget) will be set for this metric due to the separation of responsibility for investment management and spending policy, and the unpredictability of donor contributions. Thus results will be presented for information and use in policy reviews.

o **Metric**: Projected year-to-year change in real spending per student, over a long term forecast horizon

• GEP Total Investment risk

The basis for the risk budget at the total asset level is the Policy benchmark, or neutral position. Thus the risk budget starts with the risk of the benchmark index. Assuming an expected benefit from active management, the impact of deviations from the benchmark is added to the benchmark risk to derive the total risk budget. The Chief Investment Officer shall report on this metric to the Committee quarterly.

- Metric: GEP Total Investment Risk, defined as the annualized standard deviation of the monthly GEP returns, exponentially weighted over the previous 12 months.
 Benchmark Risk (i.e., the Capital Market risk of the strategic asset allocation) is measured similarly (using returns on the policy benchmark).
- Budget: GEP Total Investment Risk shall be maintained at a level equal to the square root of the sum of the squares of Benchmark Risk and the Active Risk budget (see below).
- o **Range**: If GEP Total Investment Risk is greater (less) than 20% above (below) the budgeted level at any quarterly measurement date, the Chief Investment Officer will take appropriate steps to reduce (increase) total GEP risk to its budget level, including but not limited to rebalancing asset class weights within allowable ranges. (For example, if the risk budget is 12%, the allowable range is +/- 2.4% [20% x 12%].)

• GEP Active Risk

There is no neutral or natural budget for active risk. The budget for active risk is determined to be consistent with the tolerance for active risk and the expectation to earn active return due to market inefficiencies and/or investment skill. This budget for active risk includes *all of the following* types of variation from policy:

- 1. Temporary asset weights different from strategic policy, but within the allowed ranges [Tactical/strategic risk]
- 2. Aggregate manager benchmarks different than asset class benchmark [Investment style risk]

- 3. Aggregate active manager risks [Manager value-added risk], including
 - o Aggregate portfolio systematic exposures different from the benchmark
 - o Aggregate portfolio security selection decisions
 - o Aggregate portfolio currency exposures different from the benchmark

The Chief Investment Officer shall report on this metric to the Committee quarterly.

- o **Metric**: Tracking Error, defined as annualized standard deviation of the difference between monthly GEP returns and monthly policy benchmark returns, exponentially weighted over the previous 12 months
- **Budge**t: Tracking Error budget shall be 3.0% annual standard deviation. It is understood that this budget may change when there is a change in
 - asset allocation, or
 - risk tolerance
- o **Range**: If Tracking Error is greater (less) than 1.0% (one percentage point) above the budget level at any quarterly measurement date, the Chief Investment Officer will take appropriate steps to reduce tracking error to its budget level, including but not limited to rebalancing asset class and/or manager weights within allowable ranges.

Both Total Investment Risk and Active Risk for the GEP shall be computed without the impact of Private Equity. For this calculation, it will be assumed that Total Fund performance excludes Private Equity performance and the Total Fund benchmark has no Private Equity component. Private Equity is the asset class defined in Appendix 7K.

APPENDIX 3

SPENDING POLICY

The Regents have adopted a Total Return Policy, that is, annual spending may be comprised of income, realized capital gains, or unrealized capital gains, or any combination thereof.

Annual spending shall be calculated as: a percentage times the average of the past 60 months market value of endowment assets, where the percentage may range between 4.35% and 4.75%, inclusive. Even with this smoothing of the impact of investment returns, there is a possibility that both nominal and inflation adjusted spending may experience year-to-year declines.

There are four principal factors that affect an endowment fund's financial status: 1) contributions from donors, 2) annual payout to endowment recipients, 3) inflation, and 4) investment performance. Only the latter is dependent upon the investment policy and guidelines contained herein. However, the Committee's level of risk tolerance will take into account all four factors. At certain levels of assets and a given spending policy, it could be impossible for the investments to achieve the necessary performance to meet the desired spending. The result is that either spending policy has to be changed, contributions increased or risk tolerance changed.

Amendment shown by double underscoring Additions shown by underscoring; deletions shown by strikethrough

UNIVERSITY OF CALIFORNIA

APPENDICES TO INVESTMENT POLICY STATEMENTS OF UCRP and GEP



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These Appendices are applicable to the UC Retirement Plan (UCRP) and General Endowment Pool (GEP), and are incorporated by reference into the Investment Policies of both UCRP and GEP (hereinafter referred to as "the Fund"). The term "constituents" is used to generically refer to the Pension's participants and beneficiaries, and the Endowment's donors.

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APPENDIX 4

Last approved: August 16, 2005 This version: November 15, 2012

This Version Last approved: February 14, 2006

DERIVATIVES POLICY

1. INTRODUCTION

The purpose of the Derivatives Policy is to establish permitted (and prohibited) uses of derivatives, to establish procedures for managing risks related to derivative securities, and for monitoring and reporting of their use in the Fund.

2. DEFINITION AND SCOPE

A derivative is a contract or security whose value is *derived* from another security or risk factor. There are three fundamental *classes* of derivatives - futures, options and swaps - each with many variations; in addition, some securities are *combinations* of derivatives or contain *embedded* derivatives.

This Policy covers only futures, options, swaps, and their combinations. It is applicable to marketable equity and bond asset classes only, not to absolute return strategies, real estate, or private equity. Securities with embedded option features, such as callable or convertible bonds, or mortgaged backed securities, typically have different risks, and are discussed in the Fixed Income Guidelines.

3. DERIVATIVES POLICY

The Committee recognizes that all investing, including the use of derivatives, involves risk, and that derivatives use is part of modern institutional portfolio management. The principal risk of derivative strategies comes from the potential to lever a portfolio (i.e., to magnify risk exposures using borrowed funds) or otherwise speculate (express views on a security or risk factor without committing capital). Successful and prudent use of derivatives thus depends on

- Well defined uses for derivatives, and avoidance of economic leverage
- Monitoring and measuring risk, and limits on economic exposures
- Investment manager internal controls and defined procedures for managing risk

The following policies govern the use of derivative securities in the Fund:

- 1. All derivative strategies are *prohibited unless specifically allowed in writing* as part of an investment manager's guidelines. In the latter case, those guidelines must be consistent with the policies stated herein.
- 2. Use of derivatives to create economic leverage is prohibited, *except for specific strategies only*, as per the Investment Policy Statement of UCRP and GEP, Section 2g, on page 6.
- 3. Permitted applications for derivatives are (a) efficient substitutes for physical securities, (b) managing risk by hedging existing exposures, or (c) to implement arbitrage or other approved active management strategies, and are detailed in the following section.
- 4. Although individual derivative securities may be considered risky or inappropriate as standalone investments, their use in a portfolio may actually reduce or otherwise manage risk.

Therefore the risk of derivatives – and their acceptability as investments - should be measured by their impact on the portfolio in which they are used, not in isolation.

5. The TreasurerChief Investment Officer shall implement procedures to ensure (a) that the purpose, use, and risks of derivative strategies are well understood and consistent with overall investment objectives and individual strategies, (b) that risks taken are prudent and maintained within acceptable limits, (c) that expected return is commensurate with the risk taken, (d) that their potential impact on the value of the Fund's assets is measured periodically, and (e) that there is compliance with this policy (see below, section 8).

4. USE OF DERIVATIVES

The use of derivatives instruments and strategies will be allowed in three broad areas:

- As efficient substitutes for physical securities for portfolio management, and during portfolio rebalancing, asset allocation, or transition management
 - It is often possible to create the same economic exposure to an asset or asset class by using derivatives as by purchasing the assets directly (in the "cash" or "spot" markets), but with these advantages
 - Reduced transaction cost
 - Increased speed of execution
 - Reduced disruption to existing portfolio strategies
 - Better risk-reward trade-off than exists in the cash markets
- To manage risk by hedging existing exposures
 - Hedging is the process of reducing the possibility for gain or loss over a specific future period by taking an opposite position yet not altering the underlying portfolio structure
- To implement arbitrage strategies
 - o Arbitrage is the simultaneous purchase and sale of similar securities in order to capture a perceived pricing disparity between them

These acceptable uses are described in detail below (see sections 4A-C) in the context of specific investment functions.

4A. PORTFOLIO REBALANCING, ASSET ALLOCATION AND TRANSITION MANAGEMENT

Following are potential uses of derivatives, which *may* be permitted for use. This is a representative, not an exhaustive list.

- Maintaining exposure to an asset class or risk factor when large cash inflows or outflows are expected (without changing the existing portfolios' holding of physical securities). In the case of equity portfolios, this is referred to as cash equitization, but the concept and practice applies to any asset class for which derivatives exist.
- Implementing an asset allocation efficiently prior to manager selection and/or before funding is completed
- Implementing a portfolio restructuring / rebalancing efficiently prior to manager selection and/or before funding is completed
- Implementing tactical asset allocation programs efficiently

- Implementing "alpha transport" or "portable alpha" strategies (i.e., to separate capital market exposures from the active management process and maintain a desired asset allocation while optimizing the use of active risk) between distinct asset classes, such as from (to) equity to (from) fixed income
- Implementing a portfolio insurance strategy during a period of heightened market volatility

4B. EQUITY PORTFOLIO MANAGEMENT

Following are potential uses of derivatives, which *may* be permitted for use. This is a representative, not an exhaustive list.

- Maintaining exposure to an asset class when large cash inflows or outflows are expected (without changing the portfolio's holding of physical securities)
- Obtaining exposure to a sector, country, or asset class more efficiently or more cheaply than is possible in the spot markets
- Eliminating or reducing the performance "drag" of cash held to facilitate transactions by purchasing ETF's or futures
- Return enhancement in a risk controlled framework (e.g., selling covered calls)
- Hedging anticipated market moves (without changing a portfolio's holding of physical securities) using futures and/or options. Such hedging is limited to (a) offsetting existing positions, or (b) offsetting anticipated near term portfolio rebalancing.
- Hedging foreign currency exposure using foreign exchange forwards, futures, or options.
- Implementing long/short, market neutral, or other arbitrage strategies.
- Implementing "alpha transport" or "portable alpha" strategies within an asset class or across distinct equity asset classes

4C. FIXED INCOME PORTFOLIO MANAGEMENT

Following are potential uses of derivatives, which *may* be permitted for use. This is a representative, not an exhaustive list.

- Maintaining exposure to an asset class or risk factor when large cash inflows or outflows are expected (without changing the portfolio's holding of physical securities)
- Modifying a portfolio's duration or otherwise changing its exposure to various points along the yield curve (without changing the portfolio's holding of physical securities)
- Maintaining a portfolio's targeted yield curve exposure while making sector or security selection decisions which would otherwise change it
- Modifying a portfolio's credit quality by creating a synthetic credit exposure or neutralizing (hedging) a particular credit exposure
- Obtaining exposure to a sector, country, or asset class more efficiently or more cheaply than is possible in the spot markets
- Facilitating arbitrage strategies, to exploit perceived relative value between securities, subject to the fundamental policy prohibiting leverage stated above
- Eliminating or reducing the performance "drag" of cash held to facilitate transactions by purchasing futures

- Enhancing return by substituting an exposure in the cash market with a similar derivative exposure
- Hedging anticipated market moves using futures and/or options.
- Hedging foreign currency exposure using foreign exchange forwards, futures, or options.
- Implementing "alpha transport" or "portable alpha" strategies within an asset class or across distinct fixed income asset classes

5. AUTHORITY TO USE DERIVATIVES

The <u>TreasurerChief Investment Officer</u> will determine whether the Fund's investment managers may employ particular permitted strategies. For each investment manager, after determining that the purpose falls within this policy, and that the investment manager has adequate controls and procedures to monitor and measure risk, that manager's investment guidelines will be developed or modified to permit use of those particular strategies.

The <u>TreasurerChief Investment Officer</u> will determine that the investment manager has, at a minimum,

- A defined purpose for each derivatives strategy within the investment mandate, including a thorough understanding of the proposed benefits and potential risks
- Developed and implemented written policies for controlling market, counterparty credit, liquidity, and basis risk
- Ability to value the derivative instruments, and explain the frequency and source of pricing
- Adequate analytical tools to measure and control the risks of the derivatives and assess their impact on the portfolio, on at least a daily basis
- Procedures for periodically stress testing the projected returns of the derivative instruments on both a stand-alone and portfolio basis. In addition, managers must demonstrate awareness of and controls for model risk.
- Adequate internal controls and organizational capabilities for monitoring and reporting market and counterparty credit risk, and internal procedures for identifying and reversing risks in excess of agreed upon limits
- Adequate internal controls and organizational capabilities to account for and control legal, settlement, and operational risk
- Ability to demonstrate compliance with this policy and answer reasonable requests for reporting derivative positions and their risk characteristics

Appropriate senior members of the Treasurer's Office of the Chief Investment Officer, including a senior member of the Risk Management function, will conduct the necessary due diligence and make a recommendation to the Treasurer Chief Investment Officer concerning the scope of the derivative strategies permitted and any required investment guidelines or amendment(s) to the manager's investment guidelines.

6. PERMITTED INSTRUMENTS

6A. The following derivative types are permitted under this policy, subject to the conditions and restrictions noted above. This is a representative, not an exhaustive list. As markets evolve and new derivative instruments and strategies are developed, the TreasurerChief Investment Officer and Regents' Investment Consultant may permit the use of additional derivative instruments or strategies not listed herein, on a case-by-case basis, provided they are consistent with this Policy and with the investment manager's mandate and risk parameters.

- Interest rate futures, commodity futures and equity index futures
- Exchange traded funds (ETF's)
- Foreign currency options, futures and forwards
- Over-the-counter (OTC) options and options on futures
- Swaps and swaptions
- Inverse Floaters
- Credit Default Swaps (CDS)
- Structured Notes, *as long as* the structures are transparent and contain only types and amounts of exposures permitted in these Policies.

6B. The following derivative types and strategies are not permitted

- Structured and levered notes in which the structure is designed to mask underlying risk factor(s) which would not be permissible under the Policy and/or the Derivatives Policy
- Derivative positions creating economic leverage in the portfolio context
- Derivatives used for speculative purposes

7. LIMITATIONS, CONTROLS, AND RESTRICTIONS

(see Definitions, section 9)

7A. Portfolio Rebalancing / Asset Allocation

- Selling (writing) uncovered options is prohibited
- Long futures positions must be backed by 100% cash or cash equivalents (i.e., leverage is not permitted)
- Short futures positions must be collateralized by a risk equivalent (long position) of highly correlated physical securities.

7B. Equity Portfolio Management

- The net of long and short dollar exposures to assets or currencies, whether derived from physical or derivative securities, must be less than or equal to the dollar market value of the portfolio, except for very small, inadvertent, or temporary amounts that occur in the normal course of portfolio management
- The gross dollar exposures of the portfolio from physical and derivative securities (whether futures, options, or swaps), cannot exceed 300% of the market value of the aggregate underlying portfolio, at all times
- The Treasurer Chief Investment Officer may impose further limits on the use of derivatives so that derivative notional values are not only constrained by their contribution to portfolio risk factors (such as beta, regional or industry exposure) but also

with consideration to: liquidity, counterparty credit risk, pricing transparency, and model risk. Thus derivative use may be limited even if other portfolio risk limits are not breached.

7C. Foreign Exchange Transactions

• Foreign exchange derivative contracts must have a maturity less than or equal to the anticipated holding period of the underlying security.

7D. Fixed Income Portfolio Management

- The net of long and short dollar exposures to assets or currencies, whether derived from physical or derivative securities, must be less than or equal to the dollar market value of the portfolio, except for very small, inadvertent, or temporary amounts that occur in the normal course of portfolio management
- The gross dollar exposures of the portfolio from physical and derivative securities (whether futures, options, or swaps), cannot exceed 300% of the market value of the aggregate underlying portfolio, at all times
- The Treasurer Chief Investment Officer may impose further limits on the use of derivatives so that derivative notional values are not only constrained by their contribution to portfolio risk factors (such as contribution to portfolio effective duration and spread duration) but also with consideration to: liquidity, counterparty credit risk, pricing transparency, and model risk. Thus derivative use may be limited even if other portfolio risk limits are not breached.

8. MONITORING AND REPORTING

The <u>TreasurerChief Investment Officer</u> will implement procedures for periodic monitoring of derivative strategies. Investment managers will be required to provide the following to the <u>TreasurerChief Investment Officer</u>:

- Month end position report of derivatives
 - Report will include impact on portfolio, using metrics determined by the Treasurer Chief Investment Officer
 - For fixed income managers only, report will include contribution to portfolio effective duration and effective convexity
- Quarterly statement of compliance with this policy
- Quarterly strategy report, including economic exposure to each class of derivatives, their use within the portfolio, performance characteristics, and risk controls employed.
- Quarterly report on counterparty credit risk for OTC derivatives

When derivatives are used by the <u>TreasurerChief Investment Officer</u> for portfolio rebalancing or asset allocation, the Operations and Trading functions will provide the following to the <u>TreasurerChief Investment Officer:</u>

• Daily position, exposure, and profit/loss (P/L) reports

The Treasurer Chief Investment Officer's risk management process for derivatives will include:

• Monthly reconciliation of managers' derivatives reports with custodian positions in derivatives (for all managers who are permitted to use derivatives)

- Monthly review of Managers' use of derivatives relative to their own policies and with their intended use of derivatives, and with this Policy
- Monthly reports of risk model results (for fixed income managers only)
 - Contribution to effective duration and effective convexity, by portfolio, of *all* positions
 - Economic exposures and risk characteristics of derivatives designated in section A above
 - Stress tests will be required for volatile classes of derivatives such as IOs, POs, and Inverse Floaters
- A monthly statement that all portfolios are in compliance with this policy, and a description of any instances of non-compliance and their disposition
- An annual report on potential model risk (for the risk model currently in use by the TreasurerChief Investment Officer)

While the risk of an individual derivative security may be large, risk will be assessed in a portfolio framework (i.e., how each portfolio responds to various market and interest rate scenarios, with and without the derivatives).

9. DEFINITIONS

- a. Derivative: a bilateral contract or payment exchange agreement whose value derives from the value of an underlying asset, reference rate, or index.
- b. Investment Manager: term includes portfolio managers with a fiduciary responsibility for a given investment mandate, whether directly employed by the Treasurer_Chief Investment Officer or an external asset management firm.
- c. Leverage: in the context of these guidelines means "economic leverage," not "gross leverage."
- d. Economic leverage: in the context of portfolio management, is defined as a net dollar exposure to assets in excess of the dollar amount of invested capital as measured by current market value
- e. Net dollar exposure (of a portfolio): the arithmetic sum of the dollar market values of all long (positive) and short (negative) positions in securities, plus the notional value of futures contracts, plus the dollar delta of options contracts.
- f. Dollar delta (of an option): a measure of net dollar exposure of an option; defined to be the option's notional value times the option's delta.
- g. Gross dollar exposure is defined as the sum of the combined long exposures and the absolute value of the short exposures, including all physical and derivative securities positions.
- h. Gross leverage: a term used to indicate that the gross dollar exposure of a portfolio exceeds the net market value of the total portfolio

APPENDIX 5

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PROXY VOTING POLICY

INTRODUCTION

It is part of the generally accepted standards of fiduciary care that proxy-voting rights must be diligently exercised as an aspect of fiduciary duty. The purpose of this policy is to establish the principles and process for the exercise of that duty.

PROXY VOTING POLICY

- 1. In general, but with certain exceptions, proxy issues that are of a routine business management nature, such as election of directors and appointment of auditors, are voted in accordance with the recommendations of management.
- 2. Other issues will be reviewed case-by-case and are generally voted according to existing TreasurerChief Investment Officer's Proxy Guidelines (see Exhibit I).
- 3. For all shares in the Russell 3000 Index portfolio managed by State Street Global Advisors (SSGA), the manager will vote proxies in accordance with the Treasurer_Chief Investment Officer's Proxy Guidelines.
- 4. For all shares in the MSCI EAFE Index fund, SSGA will vote proxies in accordance with SSGA's Proxy voting policy, incorporated by reference.
- 5. If the <u>TreasurerChief Investment Officer</u>'s Proxy Guidelines conflict with those of SSGA, those of the <u>TreasurerChief Investment Officer</u> shall have precedence.
- 6. SSGA may use a third party organization, such as Institutional Shareholder Services (ISS) to manage the voting process and will provide a written summary of all proxy votes on all Fund assets on an annual basis.
- 7. For all shares in external managers' portfolios, the <u>TreasurerChief Investment Officer</u> will appoint a third party organization, such as Institutional Shareholder Services (ISS), to vote all proxies in accordance with the <u>TreasurerChief Investment Officer</u>'s Proxy Guidelines, and to provide a written summary of all proxy votes on all Fund assets on an annual basis.

APPENDIX 5 - EXHIBIT I

OFFICE OF THE TREASURER CHIEF INVESTMENT OFFICER GUIDELINES FOR PROXY VOTING

Note: These are general guidelines with broad application. Company-specific issues, such as past performance, shareholder responsiveness, etc. may result in a deviation from the standard recommendation.

I. Social Issues

Issues that are controversial or relate to social issues (i.e., tobacco issues, animal testing, military contracts, etc.) are reviewed on a case-by-case basis in light of their potential long-term economic impact on shareholders, along with ongoing review of company codes of conduct and social responsibility, any existing UC policies, and the advice of independent proxy monitor services. This may result in a vote against management if the company is not reasonably responsive to shareholder concerns.

II. Corporate Governance

- A. Classified Board (or staggered board proposals): The <u>TreasurerChief Investment Officer</u> recommends annual elections for directors and that classified boards not be allowed, as they tend to entrench management.
- B. Cumulative voting or restoration of cumulative voting issues: In general, the Treasurer recommends a vote in favor of cumulative voting. California law allows companies incorporated in the state to eliminate cumulative voting with shareholder vote.
- C. Preemptive Rights or restoration of limited preemptive rights: The <u>TreasurerChief Investment</u> Officer recommends a vote in favor, as this is normally good for shareholders.
- D. Confidential Voting Issues: The Treasurer recommends a vote with management, as existing voting safeguards are normally adequate to protect shareholder interests.
- E. Authorization of blank check preferred (poison pill): The <u>TreasurerChief Investment Officer</u> recommends a vote against these anti-takeover measures as they overtly entrench management and have specific anti-takeover intent.
- F. Fair price super-majority proposals: The <u>TreasurerChief Investment Officer</u> recommends a vote against supermajority proposals of 85 percent or more.
- G. Golden Parachutes: Although the <u>TreasurerChief Investment Officer</u> recommends a vote against these incentives for management when they provide overly rich rewards for executives upon a takeover of the company, they should be assessed on a case-by-case basis with that negative criterion in mind.

III. Compensation Issues

A. Stock option plans resulting in over 10 percent dilution shall be examined on a case-by-case basis to determine the dilution in the context of the peer group and norms. Plans with excessive dilution may be voted against.

- B. Stock options for non-employee directors are examined on a case-by-case basis. Excessively rich plans for non-employee directors, where the annual payments exceed the average for its peer group may be voted against.
- C. Compensation for non-employee directors, which take the form of retirement payments, is normally voted against.
- D. Exchanging underwater options (granting lower-priced options to replace higher-priced options) issues are normally voted against.
- E. Granting stock options to executives to be exercised at less than fair market value are is normally voted against.
- F. Employee stock purchase plans normally are voted in favor as they involve a purchase of common shares at 15 percent of market value through payroll deduction. Plans at discounts of more than 85 percent (although there are very few) are examined on a case-by case basis.

APPENDIX 6

This version: November 15, 2012 Last approved: August 16, 2005

INVESTMENT MANAGER SELECTION, OVERSIGHT, REVIEW, AND TERMINATION

When selecting investment managers, the TreasurerChief Investment Officer will:

- Follow a due-diligence process to make prudent selections of investment managers. The
 due-diligence process will involve analyzing investment manager candidates in terms of
 certain:
 - o **Qualitative Characteristics**, such as key personnel, investment philosophy, investment strategy, research orientation, decision-making process, and risk controls.
 - o **Quantitative Characteristics**, such as CFA Institute-compliant composite return data, risk-adjusted rates of return (e.g., information ratios), and other risk factors.
 - o **Organizational Factors**, such as type and size of firm, ownership structure, client-servicing capabilities, record of gaining and keeping clients, and fees.

Other factors will be considered as part of the due-diligence process as facts and circumstances warrant.

- Use third-party database(s) to access appropriate screening information and ensure an unbiased and objective search process.
- With respect to qualified retirement plans, select only entities that meet the definition of "investment manager" under Section 3(38) of ERISA (a bank, insurance company, or investment adviser registered under the Investment Advisers Act of 1940).

A key aspect of a prudent investment program is the designation of a performance benchmark for each investment manager. This benchmark should be specified in writing, and should satisfy the same set of quality criteria as stated for asset class benchmarks in Appendix 1, section B. In addition, the benchmark for an actively managed portfolio should also satisfy the criteria of Ownership: the investment manager should be aware of and accept accountability for the constituents and performance of the benchmark. It is encouraged that the benchmark be embedded in and integral to the investment process and procedures of the investment manager.

Investment managers will provide to the Treasurer Chief Investment Officer the following:

- A monthly performance statement for the portfolio (gross and net) and the benchmark. Also include the gross performance for the product Composite at least quarterly
- If available, a monthly or quarterly forecast risk report, using the investment manager's risk system, showing the total, systematic ("common factor"), and non-systematic ("residual") risk of the portfolio relative to the benchmark
- A monthly or quarterly variance analysis, indicating sources of performance variances (difference between portfolio and benchmark return), and an explanation of any material differences
- A quarterly review of portfolio and strategy performance including a market outlook
- An annual statement of compliance with investment guidelines
- Any other items specified by the appropriate guidelines under the Policy

In order to ensure that thorough and consistent manager oversight is carried out on a regular basis, it is the intent of the <u>TreasurerChief Investment Officer</u> to meet with each investment manager once each calendar year, and no less than once every eighteen months. In addition to the investment performance review listed above, several other issues will be reviewed. These include brokerage commissions, account turnover, personnel turnover, client service issues, investment guideline compliance and changes in ownership.

The Committee acknowledges that, from time to time, it may be necessary to replace an existing investment manager. Consequently, the following guidelines will govern review and/or termination of investment managers because of qualitative, quantitative, or organizational concerns.

At each quarterly performance evaluation, the <u>TreasurerChief Investment Officer</u> will initiate an inquiry should any investment manager not meet the established performance objectives, including:

• Significantly under perform the previously agreed-upon benchmark over the cumulative performance period, with proper adjustment for the manager's active risk.

Additionally, the <u>TreasurerChief Investment Officer</u> will initiate an inquiry should any investment manager:

- Undergo significant organizational changes, including departure of key investment professionals;
- Implement significant change in strategy;
- Be involved in material litigation;
- Be involved in an SEC or other securities investigation;
- Be acquired by or acquire another firm.

After reviewing the appropriate qualitative and quantitative information, the <u>TreasurerChief Investment Officer</u> may deem it appropriate to terminate, place the investment manager on notice, or to take no action at that time. In cases in which the manager is placed on notice, the manager will be informed of this decision in writing. The manager may be removed from this status upon exhibiting significant organizational and/or performance changes.

Should the investment manager fail to exhibit the desired changes, the TreasurerChief
Investment Officer will conduct further discussions and analysis to determine if termination is warranted. While a systematic process will be carried out in such instances, the decision to retain or terminate a manager will not be made by a formula and will be made at the discretion of the TreasurerChief Investment Officer. It is a judgment that depends on the TreasurerChief Investment Officer's confidence in the investment firm to perform in the future.

APPENDIX 7

Asset Class Guidelines

- o 7A) U.S. Equity Guidelines
- o 7B) Developed Market Non US Equity Guidelines
- o 7C) Emerging Market Equity Guidelines
- o 7D) Global Equity Guidelines
- o 7E) Long Duration Fixed Income Guidelines
- o 7F) Core Fixed Income Guidelines
- o 7G) TIPS (Treasury Inflation Protected Securities) Guidelines
- o 7H) Non Dollar Denominated Fixed Income Guidelines
- o 7I) High Yield Fixed Income Guidelines
- o 7J) Emerging Market Debt Guidelines
- o 7K) STIP Guidelines
- o 7L) Private Equity Guidelines
- o 7M) Private Real Estate Guidelines
- o 7N) Public Real Estate Guidelines
- o 70) Absolute Return Strategies Guidelines
- o 7P) Reinvestment of Cash Collateral from Securities Lending Program
- o 707P) Real Assets Investment Guidelines
- 7R7Q) Limits on the Size of Investments with Public Equity and Fixed Income Managers

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APPENDIX 7A

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U.S. EQUITY INVESTMENT GUIDELINES

The purpose for these performance objectives ("Objectives") and management guidelines ("Guidelines") is to clearly state the investment approach, define performance objectives and to control risk in the management of the U.S. Equity allocation of the Fund ("the Program"). These Objectives and Guidelines shall be subject to ongoing review by the Committee. Capital market conditions, changes in the investment industry, new financial instruments, or a change in the Committee's risk tolerance, are among factors to be considered in determining whether the Guidelines shall be revised.

1. Investment Policy

a. Investment Objective

The primary investment objective of the Program is to generate a rate of return from investments in common stocks of US companies which exceeds the return on the broad US equity market, measured by the Russell 3000 Tobacco Free Index ("Benchmark"), while maintaining risk similar to that of the Benchmark.

b. Investment Strategy

The Program shall be implemented by hiring multiple external investment managers ("Managers"). Each Manager's strategy will focus on a subset of the broad equity market in which the Manager is believed to have a competitive advantage in providing returns in excess of its respective benchmark on a risk adjusted basis. The TreasurerChief Investment Officer will monitor whether the aggregate of all externally managed portfolios adheres to these Guidelines, and in particular achieves the overall performance and risk objectives stated below. In addition, each Manager shall have written guidelines, which will detail its strategy, performance objectives, permitted investments, and restrictions. The TreasurerChief Investment Officer will monitor each Manager's adherence to its respective guidelines. In no case may a Manager's guidelines create potential conflict with the Guidelines for the Program.

c. Performance Objective

The performance objective of the Program is to meet or exceed the return of the Benchmark, on a consistent basis over time, net of all costs and fees. Each Manager will have a unique objective, or style benchmark, which is appropriate to its individual strategy, and specified in its guidelines.

d. Risk Objective

The Program shall be managed so that its annualized tracking error budget shall be 250 basis points. Each Manager will have a unique active risk budget, relative to its style benchmark, which is appropriate to its individual strategy, and specified in its guidelines, and which will reflect the risk-return profile of its specific investment objectives.

e. Other Constraints and Considerations

- Managers shall comply with applicable State and Federal laws and regulations and the prudence requirement described in section 3(a) of the Policy.
- Managers shall act solely in the interest of the Fund's constituents.
- Implementation of this Program shall comply with the Fund's Policy.

2. Investment Guidelines

a. Asset Allocation

It is expected that the Program will be fully invested in equity and equity-related securities at all times. Any cash or held by Managers for the purpose of facilitating cash flows or portfolio transactions will be swept daily by the custodian. The <u>TreasurerChief Investment Officer</u> or designated overlay manager may equitize this cash using appropriate derivatives contracts.

b. Types of Securities

The Program will be invested in diversified portfolios of common stocks that are listed on national securities exchanges. These common stocks shall be predominantly of companies domiciled in the United States, or which derive the majority of their sales and earnings from the United States. Managers may also invest in stocks that are traded over-the-counter and in other equity-related securities and private placements as limited in their guidelines. Subject to limitations in their guidelines, Managers may also obtain equity exposure through their own specialty commingled funds.

Use of and limits on equity derivative securities by individual managers must be specified in writing in their guidelines and must be consistent with the Derivatives Policy, Appendix 4.

Nothing in these guidelines shall be construed to restrict the use of diversified global equity strategies (consisting of equities of U.S. and Non-U.S. domiciled companies). The TreasurerChief Investment Officer shall ensure that such strategies are consistent with both these guidelines and the guidelines of the Non-U.S. equity Program, and the Manager(s)' guidelines will be structured to ensure that performance and risk objectives for both equity classes are met.

c. Restrictions

The Managers may not

- Purchase securities of tobacco related companies, as per the Policy, section 5b.
- Lend securities
- Purchase commodities or commodity derivatives
- Purchase fixed income securities except for cash equivalents and margin requirements as part of a portable alpha strategy
- Buy party-in-interest securities
- Buy lettered, legend, or other restricted stock, except for 144A securities, which are permitted
- Buy or write equity linked notes
- Employ economic leverage in the portfolio through borrowing or derivatives

• Employ gross leverage in their portfolio in excess of 300% of the market value of the portfolio, at all times

d. Diversification and Concentration

The Program's investments will be appropriately diversified to control overall risk and will exhibit portfolio risk characteristics similar to those of the Benchmark. The <u>TreasurerChief Investment Officer</u> is responsible for managing aggregate risk exposures. The following limitations apply:

- The Program's beta with respect to the Benchmark will not be significantly different from 1.0, as measured over the most recent 12 month period.
- Notwithstanding the overall diversification of the Program, the <u>TreasurerChief</u>
 <u>Investment Officer</u> may set limits on any individual Manager's tracking error and/or contribution to active risk of the Program.
- The aggregate holdings of any security may not exceed 4.9% of that security's outstanding shares.
- No investment with any single manager can represent more than 12% of the total Program's assets. Passive (i.e., index replicating) managers are not subject to this limitation.

It is expected that each Manager's portfolio will be appropriately diversified, within limits established in its guidelines and relative to its performance objectives, to control risk, but without unduly restricting a Manager's ability to out-perform its benchmark. That is, an individual Manager's portfolio may be more concentrated than is appropriate for the Program's aggregate investments.

e. Managers shall employ best execution. Transactions may be directed to brokers/dealers designated by the <u>TreasurerChief Investment Officer</u> at the Manager's discretion when best execution is available.

f. Managing Cash Flows

The <u>TreasurerChief Investment Officer</u> may use derivative contracts (including but not limited to index futures and ETF's) for facilitating investment of cash flows related to contributions, withdrawals, or other asset allocation rebalancing.

3. Evaluation and Review

a. Policy and Guideline Review

The <u>TreasurerChief Investment Officer</u> shall review the Objectives and Guidelines at least annually, and report to the Committee on the impact of the Guidelines on the Program's performance.

b. Program performance and risk exposures shall be evaluated at multiple levels in accordance with the performance objectives of the Program and individual Managers.

4. Reporting

On a quarterly basis, the <u>TreasurerChief Investment Officer</u> shall provide the following reports to the Committee:

- a. A performance attribution explaining differences in sector weights and returns, between the aggregate Program investments and the Benchmark, and an explanation of any material differences.
- b. A forecast risk report, using the Treasurer Chief Investment Officer's risk system, showing the total, systematic ("common factor"), and non-systematic ("residual") risk of the aggregate portfolio, the Benchmark, and the active Program relative to the Benchmark, and an explanation of any material differences.
- c. A summary of individual manager performance, on an absolute and benchmark relative basis.

Managers will be required to provide the <u>TreasurerChief Investment Officer</u> monthly and quarterly reports, including but not limited to:

- a. A monthly performance statement for the portfolio (gross and net) and the benchmark, and provide the gross performance for the product Composite at least quarterly.
- b. If available, a monthly or quarterly forecast risk report, using the Manager's risk system, showing the total, systematic ("common factor"), and non-systematic ("residual") risk of the portfolio relative to the benchmark.
- c. A monthly or quarterly variance analysis, indicating sources of performance variances (difference between portfolio and benchmark return), and an explanation of any material differences.
- d. A quarterly review of portfolio and strategy performance including a market outlook.
- e. An annual statement of compliance with investment guidelines.

5. Definitions: See Appendix 8

APPENDIX 7B

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DEVELOPED MARKET NON U.S. EQUITY INVESTMENT GUIDELINES

The purpose for these performance objectives ("Objectives") and management guidelines ("Guidelines") is to clearly state the investment approach, define performance objectives and to control risk in the management of the Developed Market Non U.S. Equity allocation of the Fund ("the Program"). These Objectives and Guidelines shall be subject to ongoing review by the Committee. Capital market conditions, changes in the investment industry, new financial instruments, or a change in the Committee's risk tolerance, are among factors to be considered in determining whether the Guidelines shall be revised.

1. Investment Policy

a. Investment Objective

The primary investment objective of the Program is to generate a rate of return from investments in common stocks of Non US domiciled, developed market companies which exceeds the return of the MSCI World ex-US (Net Dividends) Tobacco Free Index ("Benchmark"), while maintaining risk similar to that of the Benchmark. The Benchmark shall be unhedged (see part (e) below).

b. Investment Strategy

The Program shall be implemented by hiring multiple external investment managers ("Managers"). Each Manager's strategy will focus on a subset of the broad equity market in which the Manager is believed to have a competitive advantage in providing returns in excess of its respective benchmark on a risk adjusted basis. The TreasurerChief Investment Officer will monitor whether the aggregate of all externally managed portfolios adheres to these Guidelines, and in particular achieves the overall performance and risk objectives stated below. In addition, each Manager shall have written guidelines, which will detail its strategy, performance objectives, permitted investments, and restrictions. The TreasurerChief Investment Officer will monitor each Manager's adherence to its respective guidelines. In no case may a Manager's guidelines create potential conflict with the Guidelines for the Program.

c. Performance Objective

The performance objective of the Program is to meet or exceed the return of the Benchmark, on a consistent basis over time, net of all costs and fees. Each Manager will have a unique objective, or style benchmark, which is appropriate to its individual strategy, and specified in its guidelines.

d. Risk Objective

The Program shall be managed so that its annualized tracking error budget shall be 300 basis points. Each Manager will have a unique active risk budget, relative to its style

benchmark, which is appropriate to its individual strategy, and specified in its guidelines, and which will reflect the risk-return profile of its specific investment objectives.

e. Currency Risk

The Committee accepts that as a US dollar denominated investor, investing in Non US developed markets equity implicitly involves currency risk. The Committee accepts this additional risk or volatility as part of the asset class and has adopted an "unhedged" performance benchmark. An unhedged benchmark is a benchmark in which the underlying securities' returns are translated from their local currency back to US dollars at each measurement date.

However, this general policy toward currency risk shall not prevent individual Managers from fully or partially hedging or otherwise actively managing the currency risk in their portfolios (subject to their individual guidelines). Nor shall it prevent the TreasurerChief Investment Officer from employing currency overlay managers to manage the currency risk of the aggregate portfolio.

The contribution to active risk resulting from the aggregate of active currency management, whether by Managers or by the <u>TreasurerChief Investment Officer</u>'s overlay managers, shall be included in the total tracking error and be subject to limitations above and to the Retirement Fund's overall risk budget as described in Appendix 2.

f. Other Constraints and Considerations

- Managers shall comply with applicable State and Federal laws and regulations and the prudence requirement described in section 3(a) of the Policy.
- Managers shall act solely in the interests of the Fund's constituents.
- Implementation of this Program shall comply with the Fund's Policy.

2. Investment Guidelines

a. Asset Allocation

It is expected that the Program will be fully invested in equity and equity related securities at all times. Any cash held by Managers for the purpose of facilitating cash flows or portfolio transactions will be swept daily by the custodian. The <u>TreasurerChief Investment Officer</u> or designated overlay manager may equitize this cash using appropriate derivative contracts.

b. Types of Securities

The Program will be invested in diversified portfolios of common stocks that are listed on national securities exchanges. These common stocks shall be predominantly of developed market companies domiciled outside the United States, or which derive the majority of their sales and earnings from countries outside the United States. Managers may also invest in stocks that are traded over-the-counter and in other equity-related securities and private placements as limited in their guidelines. Subject to limitations in their guidelines, Managers may also obtain equity exposure through their own specialty commingled funds.

Managers may use currency futures, forward contracts, or options to manage currency risk and hedge existing equity exposures. Use of and limits on equity derivative securities by individual managers must be specified in writing in their guidelines and must be consistent with the Derivatives Policy, Appendix 4.

Nothing in these guidelines shall be construed to restrict the use of diversified global equity strategies (consisting of equities of U.S. and Non-U.S. domiciled companies). The TreasurerChief Investment Officer shall ensure that such strategies are consistent with both these guidelines and the guidelines of the U.S. equity Program, and the Manager(s)' guidelines will be structured to ensure that performance and risk objectives for both equity classes are met.

c. Restrictions

The Managers may not

- Purchase securities of tobacco related companies, within separately managed accounts, as per the Policy, section 5b.
- Lend securities
- Purchase commodities or commodity derivatives within separately managed accounts
- Purchase fixed income securities except for cash equivalents and margin requirements as part of a portable alpha strategy
- Buy party-in-interest securities
- Buy lettered, legend, or other restricted stock, except for 144A securities, which are permitted
- Buy or write equity linked notes
- Employ economic leverage in the portfolio through borrowing or derivatives
- Employ gross leverage in their portfolio in excess of 300% of the market value of the portfolio, at all times

d. Diversification and Concentration

The Program's investments will be appropriately diversified to control overall risk and will exhibit portfolio risk characteristics similar to those of the Benchmark. The <u>TreasurerChief Investment Officer</u> is responsible for managing aggregate risk exposures, including country allocation, industry allocation, and currency. The following limitations apply:

- The Program's beta with respect to the Benchmark will not be significantly different from 1.0, as measured over the most recent 12 month period.
- Notwithstanding the overall diversification of the Program, the <u>TreasurerChief</u>
 <u>Investment Officer</u> may set limits on any individual Manager's tracking error and/or contribution to active risk of the Program.
- The aggregate holdings of any security may not exceed 4.9% of that security's outstanding shares.
- No investment with any single manager can represent more than 12% of the total Program's assets. Passive (i.e., index replicating) managers are not subject to this limitation.

It is expected that each Manager's portfolio will be appropriately diversified, within limits established in its guidelines and relative to its performance objectives, to control risk, but without unduly restricting a Manager's ability to out-perform its benchmark. That is, an individual Manager's portfolio may be more concentrated than is appropriate for the Program's aggregate investments.

e. Managers shall employ best execution. Transactions may be directed to brokers/dealers designated by the <u>TreasurerChief Investment Officer</u> at the Manager's discretion when best execution is available.

f. Managing Cash Flows

The <u>TreasurerChief Investment Officer</u> may use derivative contracts (including but not limited to index futures and ETF's) for facilitating investment of cash flows related to contributions, withdrawals, or other asset allocation rebalancing.

3. Evaluation and Review

a. Policy and Guideline Review

The <u>TreasurerChief Investment Officer</u> shall review the Objectives and Guidelines at least annually, and report to the Committee on the impact of the Guidelines on the Program's performance.

b. Program performance and risk exposures shall be evaluated at multiple levels in accordance with the performance objectives of the Program and individual Managers.

4. Reporting

On a quarterly basis, the <u>TreasurerChief Investment Officer</u> shall provide the following reports to the Committee:

- a. A performance attribution explaining differences in sector, country, and currency weights and returns, between the aggregate Program investments and the Benchmark, and an explanation of any material differences.
- b. A forecast risk report, using the <u>TreasurerChief Investment Officer</u>'s risk system, showing the total, systematic ("common factor"), and non-systematic ("residual") risk of the aggregate portfolio, the Benchmark, and the active Program relative to the Benchmark, and an explanation of any material differences.
- c. A summary of individual Manager performance, on an absolute and benchmark relative basis.

Managers will be required to provide the Treasurer Chief Investment Officer monthly and quarterly reports, including but not limited to:

- a. A monthly performance statement for the portfolio (gross and net) and the benchmark, and also provide the gross performance for the product Composite at least quarterly
- b. If available, a monthly or quarterly forecast risk report, using the Manager's risk system, showing the total, systematic ("common factor"), and non-systematic ("residual") risk of the portfolio relative to the benchmark
- c. A monthly or quarterly variance analysis, indicating sources of performance variances (difference between portfolio and benchmark return), and an explanation of any material differences.
- d. A quarterly review of portfolio and strategy performance including a market outlook

- e. An annual statement of compliance with investment guidelines
- 5. Definitions: See Appendix 8

APPENDIX 7C

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EMERGING MARKET NON U.S. EQUITY INVESTMENT GUIDELINES

The purpose for these performance objectives ("Objectives") and management guidelines ("Guidelines") is to clearly state the investment approach, define performance objectives and to control risk in the management of the Emerging Market Non U.S. Equity allocation of the Fund ("the Program"). These Objectives and Guidelines shall be subject to ongoing review by the Committee. Capital market conditions, changes in the investment industry, new financial instruments, or a change in the Committee's risk tolerance, are among factors to be considered in determining whether the Guidelines shall be revised.

1. Investment Policy

a. Investment Objective

The primary investment objective of the Program is to generate a rate of return from investments in common stocks of emerging market domiciled companies which exceeds the return on the MSCI Emerging Market (Net Dividends) Index ("Benchmark"), while maintaining risk similar to that of the Benchmark. The Benchmark shall be unhedged (see part (e) below).

b. Investment Strategy

The Program shall be implemented by hiring multiple external investment managers ("Managers"). Each Manager's strategy will focus on a subset of the broad equity market in which the Manager is believed to have a competitive advantage in providing returns in excess of its respective benchmark on a risk adjusted basis. The TreasurerChief Investment Officer will monitor whether the aggregate of all externally managed portfolios adheres to these Guidelines, and in particular achieves the overall performance and risk objectives stated below. In addition, each Manager shall have written guidelines, which will detail its strategy, performance objectives, permitted investments, and restrictions. The TreasurerChief Investment Officer will monitor each Manager's adherence to its respective guidelines. In no case may a Manager's guidelines create potential conflict with the Guidelines for the Program.

c. Performance Objective

The performance objective of the Program is to meet or exceed the return of the Benchmark, on a consistent basis over time, net of all costs and fees. Each Manager will have a unique objective, or style benchmark, which is appropriate to its individual strategy, and specified in its guidelines.

d. Risk Objective

The Program shall be managed so that its annualized tracking error budget shall be 400 basis points. Each Manager will have a unique active risk budget, relative to its style benchmark, which is appropriate to its individual strategy, and specified in its guidelines, and which will reflect the risk-return profile of its specific investment objectives.

e. Currency Risk

The Committee accepts that as a US dollar denominated investor, investing in Emerging Markets equity implicitly involves currency risk. The Committee accepts this additional risk or volatility as part of the asset class and has adopted an "unhedged" performance benchmark. An unhedged benchmark is a benchmark in which the underlying securities' returns are translated from their local currency back to US dollars at each measurement date.

However, this general policy toward currency risk shall not prevent individual Managers from fully or partially hedging or otherwise actively managing the currency risk in their portfolios (subject to their individual guidelines). Nor shall it prevent the TreasurerChief Investment Officer from employing currency overlay managers to manage the currency risk of the aggregate portfolio.

The contribution to active risk resulting from the aggregate of active currency management, whether by Managers or by the <u>TreasurerChief Investment Officer</u>'s overlay managers, shall be included in the total tracking error and be subject to limitations above and to the Retirement Fund's overall risk budget as described in Appendix 2.

f. Other Constraints and Considerations

- Managers shall comply with applicable State and Federal laws and regulations and the prudence requirement described in section 3(a) of the Policy.
- Managers shall act solely in the interests of the Fund's constituents.
- Implementation of this Program shall comply with the Fund's Policy.

2. Investment Guidelines

a. Asset Allocation

It is expected that the Program will be fully invested in equity and equity related securities at all times. Any cash held by Managers for the purpose of facilitating cash flows or portfolio transactions will be swept daily by the custodian. The <u>TreasurerChief Investment Officer</u> or designated overlay manager may equitize this cash using appropriate derivatives contracts.

b. Types of Securities

The Program will be invested in diversified portfolios of common stocks that are listed on national securities exchanges. These common stocks shall be predominantly of companies domiciled in emerging market countries. Managers may also invest in stocks that are traded over-the-counter and in other equity-related securities and private placements as limited in their guidelines. Subject to limitations in their guidelines, Managers may obtain equity exposure through their own specialty commingled funds.

Managers may use currency futures, forward contracts, or options to manage currency risk and hedge existing equity exposures. Use of and limits on equity derivative securities by individual managers must be specified in writing in their guidelines and must be consistent with the Derivatives Policy, Appendix 4.

c. Restrictions

The Managers may **not**

- Purchase securities of tobacco related companies, within separately managed accounts, as per the Policy, section 5b.
- Lend securities
- Purchase commodities or commodity derivatives, within separately managed accounts
- Purchase fixed income securities within separately managed accounts, except for cash equivalents and margin requirements as part of a portable alpha strategy, or in lieu of the same company's equity securities
- Buy party-in-interest securities
- Buy lettered, legend, or other restricted stock, except for 144A securities, which are permitted
- Buy or write equity linked notes
- Employ economic leverage in the portfolio through borrowing or derivatives
- Employ gross leverage in their portfolio in excess of 300% of the market value of the portfolio, at all times

d. Diversification and Concentration

The Program's investments will be appropriately diversified to control overall risk and will exhibit portfolio risk characteristics similar to those of the Benchmark. The <u>TreasurerChief Investment Officer</u> is responsible for managing aggregate risk exposures, including country allocation, industry allocation, and currency. The following limitations apply:

- The Program's beta with respect to the Benchmark will not be significantly different from 1.0, as measured over the most recent 12 month period.
- Notwithstanding the overall diversification of the Program, the <u>TreasurerChief</u>
 <u>Investment Officer</u> may set limits on any individual Manager's tracking error and/or contribution to active risk of the Program.
- The aggregate holdings of any security may not exceed 4.9% of that security's outstanding shares.
- No investment with any single manager can represent more than 15% of the total Program's assets. Passive (i.e., index replicating) managers are not subject to this limitation.

It is expected that each Manager's portfolio will be appropriately diversified, within limits established in its guidelines and relative to its performance objectives, to control risk without unduly restricting a Manager's ability to out-perform its benchmark. That is, an individual Manager's portfolio may be more concentrated than is appropriate for the Program's aggregate investments.

e. Managers shall employ best execution. Transactions may be directed to brokers/dealers designated by the <u>TreasurerChief Investment Officer</u> at the Manager's discretion when best execution is available.

f. Managing Cash Flows

The <u>TreasurerChief Investment Officer</u> may use derivative contracts (including but not limited to index futures and ETF's) for facilitating investment of cash flows related to contributions, withdrawals, or other asset allocation rebalancing.

3. Evaluation and Review

a. Policy and Guideline Review

The <u>TreasurerChief Investment Officer</u> shall review the Objectives and Guidelines at least annually, and report to the Committee on the impact of the Guidelines on the Program's performance.

b. Program performance and risk exposures shall be evaluated at multiple levels in accordance with the performance objectives of the Program and individual Managers.

4. Reporting

On a quarterly basis, the <u>TreasurerChief Investment Officer</u> shall provide the following reports to the Committee:

- a. A performance attribution explaining differences in sector, country, and currency weights and returns, between the aggregate Program investments and the Benchmark, and an explanation of any material differences.
- b. A forecast risk report, using the <u>TreasurerChief Investment Officer</u>'s risk system, showing the total, systematic ("common factor"), and non-systematic ("residual") risk of the aggregate portfolio, the Benchmark, and the active Program relative to the Benchmark, and an explanation of any material differences.
- c. A summary of individual Manager performance, on an absolute and benchmark relative basis.

Managers will be required to provide the TreasurerChief Investment Officer monthly and quarterly reports, including but not limited to:

- a. A monthly performance statement for the portfolio (gross and net) and the benchmark, and also provide the gross performance for the product Composite at least quarterly
- b. If available, a monthly or quarterly forecast risk report, using the Manager's risk system, showing the total, systematic ("common factor"), and non-systematic ("residual") risk of the portfolio relative to the benchmark
- c. A monthly or quarterly variance analysis, indicating sources of performance variances (difference between portfolio and benchmark return), and an explanation of any material differences.
- d. A quarterly review of portfolio and strategy performance including a market outlook
- e. An annual statement of compliance with investment guidelines

5. Definitions: See Appendix 8

APPENDIX 7D

This version: November 15, 2012

VersionLast approved: March 19, 2008 (new)

GLOBAL EQUITY INVESTMENT GUIDELINES

The purpose for these performance objectives ("Objectives") and management guidelines ("Guidelines") is to clearly state the investment approach, define performance objectives and to control risk in the management of the Global Equity allocation of the Fund ("the Program"). Wherever appropriate, these guidelines and objectives are consistent with guidelines for other Public Equity classes. These Objectives and Guidelines shall be subject to ongoing review by the Committee. Capital market conditions, changes in the investment industry, new financial instruments, or a change in the Committee's risk tolerance, are among factors to be considered in determining whether the Guidelines shall be revised.

1. Investment Policy

a. Investment Objective

The primary investment objective of the Program is to generate a rate of return from investments in common stocks which exceeds the return on the global equity market, measured by the MSCI All Country World Index (ACWI) Investable Market Tobacco Free (Net Dividends) Index ("Benchmark"), while maintaining risk similar to that of the Benchmark. The Benchmark shall be unhedged (see part (e) below).

b. Investment Strategy

The Program shall be implemented by hiring multiple external investment managers ("Managers"). Each Manager's strategy will focus on a subset of the global equity market in which the Manager is believed to have a competitive advantage in providing returns in excess of its respective benchmark on a risk adjusted basis. The TreasurerChief Investment Officer will monitor whether the aggregate of all externally managed portfolios adheres to these Guidelines, and in particular achieves the overall performance and risk objectives stated below. In addition, each Manager shall have written guidelines, which will detail its strategy, performance objectives, permitted investments, and restrictions. The TreasurerChief Investment Officer will monitor each Manager's adherence to its respective guidelines. In no case may a Manager's guidelines create potential conflict with the Guidelines for the Program.

c. Performance Objective

The performance objective of the Program is to meet or exceed the return of the Benchmark, on a consistent basis over time, net of all costs and fees. Each Manager will have a unique objective, or style benchmark, which is appropriate to its individual strategy, and specified in its guidelines.

d. Risk Objective

The Program shall be managed so that its annualized tracking error budget shall be 400 basis points. Each Manager will have a unique active risk budget, relative to its style

benchmark, which is appropriate to its individual strategy, and specified in its guidelines, and which will reflect the risk-return profile of its specific investment objectives.

e. Currency Risk

The Committee accepts that as a US dollar denominated investor, investing in Global equity implicitly involves currency risk. The Committee accepts this additional risk or volatility as part of the asset class and has adopted an "unhedged" performance benchmark. An unhedged benchmark is a benchmark in which the underlying securities' returns are translated from their local currency back to US dollars at each measurement date.

However, this general policy toward currency risk shall not prevent individual Managers from fully or partially hedging or otherwise actively managing the currency risk in their portfolios (subject to their individual guidelines). Nor shall it prevent the TreasurerChief Investment Officer from employing currency overlay managers to manage the currency risk of the aggregate portfolio.

The contribution to active risk resulting from the aggregate of active currency management, whether by Managers or by the <u>TreasurerChief Investment Officer</u>'s overlay managers, shall be included in the total tracking error and be subject to limitations above and to the Retirement Fund's overall risk budget as described in Appendix 2.

f. Other Constraints and Considerations

- Managers shall comply with applicable State and Federal laws and regulations and the prudence requirement described in section 3(a) of the Policy.
- Managers shall act solely in the interest of the Fund's constituents.
- Implementation of this Program shall comply with the Fund's Policy.

2. Investment Guidelines

a. Asset Allocation

It is expected that the Program will be fully invested in equity and equity-related securities at all times. Any cash or held by Managers for the purpose of facilitating cash flows or portfolio transactions will be swept daily by the custodian. The <u>TreasurerChief Investment Officer</u> or designated overlay manager may equitize this cash using appropriate derivatives contracts.

b. Types of Securities

The Program will be invested in diversified portfolios of common stocks that are listed on national securities exchanges. Managers may also invest in stocks that are traded over-the-counter and in other equity-related securities (such as ETF's) and private placements as limited in their guidelines. Subject to limitations in their guidelines, Managers may also obtain equity exposure through their own specialty commingled funds.

Managers may use currency futures, forward contracts, or options to manage currency risk and hedge existing equity exposures. Use of and limits on currency and equity derivative securities by managers must be specified in writing in their guidelines and must be consistent with the Derivatives Policy, Appendix 4.

c. Restrictions

The Managers may **not**

- Purchase securities of tobacco related companies, as per the Policy, section 5b.
- Lend securities
- Purchase commodities or commodity derivatives
- Purchase fixed income securities except for cash equivalents and margin requirements as part of a portable alpha strategy
- Buy party-in-interest securities
- Buy lettered, legend, or other restricted stock, except for 144A securities, which are permitted
- Buy or write equity linked notes
- Employ economic leverage in the portfolio through borrowing or derivatives
- Employ gross leverage in their portfolio in excess of 300% of the market value of the portfolio, at all times

d. Diversification and Concentration

The Program's investments will be appropriately diversified to control overall risk and will exhibit portfolio risk characteristics similar to those of the Benchmark. The <u>TreasurerChief Investment Officer</u> is responsible for managing aggregate risk exposures. The following limitations apply:

- The Program's beta with respect to the Benchmark will not be significantly different from 1.0, as measured over the most recent 12 month period.
- Notwithstanding the overall diversification of the Program, the <u>TreasurerChief</u>
 <u>Investment Officer</u> may set limits on any individual Manager's tracking error and/or contribution to active risk of the Program.
- The aggregate holdings of any security may not exceed 4.9% of that security's outstanding shares.
- No investment with any single manager can represent more than 15% of the total <u>Program's assets. Passive (i.e., index replicating) managers are not subject to this limitation.</u>

It is expected that each Manager's portfolio will be appropriately diversified, within limits established in its guidelines and relative to its performance objectives, to control risk, but without unduly restricting a Manager's ability to out-perform its benchmark. That is, an individual Manager's portfolio may be more concentrated than is appropriate for the Program's aggregate investments.

e. Managers shall employ best execution. Transactions may be directed to brokers/dealers designated by the TreasurerChief Investment Officer at the Manager's discretion when best execution is available.

f. Managing Cash Flows

The <u>TreasurerChief Investment Officer</u> may use derivative contracts (including but not limited to index futures and ETF's) for facilitating investment of cash flows related to contributions, withdrawals, or other asset allocation rebalancing.

3. Evaluation and Review

a. Policy and Guideline Review

The <u>TreasurerChief Investment Officer</u> shall review the Objectives and Guidelines at least annually, and report to the Committee on the impact of the Guidelines on the Program's performance.

b. Program performance and risk exposures shall be evaluated at multiple levels in accordance with the performance objectives of the Program and individual Managers.

4. Reporting

On a quarterly basis, the <u>TreasurerChief Investment Officer</u> shall provide the following reports to the Committee:

- d. <u>a.</u> A performance attribution explaining differences in sector, currency, and country weights and returns, between the aggregate Program investments and the Benchmark, and an explanation of any material differences.
- e. <u>b.</u> A forecast risk report, using the <u>TreasurerChief Investment Officer</u>'s risk system, showing the total, systematic ("common factor"), and non-systematic ("residual") risk of the aggregate portfolio, the Benchmark, and the active Program relative to the Benchmark, and an explanation of any material differences.
- £. <u>c.</u> A summary of individual manager performance, on an absolute and benchmark relative basis.

Managers will be required to provide the TreasurerChief Investment Officer monthly and quarterly reports, including but not limited to:

- **f.** <u>a.</u> A monthly performance statement for the portfolio (gross and net) and the benchmark, and provide the gross performance for the product Composite at least quarterly.
- g. <u>b.</u> If available, a monthly or quarterly forecast risk report, using the Manager's risk system, showing the total, systematic ("common factor"), and non-systematic ("residual") risk of the portfolio relative to the benchmark.
- h. <u>c.</u> A monthly or quarterly variance analysis, indicating sources of performance variances (difference between portfolio and benchmark return), and an explanation of any material differences.
- <u>i.</u> <u>d.</u> A quarterly review of portfolio and strategy performance including a market outlook.
- <u>e.</u> An annual statement of compliance with investment guidelines.

5. Definitions: See Appendix 8

APPENDIX 7E

Last approved: August 16, 2005 This version: November 15, 2012 This Version: February 14, 2006 Last approved: February 14, 2006

LONG DURATION FIXED INCOME INVESTMENT GUIDELINES

The purpose for these performance objectives ("Objectives") and management guidelines ("Guidelines") is to clearly state the investment approach, define performance objectives and to control risk in the management of the Long Duration Fixed Income allocation of the Fund ("the Program"). These Objectives and Guidelines shall be subject to ongoing review by the Committee. Capital market conditions, changes in the investment industry, new financial instruments, or a change in the Committee's risk tolerance, are among factors to be considered in determining whether the Guidelines shall be revised.

1. Investment Policy

a. Investment Objective

The primary investment objective of the Program is to generate a rate of return from investments in US dollar denominated bonds which exceeds the return on the long duration US fixed income market, as measured by the Citigroup Large Pension Fund Index ("Benchmark"), while maintaining risk similar to that of the Benchmark.

b. Investment Strategy

The Program shall be implemented by the TreasurerChief Investment Officer's internal fixed income staff, and may be supplemented by hiring multiple external investment managers (internal and external strategies will be collectively referred to as "Managers"). Each strategy will focus on a subset of the broad fixed income market in which the Manager is believed to have a competitive advantage in providing returns in excess of its respective benchmark on a risk adjusted basis. The TreasurerChief Investment Officer will monitor whether the aggregate of all fixed income portfolios adheres to these Guidelines, and in particular achieves the overall performance and risk objectives stated below. In addition, each Manager shall have written guidelines, which will detail its strategy, performance objectives, permitted investments, and restrictions. The TreasurerChief Investment Officer will monitor each Manager's adherence to its respective guidelines. In no case may a Manager's guidelines conflict with the Guidelines for the Program.

c. Performance Objectives

The performance objective of the Program is to meet or exceed the return of the Benchmark, on a consistent basis over time, net of all costs and fees. Each Manager will have a unique objective, or style benchmark, which is appropriate to its individual strategy, and specified in its guidelines.

d. Risk Objective

The Program shall be managed so that its annualized tracking error budget shall be 150 basis points. Each Manager will have a unique active risk budget, relative to its style

benchmark, which is appropriate to its individual strategy, and specified in its guidelines, and which will reflect the risk-return profile of its specific investment objectives.

e. Other Constraints and Considerations

- Managers shall comply with applicable State and Federal laws and regulations and the prudence requirement described in section 3(a) of the Policy.
- Managers shall act solely in the interest of the Fund's constituents.
- Implementation of this Program shall comply with the Fund's Policy.

2. Investment Guidelines

a. Asset Allocation

The portfolio will be invested **primarily** in marketable, publicly traded, investment grade fixed income instruments, notes and debentures denominated in U.S. dollars.

b. Types of Securities

The Program will be invested in diversified portfolios of fixed income securities, <u>similar to those</u> in the benchmark, and their derivative securities, subject to restrictions noted below in section 2c and 2d. For a description of the Benchmark see Appendix 8 (Definitions).

The following list is indicative of the securities which are appropriate for the Program, given its Benchmark and risk budget. It should not be construed to be an exhaustive list of "allowable" investment securities. Security types and/or strategies not specifically enumerated, but which the Treasurer and Regents' Investment Consultant believe are appropriate and consistent with the Investment Policy may also be held, subject to the restrictions in 2c. and 2d. below.

The Program may purchase securities on a when-issued basis or for forward delivery.

1. Fixed income instruments

- a. Obligations issued or guaranteed by the U.S. Federal Government, U.S. Federal Agencies or U.S. government-sponsored corporations and agencies
- b. Obligations of U.S. and foreign corporations such as corporate bonds, convertible and non-convertible notes and debentures, preferred stocks, and bank loans
- c. Mortgage-backed and asset-backed securities, including CMBS, mortgage TBA's, and other MBS derivatives, including CMO's, REMICS, IO's, and PO's
- d. CBO's, CLO's, and CDO's
- e. Obligations of international agencies, supranational entities, and foreign governments (or their subdivisions or agencies), as well as foreign currency linked securities, warrants, preferred stocks and forward contracts.
- f. Obligations issued or guaranteed by U.S. local, city and state governments and agencies
- g. Private Placements or Rule 144A securities, issued with or without registration rights

2. Short term fixed income instruments

- a. US Treasury and Agency bills and notes
- b. Certificates of deposit
- c. Bankers acceptances
- d. Commercial paper

- e. Repurchase and reverse repurchase agreements (must be fully collateralized with approved collateral, using approved counterparties only)
- f. Eurodollar CD's, TD's, and commercial paper
- g. US and Eurodollar floating rate notes
- h. Money market funds managed by the Custodian
- i. Short Term Investment Pool (STIP), managed by the Treasurer

3. Fixed income derivatives

- a. US Treasury, Agency, and Eurodollar futures
- b. Interest rate options, swaps, and swaptions
- c. Credit default swaps (CDS) and their derivatives
- d. Foreign currency forward contracts and options
- e. Inflation linked futures and swaps
- f. Total rate of return swaps

c. Restrictions

The Managers may **not**

- Purchase securities of tobacco related companies, as per the Policy, section 5b.
- Invest in mutual funds or group trusts unless specifically allowed in their guidelines
- Buy securities on margin, except for futures or swaps, against which are held a risk equivalent amount of cash or liquid securities
- Purchase equity securities (other than preferred stock) or commodities or their derivatives
- Buy party-in-interest securities
- Buy securities restricted as to sale or transfer, except for 144A securities, which are permitted
- Buy or write structured ("levered") notes
- Employ economic leverage in the portfolio through borrowing or derivatives, or engage in derivative strategies that conflict with the Derivatives Policy
- Purchase or sell foreign exchange contracts for any purpose other than hedging their portfolio exposures

d. Diversification and Concentration

The Program's investments will be appropriately diversified to control overall risk. The Program's investments will exhibit portfolio risk characteristics similar to the Benchmark. The following limitations apply in order to manage risk within acceptable ranges:

• Interest rate risk

• The average weighted effective duration of portfolio security holdings shall not vary from that of the Benchmark index by more +/-20%.

Credit risk

- No more than 10% of the Program's investments, measured by market value, should be below "investment grade", i.e. rated lower than the following standards or their equivalent by all major NRSRO's
 - Standard & Poor's and Fitch (BBB-)
 - Moody's (Baa3)
- o Commercial Paper must have a rating of at least A-1, P-1, D-1, or F-1

- o The Program's investments should exhibit an average credit quality of A (or equivalent) or better. Split-rated credits are considered to have the higher credit rating as long as the higher rating is given by one of the NRSRO's
- Except for securities issued by the US Treasury or Agencies of the US
 Government, no more than 3% of the Program's market value may be invested in any single issuer.

• Liquidity risk

- o No more than 20% of the Program's market value may be invested in Private Placements or Rule 144A securities
- The Program's investments in aggregate of any security may not exceed 20% of that security's outstanding par value, without a written exception approved by the Treasurer Chief Investment Officer.

• Foreign exchange risk

o No more than 10% of the Program market value can be invested in securities denominated in currencies other than US dollar

• Asset allocation risk

- The Program's investments in aggregate may overweight or underweight Core sectors so that the Core sector contribution to portfolio effective duration is within +/- 50% of the corresponding Benchmark core sector contribution to portfolio effective duration. [Core sectors are defined as Government Sponsored, Credit, and Collateral.]
- Notwithstanding the overall diversification of the Program, the <u>TreasurerChief</u>
 <u>Investment Officer</u> may set limits on any individual Manager's tracking error and/or contribution to active risk of the Program.

It is expected that each Manager's portfolio be appropriately diversified, within limits established in its guidelines and relative to its performance objectives, to control risk, but without unduly restricting the Manager's ability to out-perform its benchmark. That is, the Managers' portfolios may be more concentrated than is appropriate for the Program's aggregate investments.

e. Managers shall employ best execution. Transactions shall be directed to brokers/dealers designated by the <u>TreasurerChief Investment Officer</u> at the Manager's discretion when best execution is available.

<u>f.</u> Managing Cash Flows

Managers may use derivatives and foreign exchange forwards for facilitating investment of cash flows related to income received, contributions, withdrawals, or other asset allocation rebalancing. Fixed income exposure, including cash and derivative instruments, shall at all times be equal to the market value of the portfolio (leverage is not permitted).

3. Evaluation and Review

a. Policy and Guideline Review

The <u>TreasurerChief Investment Officer</u> shall review the Objectives and Guidelines at least annually, and report to the Committee on the impact of the Guidelines on the Program's performance.

b. Program performance and risk exposures shall be evaluated at multiple levels in accordance with the performance objectives of the Program and individual Managers.

4. Reporting

On a quarterly basis, the <u>TreasurerChief Investment Officer</u> shall provide the following reports to the Committee:

- a. A performance attribution explaining differences in sector weights and returns, between the aggregate Program investments and the Benchmark, and an explanation of any material differences.
- b. A forecast risk report, using the <u>TreasurerChief Investment Officer</u>'s risk system, showing the total, systematic ("common factor"), and non-systematic ("residual") risk of the aggregate portfolio, the Benchmark, and the active Program relative to the Benchmark, and an explanation of any material differences.
- c. A summary of individual Manager performance, on an absolute and benchmark relative basis.

Managers will be required to provide the Treasurer Chief Investment Officer monthly and quarterly reports, including but not limited to:

- a. A monthly performance statement for the portfolio (gross and net) and the benchmark, and also provide the gross performance for the product Composite at least quarterly
- b. If available, a monthly or quarterly forecast risk report, using the Manager's risk system, showing the total, systematic ("common factor"), and non-systematic ("residual") risk of the portfolio relative to the benchmark
- c. A monthly or quarterly variance analysis, indicating sources of performance variances (difference between portfolio and benchmark return), and an explanation of any material differences.
- d. A quarterly review of portfolio and strategy performance including a market outlook
- e. An annual statement of compliance with investment guidelines

5. Definitions: See Appendix 8

APPENDIX 7F

This Version: February 14, 2006 November 15, 2012

Last approved: February 14, 2006

CORE FIXED INCOME INVESTMENT GUIDELINES

The purpose for these performance objectives ("Objectives") and management guidelines ("Guidelines") is to clearly state the investment approach, define performance objectives and to control risk in the management of the Core Fixed Income allocation of the Fund ("the Program"). These Objectives and Guidelines shall be subject to ongoing review by the Committee. Capital market conditions, changes in the investment industry, new financial instruments, or a change in the Committee's risk tolerance, are among factors to be considered in determining whether the Guidelines shall be revised.

1. Investment Policy

a. Investment Objective

The primary investment objective of the Program is to generate a rate of return from investments in US dollar denominated bonds which exceeds the return on the aggregate US fixed income market, as measured by the Barclays Capital US Aggregate Index ("Benchmark"), while maintaining risk similar to that of the Benchmark.

b. Investment Strategy

The Program shall be implemented by the TreasurerChief Investment Officer's internal fixed income staff, and may be supplemented by hiring multiple external investment managers (internal and external strategies will be collectively referred to as "Managers"). Each Manager's strategy will focus on a subset of the broad fixed income market in which the Manager is believed to have a competitive advantage in providing returns in excess of its respective benchmark on a risk adjusted basis. The TreasurerChief Investment Officer will monitor whether the aggregate of all fixed income portfolios adheres to these Guidelines, and in particular achieves the overall performance and risk objectives stated below. In addition, each Manager shall have written guidelines, which will detail its strategy, performance objectives, permitted investments, and restrictions. The TreasurerChief Investment Officer will monitor each Manager's adherence to its respective guidelines. In no case may a Manager's guidelines conflict with the Guidelines for the Program.

c. Performance Objectives

The performance objective of the Program is to meet or exceed the return of the Benchmark, on a consistent basis over time, net of all costs and fees. Each Manager will have a unique objective, or style benchmark, which is appropriate to its individual strategy, and specified in its guidelines.

d. Risk Objective

The Program shall be managed so that its annualized tracking error budget shall be 100 basis points. Each Manager will have a unique active risk budget, relative to its style

benchmark, which is appropriate to its individual strategy, and specified in its guidelines, and which will reflect the risk-return profile of its specific investment objectives.

e. Other Constraints and Considerations

- Managers shall comply with applicable State and Federal laws and regulations and the prudence requirement described in section 3(a) of the Policy.
- Managers shall act solely in the interest of the Fund's constituents.
- Implementation of this Program shall comply with the Fund's Policy.

2. Investment Guidelines

a. Asset Allocation

The portfolio will be invested primarily in marketable, publicly traded, investment grade fixed income instruments, notes and debentures denominated in U.S. dollars.

b. Types of Securities

The Program will be invested in diversified portfolios of fixed income securities, <u>similar to those in the benchmark</u>, and their derivative securities, subject to restrictions noted below in section 2c and 2d. For a description of the Benchmark see Appendix 8 (Definitions).

The following list is indicative of the securities which are appropriate for the Program, given its Benchmark and risk budget. It should not be construed to be an exhaustive list of "allowable" investment securities. Security types and/or strategies not specifically enumerated, but which the Treasurer and Regents' Investment Consultant believe are appropriate and consistent with the Investment Policy may also be held, subject to the restrictions in 2c. and 2d. below.

The Program may purchase securities on a when-issued basis or for forward delivery.

1. Fixed income instruments

- a. Obligations issued or guaranteed by the U.S. Federal Government, U.S. Federal Agencies or U.S. government-sponsored corporations and agencies
- b. Obligations of U.S. and foreign corporations such as corporate bonds, convertible and non-convertible notes and debentures, preferred stocks, and bank loans
- c. Mortgage-backed and asset-backed securities, including CMBS, mortgage TBA's, and other MBS derivatives, including CMO's, REMICS, IO's, and PO's
- d. CBO's, CLO's, and CDO's
- e. Obligations of international agencies, supranational entities, and foreign governments (or their subdivisions or agencies), as well as foreign currency linked securities, warrants, preferred stocks and forward contracts.
- f. Obligations issued or guaranteed by U.S. local, city and state governments and agencies
- g. Private Placements or Rule 144A securities, issued with or without registration rights

2. Short term fixed income instruments

- a. US Treasury and Agency bills and notes
- b. Certificates of deposit
- c. Bankers acceptances
- d. Commercial paper

- e. Repurchase and reverse repurchase agreements (must be fully collateralized with approved collateral, using approved counterparties only)
- f. Eurodollar CD's, TD's, and commercial paper
- g. US and Eurodollar floating rate notes
- h. Money market funds managed by the Custodian
- i. Short Term Investment Pool (STIP), managed by the Treasurer

3. Fixed income derivatives

- a. US Treasury, Agency, and Eurodollar futures
- b. Interest rate options, swaps, and swaptions
- c. Credit default swaps (CDS) and their derivatives
- d. Foreign currency forward contracts and options
- e. Inflation linked futures and swaps
- f. Total rate of return swaps

c. Restrictions

The Managers may not

- Purchase securities of tobacco related companies, as per the Policy, section 5b.
- Invest in mutual funds or group trusts unless specifically allowed in their guidelines
- Buy securities on margin, except for futures or swaps, against which are held a risk equivalent amount of cash or liquid securities
- Purchase equity securities (other than preferred stock) or commodities or their derivatives
- Buy party-in-interest securities
- Buy securities restricted as to sale or transfer, except for 144A securities, which are permitted
- Buy or write structured ("levered") notes
- Employ economic leverage in the portfolio through borrowing or derivatives, or engage in derivative strategies that conflict with the Derivatives Policy
- Purchase or sell foreign exchange contracts for any purpose other than hedging their portfolio exposures

d. Diversification and Concentration

The Program's investments will be appropriately diversified to control overall risk. The Program's investments will exhibit portfolio risk characteristics similar to the Benchmark. The following limitations apply in order to manage risk within acceptable ranges:

• Interest rate risk

• The average weighted effective duration of portfolio security holdings shall not vary from that of the Benchmark index by more +/-20%.

Credit risk

- No more than 10% of the Program's investments, measured by market value, should be below "investment grade", i.e. rated lower than the following standards or their equivalent by all major NRSRO's
 - Standard & Poor's and Fitch (BBB-)
 - Moody's (Baa3)
- o Commercial Paper must have a rating of at least A-1, P-1, D-1, or F-1

- o The Program's investments should exhibit an average credit quality of A (or equivalent) or better. Split-rated credits are considered to have the higher credit rating as long as the higher rating is given by one of the NRSRO's
- Except for securities issued by the US Treasury or Agencies of the US
 Government, no more than 3% of the Program's market value may be invested in any single issuer.

• Liquidity risk

- o No more than 20% of the Program's market value may be invested in Private Placements or Rule 144A securities
- The Program's investments in aggregate of any security may not exceed 20% of that security's outstanding par value, without a written exception approved by the Treasurer Chief Investment Officer.

• Foreign exchange risk

o No more than 10% of the Program market value can be invested in securities denominated in currencies other than US dollar

• Asset allocation risk

- o The Program's investments in aggregate may overweight or underweight Core sectors so that the Core sector contribution to portfolio effective duration is within +/- 50% of the corresponding Benchmark core sector contribution to portfolio effective duration. [Core sectors are defined as Government Sponsored, Credit, and Collateral.]
- Notwithstanding the overall diversification of the Program, the <u>TreasurerChief</u>
 <u>Investment Officer</u> may set limits on any individual Manager's tracking error and/or contribution to active risk of the Program.

It is expected that each Manager's portfolio be appropriately diversified, within limits established in its guidelines and relative to its performance objectives, to control risk, but without unduly restricting the Manager's ability to out-perform its benchmark. That is, the Managers' portfolios may be more concentrated than is appropriate for the Program's aggregate investments.

e. Managers shall employ best execution. Transactions shall be directed to brokers/dealers designated by the <u>TreasurerChief Investment Officer</u> at the Manager's discretion when best execution is available.

f. Managing Cash Flows

Managers may use derivatives and foreign exchange forwards for facilitating investment of cash flows related to income received, contributions, withdrawals, or other asset allocation rebalancing. Fixed income exposure, including cash and derivative instruments, shall at all times be equal to the market value of the portfolio (leverage is not permitted).

3. Evaluation and Review

a. Policy and Guideline Review

The <u>TreasurerChief Investment Officer</u> shall review the Objectives and Guidelines at least annually, and report to the Committee on the impact of the Guidelines on the Program's performance.

b. Program performance and risk exposures shall be evaluated at multiple levels in accordance with the performance objectives of the Program and individual Managers.

4. Reporting

On a quarterly basis, the <u>TreasurerChief Investment Officer</u> shall provide the following reports to the Committee:

- a. A performance attribution explaining differences in sector weights and returns, between the aggregate Program investments and the Benchmark, and an explanation of any material differences.
- b. A forecast risk report, using the <u>TreasurerChief Investment Officer</u>'s risk system, showing the total, systematic ("common factor"), and non-systematic ("residual") risk of the aggregate portfolio, the Benchmark, and the active Program relative to the Benchmark, and an explanation of any material differences.
- c. A summary of individual Manager performance, on an absolute and benchmark relative basis.

Managers will be required to provide the Treasurer Chief Investment Officer monthly and quarterly reports, including but not limited to:

- a. A monthly performance statement for the portfolio (gross and net) and the benchmark, and also provide the gross performance for the product Composite at least quarterly
- b. If available, a monthly or quarterly forecast risk report, using the Manager's risk system, showing the total, systematic ("common factor"), and non-systematic ("residual") risk of the portfolio relative to the benchmark
- c. A monthly or quarterly variance analysis, indicating sources of performance variances (difference between portfolio and benchmark return), and an explanation of any material differences.
- d. A quarterly review of portfolio and strategy performance including a market outlook
- e. An annual statement of compliance with investment guidelines

5. Definitions: See Appendix 8

APPENDIX 7G

This Version: May 6, 2009 November 15, 2012

Replaces version: February 14, 2006Last approved: May 6, 2009

TIPS (TREASURY INFLATION PROTECTED SECURITIES) INVESTMENT GUIDELINES

The purpose for these performance objectives ("Objectives") and management guidelines ("Guidelines") is to clearly state the investment approach, define performance objectives and to control risk in the management of the TIPS allocation of the Fund ("the Program"). These Objectives and Guidelines shall be subject to ongoing review by the Committee. Capital market conditions, changes in the investment industry, new financial instruments, or a change in the Committee's risk tolerance, are among factors to be considered in determining whether the Guidelines shall be revised.

1. Investment Policy

a. Investment Objective

The primary investment objective of the Program is to generate a rate of return from investments in US Government issued, dollar denominated, inflation protected bonds which exceeds the return on the Barclays Capital US TIPS Index ("Benchmark"), while maintaining risk similar to that of the Benchmark.

b. Investment Strategy

The Program shall be managed by the <u>TreasurerChief Investment Officer</u>'s internal fixed income staff ("Manager"). The <u>TreasurerChief Investment Officer</u> will monitor whether the Program adheres to these Guidelines, and in particular achieves the performance and risk objectives stated below.

c. Performance Objectives

The performance objective of the Program is to exceed the return of the Benchmark, on a consistent basis over time, net of all costs and fees.

d. Risk Objective

The Program shall be managed so that its annualized tracking error budget shall be 200 basis points.

e. Other Constraints and Considerations

- Manager shall comply with applicable State and Federal laws and regulations and the prudence requirement described in section 3(a) of the Policy.
- Manager shall act solely in the interest of the Fund's constituents.
- Implementation of this Program shall comply with the Fund's Policy.

2. Investment Guidelines

a. Asset Allocation / Types of Securities

The Program will be invested in diversified portfolios of fixed income securities, <u>similar to those in the benchmark</u>, and their derivative securities, subject to restrictions noted below in section 2c and 2d. For a description of the Benchmark see Appendix 8 (Definitions).

The following list is indicative of the securities which are appropriate for the Program, given its Benchmark and risk budget. It should not be construed to be an exhaustive list of "allowable" investment securities. Security types and/or strategies not specifically enumerated, but which the Treasurer and Regents' Investment Consultant believe are appropriate and consistent with the Investment Policy may also be held, subject to the restrictions in 2c. and 2d. below.

The Program may purchase securities on a when-issued basis or for forward delivery.

- 1. Fixed income instruments
 - a. US Treasury Inflation Protected Securities
 - b. US Treasury nominal bonds and notes
 - c. Non-US sovereign inflation linked bonds (G10 countries only)
 - d. Corporate issued inflation linked bonds
- 2. Short term fixed income instruments
 - a. US Treasury bills and notes
 - b. Money market funds managed by the Custodian
 - c. Short Term Investment Pool (STIP), managed by the Treasurer
- 3. Fixed income derivatives
 - a. US Treasury and Eurodollar futures
 - b. Foreign currency forward contracts and options
 - c. Inflation linked futures and swaps
 - d. Total rate of return swaps

b. Restrictions

The Manager may **not**

- Purchase securities of tobacco related companies, as per the Policy, section 5b.
- Invest in mutual funds or group trusts unless specifically allowed in their guidelines
- Buy securities on margin, except for futures or swaps, against which are held a risk equivalent amount of cash or liquid securities
- Purchase equity securities or commodities or their derivatives
- Buy party-in-interest securities
- Buy securities restricted as to sale or transfer, except for 144A securities, which are permitted
- Buy or write structured ("levered") notes
- Employ leverage in the portfolio through borrowing or derivatives, or engage in derivative strategies that conflict with the Derivatives Policy
- Purchase or sell foreign exchange contracts for any purpose other than hedging their portfolio exposures

c. Diversification and Concentration

The Program's investments will be appropriately diversified to control overall risk. The Program's investments will exhibit portfolio risk characteristics similar to the Benchmark. The following limitations apply in order to manage risk within acceptable ranges:

• Interest rate risk

o The average weighted effective duration of portfolio security holdings shall not vary from that of the Benchmark index by more +/-20%.

• Credit risk

- o No more than 10% of the Program's investments, measured by market value, may be issued by non sovereign issuers
 - No more than 3% of the Program's market value may be invested in any single non sovereign issuer

• Foreign exchange risk

- No more than 10% of the Program market value may be invested in securities denominated in currencies other than US dollar
 - All securities denominated in currencies other than US dollar must be currency hedged back to US Dollar

d. Managing Cash Flows

Manager may use derivatives and foreign exchange forwards for facilitating investment of cash flows related to income received, contributions, withdrawals, or other asset allocation rebalancing. Fixed income exposure, including cash and derivative instruments, shall at all times be equal to the market value of the portfolio (leverage is not permitted).

3. Evaluation and Review

a. Policy and Guideline Review

The <u>TreasurerChief Investment Officer</u> shall review the Objectives and Guidelines at least annually, and report to the Committee on the impact of the Guidelines on the Program's performance.

b. Program performance and risk exposures shall be evaluated at multiple levels in accordance with the performance objectives of the Program.

4. Reporting

On a quarterly basis, the <u>TreasurerChief Investment Officer</u> shall provide the following reports to the Committee:

- a. A summary of Program investments and risks.
- b. A summary of Program performance, on an absolute and benchmark relative basis.

Manager will be required to provide the <u>TreasurerChief Investment Officer</u> monthly and quarterly reports, including but not limited to:

- e. a. Monthly accounting statements showing portfolio income, holdings and transactions
- d. <u>b.</u> Quarterly review of portfolio and strategy performance including a market outlook
- e.c. Annual statement of compliance with investment guidelines

5. Definitions: See Appendix 8

APPENDIX 7H

This Version: February 14, 2006 November 15, 2012

Last approved: February 14, 2006

NON DOLLAR DENOMINATED FIXED INCOME INVESTMENT GUIDELINES

The purpose for these performance objectives ("Objectives") and management guidelines ("Guidelines") is to clearly state the investment approach, define performance objectives and to control risk in the management of the Non Dollar Denominated Fixed Income allocation of the Fund ("the Program"). These Objectives and Guidelines shall be subject to ongoing review by the Committee. Capital market conditions, changes in the investment industry, new financial instruments, or a change in the Committee's risk tolerance, are among factors to be considered in determining whether the Guidelines shall be revised.

1. Investment Policy

a. Investment Objective

The primary investment objective of the Program is to generate a rate of return from investments in Non-US dollar denominated bonds which exceeds the return on the Non Dollar denominated global fixed income market, as measured by the Citigroup World Government Bond–ex U.S Index. ("Benchmark"), while maintaining risk similar to that of the Benchmark. The Benchmark shall be unhedged (see part (e) below).

b. Investment Strategy

The Program shall be implemented by a combination of the TreasurerChief Investment Officer's internal fixed income staff and multiple external investment managers (internal and external strategies will be collectively referred to as "Managers"). Each Manager's strategy will focus on a subset of the Non US dollar denominated fixed income market in which the Manager is believed to have a competitive advantage in providing returns in excess of its respective benchmark on a risk adjusted basis. The TreasurerChief Investment Officer will monitor whether the aggregate of all Non US dollar denominated fixed income portfolios adheres to these Guidelines, and in particular achieves the overall performance and risk objectives stated below. In addition, each Manager shall have written guidelines, which will detail its strategy, performance objectives, permitted investments, and restrictions. The TreasurerChief Investment Officer will monitor each Manager's adherence to its respective guidelines. In no case may a Manager's guidelines conflict with the Guidelines for the Program.

c. Performance Objectives

The performance objective of the Program is to meet or exceed the return of the Benchmark, on a consistent basis over time, net of all costs and fees. Each Manager will have a unique objective, (benchmark), which is appropriate to its individual strategy, and specified in its guidelines.

d. Risk Objective

The Program shall be managed so that its annualized tracking error budget shall be 200 basis points. Each Manager will have a unique active risk budget, relative to its specific benchmark, which is appropriate to its individual strategy, and specified in its guidelines, and which will reflect the risk-return profile of its specific investment objectives.

e. Currency Risk

The Committee accepts that as a US dollar denominated investor, investing in Non US dollar denominated bonds implicitly involves currency risk. The Committee accepts this additional risk or volatility as part of the asset class and has adopted an "unhedged" performance benchmark. An unhedged benchmark is a benchmark in which the underlying securities' returns are translated from their local currency back to US dollars at each measurement date.

However, this general policy toward currency risk shall not prevent individual Managers from fully or partially hedging or otherwise actively managing the currency risk in their portfolios (subject to their individual guidelines). Nor shall it prevent the TreasurerChief Investment Officer from employing currency overlay managers to manage the currency risk of the aggregate portfolio.

The contribution to active risk resulting from the aggregate of active currency management, whether by Managers or by the <u>TreasurerChief Investment Officer</u>'s overlay managers, shall be included in the total tracking error and be subject to limitations above and to the Retirement Fund's overall risk budget as described in Appendix 2.

f. Other Constraints and Considerations

- Managers shall comply with applicable State and Federal laws and regulations and the prudence requirement described in section 3(a) of the Policy.
- Managers shall act solely in the interest of the Fund's constituents.
- Implementation of this Program shall comply with the Fund's Policy.

2. Investment Guidelines

a. Asset Allocation

The portfolio will be invested primarily in marketable, publicly traded, investment grade fixed income instruments, notes and debentures issued by developed market countries other than the U.S. and denominated in currencies other than U.S. dollars.

Nothing in these guidelines shall be construed to restrict the use of diversified global fixed income strategies (consisting of bonds denominated in both US and Non-US currencies). The TreasurerChief Investment Officer shall ensure that such strategies are consistent with both these guidelines and the guidelines of the other fixed income Programs, and may develop separate guidelines for such strategies to ensure that performance and risk objectives for all fixed income classes are met.

b. Types of Securities

The Program will be invested in diversified portfolios of fixed income securities, <u>similar to those in the benchmark</u>, and their derivative securities, subject to restrictions noted below in section 2c and 2d. For a description of the Benchmark see Appendix 8 (Definitions).

The following list is indicative of the securities which are appropriate for the Program, given its Benchmark and risk budget. It should not be construed to be an exhaustive list of "allowable" investment securities. Security types and/or strategies not specifically enumerated, but which the Treasurer and Regents' Investment Consultant believe are appropriate and consistent with the Investment Policy may also be held, subject to the restrictions in 2c. and 2d. below.

The Program may purchase securities on a when-issued basis or for forward delivery.

1. Fixed income instruments

- a. Obligations of foreign governments (or their subdivisions or agencies), international agencies, and supranational entities
- b. Obligations of U.S. and foreign corporations such as corporate bonds, convertible and non-convertible notes and debentures, preferred stocks, and bank loans
- c. Obligations issued or guaranteed by the U.S. Federal Government, U.S. Federal Agencies or U.S. government-sponsored corporations and agencies

2. Short term fixed income instruments

- a. US dollar and foreign currencies
- b. Short term obligations of US and foreign governments
- c. Repurchase and reverse repurchase agreements (must be fully collateralized with approved collateral, using approved counterparties only)
- d. Eurodollar CD's and Eurodollar floating rate notes
- e. Money market funds managed by the Custodian
- f. Short Term Investment Pool (STIP), managed by the Treasurer

3. Currency and Fixed income derivatives

- a. Government bond and other bond index futures
- b. Interest rate options, swaps, and swaptions
- c. Single name or basket Credit default swaps (CDS)
- d. Foreign currency forward contracts and options
- e. Total rate of return swaps

c. Restrictions

The Managers may **not**

- Purchase securities of tobacco related companies, as per the Policy, section 5b...
- Purchase currencies (or bonds denominated in currencies) not freely convertible to US dollars
- Invest in mutual funds or group trusts unless specifically allowed in their guidelines
- Buy securities on margin, except for futures or swaps, against which are held a risk equivalent amount of cash or liquid securities
- Purchase equity securities or commodities or their derivatives
- Buy party-in-interest securities
- Buy securities restricted as to sale or transfer, except for 144A securities, which are permitted
- Buy or write structured ("levered") notes
- Employ economic leverage in the portfolio through borrowing or derivatives, or engage in derivative strategies that conflict with the Derivatives Policy

d. Diversification and Concentration

The Program's investments will be appropriately diversified to control overall risk. The Program's investments will exhibit portfolio risk characteristics similar to the Benchmark. The following limitations apply in order to manage risk within acceptable ranges:

• Interest rate risk

o The average weighted effective duration of portfolio security holdings shall not vary from that of the Benchmark index by more +/-20%.

• Credit risk

- No more than 10% of the Program's investments, measured by market value, should be below "investment grade", i.e. rated lower than the following standards or their equivalent by all major NRSRO's
 - Standard & Poor's and Fitch (BBB-)
 - Moody's (Baa3)
- o The Program's investments should exhibit an average credit quality of A (or equivalent) or better. Split-rated credits are considered to have the higher credit rating as long as the higher rating is given by one of the NRSRO's
- Except for securities issued by the US Treasury or sovereign entities included in the benchmark, no more than 3% of the Program's market value may be invested in any single issuer.

Liquidity risk

 The Program's investments in aggregate of any security may not exceed 20% of that security's outstanding par value, without a written exception approved by the Treasurer Chief Investment Officer.

• Foreign exchange risk

- o No more than 20% of the Program market value can be invested in securities denominated in currencies other than currencies included in the Benchmark
- o No more than 20% of the Program's net foreign exchange exposure (inclusive of currency overlay managers) can be in currencies not included in the Benchmark

• Asset allocation risk

- The Program's investments in aggregate may overweight or underweight currencies so that each currency's exposure contribution to portfolio risk is within +/- 20 percentage points of the corresponding Benchmark currency's exposure contribution to portfolio risk for Euro and Yen denominated bonds, and is within +/- 10 percentage points of the corresponding Benchmark currency's exposure contribution to portfolio risk for all other currency denominated bonds, including US Dollar. That is, if Euro denominated bonds contribute 50% of total the Benchmark risk, then the Program's Euro bonds exposure contribution to portfolio risk should be between 30% and 70%.
- Notwithstanding the overall diversification of the Program, the <u>TreasurerChief</u>
 <u>Investment Officer</u> may set limits on any individual Manager's tracking error and/or contribution to active risk of the Program.

It is expected that each Manager's portfolio be appropriately diversified, within limits established in its guidelines and relative to its performance objectives, to control risk, but without unduly restricting the Manager's ability to out-perform its benchmark. That is, the Managers'

portfolios may be more concentrated than is appropriate for the Program's aggregate investments.

e. Managers shall employ best execution. Transactions shall be directed to brokers/dealers designated by the <u>TreasurerChief Investment Officer</u> at the Manager's discretion when best execution is available.

f. Managing Cash Flows

Managers may use derivatives and foreign exchange forwards for facilitating investment of cash flows related to income received, contributions, withdrawals, or other asset allocation rebalancing. Fixed income exposure, including cash and derivative instruments, shall at all times be equal to the market value of the portfolio (leverage is not permitted).

3. Evaluation and Review

a. Policy and Guideline Review

The <u>TreasurerChief Investment Officer</u> shall review the Objectives and Guidelines at least annually, and report to the Committee on the impact of the Guidelines on the Program's performance.

b. Program performance and risk exposures shall be evaluated at multiple levels in accordance with the performance objectives of the Program and individual Managers.

4. Reporting

On a quarterly basis, the <u>TreasurerChief Investment Officer</u> shall provide the following reports to the Committee:

- a. A performance attribution explaining differences in country and currency weights and returns, between the aggregate Program investments and the Benchmark, and an explanation of any material differences.
- b. A forecast risk report, using the <u>TreasurerChief Investment Officer</u>'s risk system, showing the total, systematic ("common factor"), and non-systematic ("residual") risk of the aggregate portfolio, the Benchmark, and the active Program relative to the Benchmark, and an explanation of any material differences.
- c. A summary of individual Manager performance, on an absolute and benchmark relative basis.

Managers will be required to provide the <u>TreasurerChief Investment Officer</u> monthly and quarterly reports, including but not limited to:

- a. A monthly performance statement for the portfolio (gross and net) and the benchmark, and also provide the gross performance for the product Composite at least quarterly
- b. If available, a monthly or quarterly forecast risk report, using the Manager's risk system, showing the total, systematic ("common factor"), and non-systematic ("residual") risk of the portfolio relative to the benchmark

- c. A monthly or quarterly variance analysis, indicating sources of performance variances (difference between portfolio and benchmark return), and an explanation of any material differences.
- d. A quarterly review of portfolio and strategy performance including a market outlook
- e. An annual statement of compliance with investment guidelines

5. Definitions: See Appendix 8

APPENDIX 7I

This Version: February 14, 2006 November 15, 2012

Last approved: February 14, 2006

HIGH YIELD DEBT INVESTMENT GUIDELINES

The purpose for these performance objectives ("Objectives") and management guidelines ("Guidelines") is to clearly state the investment approach, define performance objectives and to control risk in the management of the High Yield Debt allocation of the Fund ("the Program"). These Objectives and Guidelines shall be subject to ongoing review by the Committee. Capital market conditions, changes in the investment industry, new financial instruments, or a change in the Committee's risk tolerance, are among factors to be considered in determining whether the Guidelines shall be revised.

1. Investment Policy

a. Investment Objective

The primary investment objective of the Program is to generate a rate of return from investments in high yield US dollar denominated debt which exceeds the return of the non-investment grade fixed income market, as measured by the Merrill Lynch High Yield Cash Pay Index ("Benchmark"), while maintaining risk similar to that of the Benchmark..

b. Investment Strategy

The Program shall be implemented by a combination of the TreasurerChief Investment Officer's internal fixed income staff and multiple external investment managers (internal and external strategies will be collectively referred to as "Managers"). Each Manager's strategy will focus on a subset of the high yield debt market in which the Manager is believed to have a competitive advantage in providing returns in excess of its respective benchmark on a risk adjusted basis. The TreasurerChief Investment Officer will monitor whether the aggregate of all high yield debt portfolios adheres to these Guidelines, and in particular achieves the overall performance and risk objectives stated below. In addition, each Manager shall have written guidelines, which will detail its strategy, performance objectives, permitted investments, and restrictions. The TreasurerChief Investment Officer will monitor each Manager's adherence to its respective guidelines. In no case may a Manager's guidelines conflict with the Guidelines for the Program.

c. Performance Objectives

The performance objective of the Program is to meet or exceed the return of the Benchmark, on a consistent basis over time, net of all costs and fees. Each Manager will have a unique objective, (benchmark), which is appropriate to its individual strategy, and specified in its guidelines.

d. Risk Objective

The Program shall be managed so that its annualized tracking error budget shall be 350 basis points. Each Manager will have a unique active risk budget, relative to its specific

benchmark, which is appropriate to its individual strategy, and specified in its guidelines, and which will reflect the risk-return profile of its specific investment objectives.

e. Other Constraints and Considerations

- Managers shall comply with applicable State and Federal laws and regulations and the prudence requirement described in section 3(a) of the Policy.
- Managers shall act solely in the interest of the Fund's constituents.
- Implementation of this Program shall comply with the Fund's Policy.

2. Investment Guidelines

a. Asset Allocation

The portfolio will be invested primarily in marketable, publicly traded, non-investment grade debt instruments, notes and debentures denominated in U.S. dollars.

b. Types of Securities

The Program will be invested in diversified portfolios of fixed income securities, <u>similar to those in the benchmark</u>, and their derivative securities, subject to restrictions noted below in section 2c and 2d. For a description of the Benchmark see Appendix 8 (Definitions).

The following list is indicative of the securities which are appropriate for the Program, given its Benchmark and risk budget. It should not be construed to be an exhaustive list of "allowable" investment securities. Security types and/or strategies not specifically enumerated, but which the Treasurer and Regents' Investment Consultant believe are appropriate and consistent with the Investment Policy may also be held, subject to the restrictions in 2c. and 2d. below.

The Program may purchase securities on a when-issued basis or for forward delivery.

- 1. Fixed income instruments
 - a. Obligations of U.S. and foreign corporations such as corporate bonds, convertible and non-convertible notes and debentures, preferred stocks, and bank loans
 - a. Obligations of international agencies, supranational entities, and foreign governments (or their subdivisions or agencies).
 - b. Obligations issued or guaranteed by U.S. local, city and state governments and agencies
 - c. Private Placements or Rule 144A securities, issued with or without registration rights
- 2. Short term fixed income instruments
 - a. US Treasury and Agency bills and notes
 - b. Repurchase and reverse repurchase agreements (must be fully collateralized with approved collateral, using approved counterparties only)
 - c. Money market funds managed by the Custodian
 - d. Short Term Investment Pool (STIP), managed by the Treasurer
- 3. Fixed income derivatives
 - a. US Treasury, Agency, and Eurodollar futures
 - b. Interest rate options, swaps, and swaptions
 - c. Credit default swaps (CDS) and their derivatives
 - d. Total rate of return swaps

c. Restrictions

The Managers may **not**

- Purchase securities of tobacco related companies, as per the Policy, section 5b.
- Invest in mutual funds or group trusts unless specifically allowed in their guidelines
- Buy securities on margin, except for futures or swaps, against which are held a risk equivalent amount of cash or liquid securities
- Sell securities short, except for interest rate futures and options, credit default swaps, and foreign currency forwards and options
- Purchase equity securities or commodities or their derivatives
- Buy party-in-interest securities
- Buy securities restricted as to sale or transfer, except for 144A securities, which are permitted
- Buy or write structured ("levered") notes
- Employ economic leverage in the portfolio through borrowing or derivatives, or engage in derivative strategies that conflict with the Derivatives Policy
- Purchase or sell foreign exchange contracts for any purpose other than hedging their portfolio exposures

d. Diversification and Concentration

The Program's investments will be appropriately diversified to control overall risk. The Program's investments will exhibit portfolio risk characteristics similar to the Benchmark. The following limitations apply in order to manage risk within acceptable ranges:

• Interest rate risk

The average weighted spread duration of portfolio security holdings shall not vary from that of the Benchmark index by more +/-20%.

• Credit risk

- No more than 10% of the Program's investments, measured by market value, should be rated "in default", i.e. rated lower than the following standards or their equivalent by all major NRSRO's
 - Standard & Poor's and Fitch (C)
 - Moody's (C)
- O The Program's investments should exhibit an average credit quality of B-/CCC (or equivalent) or better. Split-rated credits are considered to have the higher credit rating as long as the higher rating is given by one of the NRSRO's
- Except for securities issued by the US Treasury or Agencies of the US
 Government, no more than 5% of the Program's market value may be invested in any single issuer.

• Liquidity risk

- o No more than 2030% of the Program's market value may be invested in Private Placements or Rule 144A securities
- o The Program's investments in aggregate of any marketable security may not exceed 20% of that security's outstanding par value, without a written exception approved by the TreasurerChief Investment Officer.

• Foreign exchange risk

- o No more than 10% of the Program market value can be invested in securities denominated in currencies other than US dollar
- Notwithstanding the overall diversification of the Program, the <u>TreasurerChief</u>
 <u>Investment Officer</u> may set limits on any individual Manager's tracking error and/or contribution to active risk of the Program.

It is expected that each Manager's portfolio be appropriately diversified, within limits established in its guidelines and relative to its performance objectives, to control risk, but without unduly restricting the Manager's ability to out-perform its benchmark. That is, the Managers' portfolios may be more concentrated than is appropriate for the Program's aggregate investments.

e. Managers shall employ best execution. Transactions shall be directed to brokers/dealers designated by the <u>TreasurerChief Investment Officer</u> at the Manager's discretion when best execution is available.

f. Managing Cash Flows

Managers may use derivatives for facilitating investment of cash flows related to income received, contributions, withdrawals, or other asset allocation rebalancing. Fixed income exposure, including cash and derivative instruments, shall at all times be equal to the market value of the portfolio (leverage is not permitted).

3. Evaluation and Review

a. Policy and Guideline Review

The <u>TreasurerChief Investment Officer</u> shall review the Objectives and Guidelines at least annually, and report to the Committee on the impact of the Guidelines on the Program's performance.

b. Program performance and risk exposures shall be evaluated at multiple levels in accordance with the performance objectives of the Program and individual Managers.

4. Reporting

On a quarterly basis, the <u>TreasurerChief Investment Officer</u> shall provide the following reports to the Committee:

- a. A performance attribution explaining differences in sector and quality weights and returns, between the aggregate Program investments and the Benchmark, and an explanation of any material differences.
- b. A forecast risk report, using the <u>TreasurerChief Investment Officer</u>'s risk system, showing the total, systematic ("common factor"), and non-systematic ("residual") risk of the aggregate portfolio, the Benchmark, and the active Program relative to the Benchmark, and an explanation of any material differences.

c. A summary of individual Manager performance, on an absolute and benchmark relative basis.

Managers will be required to provide the TreasurerChief Investment Officer monthly and quarterly reports, including but not limited to:

- a. A monthly performance statement for the portfolio (gross and net) and the benchmark, and also provide the gross performance for the product Composite at least quarterly
- b. If available, a monthly or quarterly forecast risk report, using the Manager's risk system, showing the total, systematic ("common factor"), and non-systematic ("residual") risk of the portfolio relative to the benchmark
- c. A monthly or quarterly variance analysis, indicating sources of performance variances (difference between portfolio and benchmark return), and an explanation of any material differences.
- d. A quarterly review of portfolio and strategy performance including a market outlook
- e. An annual statement of compliance with investment guidelines
- 5. Definitions: See Appendix 8

APPENDIX 7.I

This version: July 1, 2008 Approved November 15, 2012; effective January 1, 2013

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EMERGING MARKET DEBT INVESTMENT GUIDELINES

The purpose for these performance objectives ("Objectives") and management guidelines ("Guidelines") is to clearly state the investment approach, define performance objectives and to control risk in the management of the Emerging Market Debt allocation of the Fund ("the Program"). These Objectives and Guidelines shall be subject to ongoing review by the Committee. Capital market conditions, changes in the investment industry, new financial instruments, or a change in the Committee's risk tolerance, are among factors to be considered in determining whether the Guidelines shall be revised.

1. Investment Policy

a. Investment Objective

The primary investment objective of the Program is to generate a rate of return from investments in debt of issuers in emerging market countries which exceeds the return on the Benchmark, which is a weighted sum of 33% times the J.P. Morgan Emerging Markets Bond Index – Global Diversified [hard currency]plus 67% times the J.P. Morgan Government Bond Index – Emerging Markets Global Diversified, while maintaining risk similar to that of the Benchmark.

b. Investment Strategy

The Program shall be implemented by a combination of the TreasurerChief Investment Officer's internal fixed income staff, and multiple external investment managers (internal and external strategies will be collectively referred to as "Managers"). Each Manager's strategy will focus on a subset of the emerging market debt universe in which the Manager is believed to have a competitive advantage in providing returns in excess of its respective benchmark on a risk adjusted basis. The TreasurerChief Investment Officer will monitor whether the aggregate of all emerging market debt portfolios adheres to these Guidelines, and in particular achieves the overall performance and risk objectives stated below. In addition, each Manager shall have written guidelines, which will detail its strategy, performance objectives, permitted investments, and restrictions. The TreasurerChief Investment Officer will monitor each Manager's adherence to its respective guidelines. In no case may a Manager's guidelines conflict with the Guidelines for the Program.

c. Performance Objectives

The performance objective of the Program is to meet or exceed the return of the Benchmark, on a consistent basis over time, net of all costs and fees. Each Manager will have a unique objective, (benchmark), which is appropriate to its individual strategy, and specified in its guidelines.

d. Risk Objective

The Program shall be managed so that its annualized tracking error budget shall be 500 basis points. Each Manager will have a unique active risk budget, relative to its specific benchmark, which is appropriate to its individual strategy, and specified in its guidelines, and which will reflect the risk-return profile of its specific investment objectives.

e. Other Constraints and Considerations

- Managers shall comply with applicable State and Federal laws and regulations and the prudence requirement described in section 3(a) of the Policy.
- Managers shall act solely in the interest of the Fund's constituents.
- Implementation of this Program shall comply with the Fund's Policy.

2. Investment Guidelines

a. Asset Allocation

The portfolio will be invested primarily in marketable, publicly traded, fixed income instruments, notes and debentures issued by emerging market sovereign or corporate issuers, denominated in U.S. dollars and issuers' local currencies.

b. Types of Securities

The Program will be invested in diversified portfolios of fixed income securities, <u>similar to those</u> in the benchmark, and their derivative securities, subject to restrictions noted below in section 2c and 2d. For a description of the Benchmark see Appendix 8 (Definitions).

The following list is indicative of the securities which are appropriate for the Program, given its Benchmark and risk budget. It should not be construed to be an exhaustive list of "allowable" investment securities. Security types and/or strategies not specifically enumerated, but which the Treasurer and Regents' Investment Consultant believe are appropriate and consistent with the Investment Policy may also be held, subject to the restrictions in 2c. and 2d. below.

The Program may purchase securities on a when-issued basis or for forward delivery.

1. Fixed income instruments

- a. Obligations of foreign governments (or their subdivisions or agencies), international agencies, and supranational entities.
- b. Obligations of foreign corporations such as corporate bonds, convertible and non-convertible notes and debentures, preferred stocks, and bank loans
- c. Private Placements or Rule 144A securities, issued with or without registration rights

2. Short term fixed income instruments

- a. US Treasury and Agency bills and notes
- b. Repurchase and reverse repurchase agreements (must be fully collateralized with approved collateral, using approved counterparties only)
- c. Eurodollar CD's, TD's, and commercial paper
- d. US and Eurodollar floating rate notes
- e. Money market funds managed by the Custodian
- f. Short Term Investment Pool (STIP), managed by the Treasurer

g.

3. Fixed income derivatives

- a. US Treasury, Agency, and Eurodollar futures
- b. Interest rate options, swaps, and swaptions
- c. Credit default swaps (CDS) and their derivatives
- d. Foreign currency forward contracts and options
- e. Total rate of return swaps

c. Restrictions

The Managers may **not:**

- Purchase securities of tobacco related companies, as per the Policy, section 5b.
- Invest in mutual funds or group trusts unless specifically allowed in their guidelines
- Buy securities on margin, except for futures or swaps, against which are held a risk equivalent amount of cash or liquid securities
- Sell securities short, except for interest rate futures and options, credit default swaps, and foreign currency forwards and options
- Purchase equity securities or commodities or their derivatives
- Buy party-in-interest securities
- Buy securities restricted as to sale or transfer, except for 144A securities, which are permitted
- Buy or write structured ("levered") notes
- Employ economic leverage in the portfolio through borrowing or derivatives, or engage in derivative strategies that conflict with the Derivatives Policy

d. Diversification and Concentration

The Program's investments will be appropriately diversified to control overall risk. The Program's investments will exhibit portfolio risk characteristics similar to the Benchmark. The following limitations apply in order to manage risk within acceptable ranges:

• Interest rate risk

o The average weighted effective duration of portfolio security holdings shall not vary from that of the Benchmark index by more +/-20%.

• Credit risk

- o No more than 20% of the Program's investments, measured by market value, should be rated "B+" (or equivalent) or below by all major NRSRO's
 - Standard & Poor's and Fitch (B+)
 - Moody's (B1)
- o The Program's investments should exhibit an average credit quality of BB (or equivalent) or better. Split-rated credits are considered to have the higher credit rating as long as the higher rating is given by one of the NRSRO's
- Except for securities issued by the US Treasury or sovereign entities included in the Benchmark, no more than 5% of the Program's market value may be invested in any single issuer, without a written exception approved by the <u>TreasurerChief</u> <u>Investment Officer</u>.

• Liquidity risk

 The Program's investments in aggregate of any security may not exceed 20% of that security's outstanding par value, without a written exception approved by the Treasurer Chief Investment Officer.

• Asset allocation and Foreign currency risk

- The Program's investments in aggregate may overweight or underweight issuer countries (including their currencies) so that each country's exposure contribution to portfolio risk is within +/- 20 percentage points of the corresponding Benchmark country's exposure contribution to portfolio risk. That is, if Brazilian bonds (including currency) contribute comprise 20% of the total Benchmark risk, then the Program's Brazilian bond and currency exposure contribution to portfolio risk should be between 0% and 40%.
- Notwithstanding the overall diversification of the Program, the <u>TreasurerChief</u>
 <u>Investment Officer</u> may set limits on any individual Manager's tracking error and/or contribution to active risk of the Program.

It is expected that each Manager's portfolio be appropriately diversified, within limits established in its guidelines and relative to its performance objectives, to control risk, but without unduly restricting the Manager's ability to out-perform its benchmark. That is, the Managers' portfolios may be more concentrated than is appropriate for the Program's aggregate investments.

e. Managers shall employ best execution. Transactions shall be directed to brokers/dealers designated by the <u>TreasurerChief Investment Officer</u> at the Manager's discretion when best execution is available.

f. Managing Cash Flows

Managers may use derivatives and foreign exchange forwards for facilitating investment of cash flows related to income received, contributions, withdrawals, or other asset allocation rebalancing. Fixed income exposure, including cash and derivative instruments, shall at all times be equal to the market value of the portfolio (leverage is not permitted).

3. Evaluation and Review

a. Policy and Guideline Review

The <u>TreasurerChief Investment Officer</u> shall review the Objectives and Guidelines at least annually, and report to the Committee on the impact of the Guidelines on the Program's performance.

b. Program performance and risk exposures shall be evaluated at multiple levels in accordance with the performance objectives of the Program and individual Managers.

4. Reporting

On a quarterly basis, the <u>TreasurerChief Investment Officer</u> shall provide the following reports to the Committee:

- a. A performance attribution explaining differences in country weights and returns, between the aggregate Program investments and the Benchmark, and an explanation of any material differences.
- b. A forecast risk report, using the <u>TreasurerChief Investment Officer</u>'s risk system, showing the total, systematic ("common factor"), and non-systematic ("residual") risk of the aggregate portfolio, the Benchmark, and the active Program relative to the Benchmark, and an explanation of any material differences.
- c. A summary of individual Manager performance, on an absolute and benchmark relative basis.

Managers will be required to provide the <u>TreasurerChief Investment Officer</u> monthly and quarterly reports, including but not limited to:

- a. A monthly performance statement for the portfolio (gross and net) and the benchmark, and also provide the gross performance for the product Composite at least quarterly
- b. If available, a monthly or quarterly forecast risk report, using the Manager's risk system, showing the total, systematic ("common factor"), and non-systematic ("residual") risk of the portfolio relative to the benchmark
- c. A monthly or quarterly variance analysis, indicating sources of performance variances (difference between portfolio and benchmark return), and an explanation of any material differences.
- d. A quarterly review of portfolio and strategy performance including a market outlook
- e. An annual statement of compliance with investment guidelines

5. Definitions: See Appendix 8

APPENDIX 7K

Last approved: February 14, 2006 This version: November 15, 2012 This Version: September 10, 2009 Last approved: September 10, 2009

Effective Date: October 1, 2009

SHORT TERM INVESTMENT POOL (STIP) INVESTMENT GUIDELINES

The purpose for these performance objectives ("Objectives") and management guidelines (Guidelines") is to clearly state the investment approach, define performance objectives and to control risk in the management of the University's Short Term Investment Pool, or STIP ("Program"). These Objectives and Guidelines shall be subject to ongoing review by the Committee. Capital market conditions, changes in the investment industry, new financial instruments, or a change in the Committee's risk tolerance, are among factors to be considered in determining whether the Guidelines shall be revised.

1. Investment Policy

a. Background:

The STIP is a cash investment pool established by The Regents and is available to all University groups, including retirement and endowment funds. The STIP allows fund participants to maximize income on their short-term cash balances by taking advantage of the economies of scale of investing in a larger pool and investing in a broader range of maturities.

b. Investment Objective

The Objective of the Program is to maximize returns consistent with safety of principal, liquidity, and cash flow requirements. The primary investment objective is to generate income from investments in short duration US dollar denominated bonds and cash equivalents. Because the liquidity needs of the University are subject to large and uncertain changes, the fund may materially increase its investments in highly liquid, cash equivalent securities from time to time.

Accordingly, the Benchmark will be a weighted average of the income return on a constant maturity two (2) year Treasury note and the return on US 30 day Treasury Bills. The weights for the two constituents will be the actual average weights of the bond and cash equivalent components of the pool. The Benchmark will be re-balanced monthly.

c. Investment Strategy

The Program shall be implemented by the <u>TreasurerChief Investment Officer</u> internal fixed income staff ("Manager"). The <u>TreasurerChief Investment Officer</u> will monitor the Program's adherence to these Guidelines.

d. Performance Objectives

The performance objective of the Program is to meet or exceed the return of the Benchmark, on a consistent basis over time, net of all costs and fees.

e. Risk Objective

The Program shall be managed so that its annualized tracking error budget shall be 75 basis points.

f. Other Constraints and Considerations

- Managers shall comply with applicable State and Federal laws and regulations and the prudence requirement described in section 3(a) of the Policy.
- Manager shall act solely in the interest of the Fund's owners.
- Implementation of this Program shall comply with the Fund's Policy.

2. Investment Guidelines

a. Asset Allocation

The portfolio will be invested primarily in marketable, publicly traded, investment grade short term fixed income instruments, notes and debentures denominated in U.S. dollars.

b. Types of Securities

The Program will be invested in a diversified portfolio of fixed income securities, subject to restrictions noted below in section 2c and 2d.

The following list is indicative of the investment classes which are appropriate for the Program, given its Benchmark and risk budget. It should not be construed to be an exhaustive list of "allowable" asset types. Security types and/or strategies not specifically enumerated, but which the Treasurer and Regents' Investment Consultant believe are appropriate and consistent with the Investment Policy may also be held, subject to the restrictions in 2c. and 2d. below.

The Program may purchase securities on a when-issued basis or for forward delivery.

- 1. Fixed income instruments
 - a. Obligations issued or guaranteed by the U.S. Federal Government, U.S. Federal Agencies or U.S. government-sponsored corporations and agencies
 - b. Obligations of U.S. and foreign corporations such as corporate bonds, notes and debentures, and bank loans
 - c. Mortgage-backed and asset-backed securities
 - d. Obligations of international agencies, supranational entities, and foreign governments (or their subdivisions or agencies)
 - e. Obligations issued or guaranteed by U.S. local, city and state governments and agencies
 - f. Private Placements or Rule 144A securities, issued with or without registration rights
- 2. Short term fixed income instruments (having maturity of less than 13 months)
 - a. US Treasury and Agency bills and notes
 - b. Certificates of deposit
 - c. Bankers acceptances
 - d. Commercial paper
 - e. Repurchase and reverse repurchase agreements (must be fully collateralized with approved collateral, using approved counterparties only)
 - f. Eurodollar CD's, TD's, and commercial paper
 - g. US and Eurodollar floating rate notes
 - h. Money market funds managed by the custodian

c. Restrictions

The following security types are **not** permitted:

- Interest rate derivative contracts, including options and futures
- Equity like securities, including but not limited to convertible bonds, preferred stocks, warrants, equity linked notes, and commodities
- Bonds issued in currencies other than US Dollar
- Foreign currency linked notes

The Manager may **not:**

- Purchase securities of tobacco related companies, as per the Policy, section 5b.
- Invest in mutual funds or group trusts unless specifically allowed in its guidelines
- Buy securities on margin
- Sell securities short
- Buy party-in-interest securities
- Buy securities restricted as to sale or transfer, except for 144A securities, which are permitted
- Buy or write structured ("levered") notes
- Employ economic leverage in the portfolio through borrowing or derivatives, or engage in derivative strategies that conflict with the Derivatives Policy
- Purchase or sell foreign exchange contracts

d. Diversification and Concentration

The Program's investments will be appropriately diversified to control overall risk. The following limitations apply in order to manage risk within acceptable ranges:

• Interest rate risk

o No security may have a maturity of more than 5 ½ years

Credit risk

- No more than 5% of the Program's investments, measured by market value, should be below "investment grade", i.e. rated lower than the following standards or their equivalent by all major NRSRO's
 - Standard & Poor's and Fitch (BBB-)
 - Moody's (Baa3)
- o Commercial Paper must have a rating of at least A-1, P-1, D-1, or F-1
- o The Program's investments should exhibit an average credit quality of A (or equivalent) or better. Split-rated credits are considered to have the higher credit rating as long as the higher rating is given by one of the NRSRO's
- No more than 5% of the Program's allocation to commercial paper may be invested in any single issuer. This guideline may be exceeded on a temporary basis due to unusual cash flows, up to a limit of 10%, for a period not to exceed one month.
- Except for securities issued by the US Treasury or Agencies of the US
 Government, no more than 3% of the Program's market value (exclusive of commercial paper) may be invested in any single issuer.

• Liquidity risk

- o No more than 10% of the Program's market value may be invested in Private Placements or Rule 144A securities
- The Programs' investments in aggregate of any security may not exceed 20% of that security's outstanding par value, without a written exception approved by the Treasurer Chief Investment Officer.

Subject to the limitations above, the investment manager has complete discretion with regard to choosing sector weights, issuers, and maturities.

e. Managers shall employ best execution. Transactions shall be directed to brokers/dealers designated by the TreasurerChief Investment Officer at the Manager's discretion when best execution is available.

3. Evaluation and Review

a. Policy and Guideline Review

The <u>TreasurerChief Investment Officer</u> shall review the Objectives and Guidelines at least annually, and report to the Committee on the impact of the Guidelines on the Program's performance.

b. Program performance and risk exposures shall be evaluated at multiple levels in accordance with the Objectives of the Program and individual Managers.

4. Reporting

On a quarterly basis, the <u>TreasurerChief Investment Officer</u> shall provide the following reports to the Committee:

- a. A summary of Program investments and risks.
- b. A summary of Program performance, on an absolute and benchmark relative basis.

Manager will be required to provide the <u>TreasurerChief Investment Officer</u> monthly and quarterly reports, including but not limited to:

- a. Monthly accounting statements showing portfolio income, holdings and transactions
- b. Quarterly review of portfolio and strategy performance including a market outlook
- c. Annual statement of compliance with investment guidelines

5. Definitions: See Appendix 8

APPENDIX 7L

Effective: April 1, 2011 This version: November 15, 2012

Replaces Version: September 17, 2008 Last approved: April 1, 2011

PRIVATE EQUITY INVESTMENT GUIDELINES

The purpose for portfolio guidelines is to clearly define performance objectives and to control risk. Portfolio guidelines to control risk should be subject to ongoing review.

Performance Objectives:

The objective of the private equity portfolio is to earn a return, after adjusting for risk, that exceeds the Russell 3000 Index return on a consistent basis over time.

Portfolio Guidelines:

- Permissible investments include <u>limited liability structures such as limited partnerships</u>, <u>limited liability corporations</u>, and other vehicles that invest in <u>U.S.</u> venture capital, <u>U.S.</u> buyouts, <u>and special situations</u> and non-U.S. <u>private equity</u>. Permissible investments <u>will be primarily private market assets</u>, <u>but may include publicly-traded assets</u>, and <u>may also include funds of funds</u>, <u>secondaries</u>, co-investments and direct equity investments (as limited in <u>Guidelines 10 and 11 below</u>).
- 2. Fund-of-funds partnerships are permitted, and the commitment to any individual fund-of-funds partnership is recommended not to exceed 35 percent of the total capital raised by the partnership. The maximum of 35 percent represents the ownership percentage of the partnership at each closing.
- 3. The policy allocation to U.S. buyouts is 70 percent of the private equity portfolio with a minimum allocation of 50 percent and maximum allocation of 90 percent. U.S. buyouts are broadly defined as leveraged buyouts, growth capital buyouts, special situations, restructuring, and mezzanine funds. Real estate funds are not included.
- 4. The policy allocation to U.S. venture capital is 25 percent of the private equity portfolio with a minimum allocation of 15 percent and maximum allocation of 40 percent. U.S. venture capital includes early, middle, and late stage private investments in new high growth businesses.
- 5. The policy allocation to co-investments / direct equity investments is 5 percent of the private equity portfolio with a minimum allocation of 0 percent and a maximum allocation of 10 percent.
- 2. Venture Capital investments shall be limited to a maximum of 40 percent of the private equity portfolio's total market value, with a long-term target weight of no more than 20 percent.

- 6.3. No single partnership commitment (including co-investments / direct equity investments) can represent, at the time of commitment, more than 5 percent of the current private equity allocation defined as the most recent quarter book value plus unfunded commitments plus approved target commitment for the current (one) year.
- 7.4. Investment in multiple funds of the same general partner is permitted. However, the total commitment to partnerships with the same general partner (including co-investments / direct equity investments), at the time of commitment, cannot exceed 15 percent of the budgeted three year private equity allocation defined as current book value plus unfunded commitments plus approved-commitment level for the current year and two subsequent years.
- 8.5. The commitment to any individual partnership is recommended not to exceed 20-30 percent of the total capital raised by the partnership, up to a maximum of \$150 million. The maximum of 20-30 percent represents the ownership percentage of the partnership at each closing. Notwithstanding these limitations, commitments to any fund-of-funds partnership are recommended not to exceed 35 percent of the total capital raised by the partnership. Exceptions to this limitation may be made by the Chief Investment Officer.
- 9.6. The private equity portfolio should be diversified across time as well. At the time the budget is set, no more than 30 percent of the budgeted three year private equity allocation (defined in the same way as in Guideline 7 above) can be committed to partnerships in any one year.
- 10.7. No single co-investment or direct investment company can represent, at the time of commitment, more than \$20-200 million at cost. No single co-investment in the General Endowment Pool can represent, at the time of commitment, more than \$100 million at cost. No single co-investment company combined with UC's share of the same portfolio company from partnership investments can represent, at the time of commitment, more than \$30 million at cost.
- 11. Direct investments shall be limited to the following:
 - a. companies whose businesses are based on research or development initiated at the University of California or the UC managed National Laboratories, and
 - b. investments which are made with an independent private equity firm or experienced private equity professional as partner
- 12.8. Use of derivative securities by individual investment managers must be specified in writing in the manager's guidelines and must be consistent with the Derivatives Policy, Appendix 4.

APPENDIX 7M

Effective: April 1, 2011 This version: November 15, 2012 Replaces version: March 1, 2009 Last approved: April 1, 2011

PRIVATE REAL ESTATE INVESTMENT GUIDELINES

The purpose of the real estate investment guidelines is to define the investment objectives, philosophy, and specific guidelines for making investments and the benchmarks to measure performance.

These guidelines are applicable to the entire real estate program ("Program") consisting of investments made on behalf of the UCRP and GEP funds. The allocation of investments between the two funds will be managed by the TreasurerChief Investment Officer in accordance with the performance and risk objectives of those funds.

Allocations and ranges for the four principal strategies are shown below.

Strategic Allocations		
Strategy	Allocation	Range
REITS	10%	5%-20%
Core Real Estate	30%	10%-80%
Value-Added Strategies	30%	10%-50%
Opportunistic Strategies	30%	10%-40%
Total	100%	

Core Real Estate, Value Added Strategies, and Opportunistic Strategies constitute "Private Real Estate." Value Added and Opportunistic strategies together are referred to as "Non-Core." REITS are discussed in the section "Public Real Estate Securities (Appendix 7N)." The term "Program" will be interpreted in the context of private or public real estate.

Investment Guidelines

- 1. The benchmark for evaluating the Program's investment performance will be the National Council of Real Estate Investment Fiduciaries (NCREIF) Funds Index Open-end Diversified Core Equity Index ("NFI-ODCE"). The Program return is expected to meet or exceed this benchmark, on a rolling three year basis, after deducting all costs and expenses ("net returns").
- 2. Investments shall be in limited liability investment vehicles such as limited partnerships, limited liability corporations, private REITs, and other commingled investment Funds. Direct investments through discretionary Separate Accounts may be made through title holding corporations.

- 3. Investments shall be primarily equity-oriented, but may also include debt instruments secured by real estate.
- 4. Specific property types in the Program shall be within the following ranges:

Property Diversification Guidelines	
Property Type	Range
Office	20%-50%
Apartments	15%-35%
Industrial	15%-35%
Retail	15%-35%
Hospitality	Up to 20%
Other (incl. student housing)	Up to 20%

- 5. Investments in the U.S. shall be diversified by geographic location as follows:
 - a. Exposure (current NAV) in any one NFI-ODCE region within the total Private program (commingled funds and separate accounts) not to exceed the weight of that region in the NFI-ODCE index by more than 5%.
 - b. Exposure (current NAV) in any one Metropolitan Statistical Area (or Metropolitan Statistical Division, if applicable) within the Separate Account portfolio not to exceed 20% of the Separate Account program allocation ("allocation" meaning: NAV + Unfunded Commitments).
- 6. Investments outside the U.S. may not represent more than 25% of the private real estate portfolio and at the portfolio level must be diversified by type and geographic location.
- 7. The Program's investment in any one <u>closed end</u> fund shall not exceed 2025% of the total capital being raised for that fund, up to a maximum of \$75 million.
- 8. No more than 15% of the Program's commingled Fund Net Asset Value + Unfunded Commitments shall be invested with a single manager. No more than 25% of the Separate Account program allocation shall be invested with a single manager ("allocation" meaning: NAV + Unfunded Commitments).
- 9. The Program's outstanding investment(s) with any given firm, including its affiliates and subsidiaries, may not exceed 20% of that firm's total real estate equity under management.
- 10. In order to enhance the alignment of interests of the investor and the sponsor, the sponsor of a closed-end fund investment will be required to make a co-investment of at least 1%.

 This also applies prospectively to Separate Account managers, except where prohibited by law or regulation. Any exceptions must be approved by the Chief Investment Officer.
- 11. Leverage at the Program level shall not exceed 6590% of the (gross) market value of the total assets of the Program. All leverage shall be non-recourse to the Regents, as trustee of UCRP, with respect to UCRP investments in the Program. All leverage shall be non-

recourse to the Regents, a public corporation, with respect to GEP investments in the Program.

- 12. Letters of credit may be obtained or funding guarantees provided in favor of a lender in connection with the development and operation of a property managed by a Separate Account manager through a property title holding corporation owned by the Regents as trustee of UCRP, or the Regents, a public corporation, with respect to GEP investments in the Program, provided that such letter or guarantee does not encumber any assets other than those previously committed to such separate account to fund such investment.
- 13. The acquisition price of any single property or collective investment vehicle (portfolio of properties) shall not exceed 5% of the total Separate Account program long-term allocation (that is, Net Asset Value + Unfunded Commitments + unused capacity consistent with the long-term policy targets of Real Estate). The TreasurerChief Investment Officer may approve the acquisition of properties greater than 5% but less than 10% of the total Program allocation.
- 14. Fund of Fund investments are permitted
- 15. Club deals and co-investments, in aggregate, shall not exceed 7.515% of total Program market value, up to a limit of \$300 million for any single deal.

Note: Compliance with some of these guidelines will not be required until a sufficient number of investments have been made. The Treasurer will keep the Committee periodically informed as to the status of its compliance with these guidelines.

APPENDIX 7N

Effective: April 1, 2011 This version: November 15, 2012 Replaces version: May 17, 2007 Last approved: April 1, 2011

PUBLIC REAL ESTATE SECURITIES INVESTMENT GUIDELINES

The purpose for these performance objectives ("Objectives") and management guidelines ("Guidelines") is to clearly state the investment approach, define performance objectives and to control risk in the management of the Public Real Estate Securities allocation of the Fund ("the Program"). These Objectives and Guidelines shall be subject to ongoing review by the Committee. Capital market conditions, changes in the investment industry, new financial instruments, or a change in the Committee's risk tolerance, are among factors to be considered in determining whether the Guidelines shall be revised.

1. Investment Policy

a. Investment Objective

The primary investment objective of the Program is to generate a rate of return from investments in public real estate securities which exceeds the return on the global real estate securities market, measured by the FTSE EPRA NAREIT Global Index return ("Benchmark"), while maintaining risk similar to that of the Benchmark.

b. Investment Strategy

The Program shall be implemented by hiring multiple external investment managers ("Managers"). Each Manager's strategy will focus on a subset of the global real estate securities market in which the Manager is believed to have a competitive advantage in providing returns in excess of its respective benchmark on a risk adjusted basis. The TreasurerChief Investment Officer will monitor whether the aggregate of all externally managed portfolios adheres to these Guidelines, and in particular achieves the overall performance and risk objectives stated below. In addition, each Manager shall have written guidelines, which will detail its strategy, performance objectives, permitted investments, and restrictions. The TreasurerChief Investment Officer will monitor each Manager's adherence to its respective guidelines. In no case may a Manager's guidelines create potential conflict with the Guidelines for the Program.

c. Performance Objective

Each Manager will have a unique objective, or style benchmark, which is appropriate to its individual strategy, and specified in its guidelines. The Program return is expected to meet or exceed a weighted aggregate of these benchmarks, on a consistent basis over time, after deducting all costs and expenses.

d. Risk Objective

The Program shall be managed so that its annualized tracking error budget shall be 450 basis points. Each Manager will have a unique active risk budget, relative to its style benchmark, which is appropriate to its individual strategy, and specified in its guidelines, and which will reflect the risk-return profile of its specific investment objectives.

e. Other Constraints and Considerations

- Managers shall comply with applicable State and Federal laws and regulations and the prudence requirement described in section 3(a) of the Policy.
- Managers shall act solely in the interest of the Fund's constituents.
- Implementation of this Program shall comply with the Fund's Policy.

2. Investment Guidelines

a. Asset Allocation

It is expected that the Program will be fully invested in equity and equity-related securities at all times. Any cash held by Managers of separate accounts for the purpose of facilitating cash flows or portfolio transactions will be swept daily by the custodian. The TreasurerChief Investment Officer or designated overlay manager may equitize this cash using appropriate derivatives contracts.

b. Types of Securities

The Program will be invested in diversified portfolios of real estate securities that are listed on national securities exchanges. Managers may also invest in stocks that are traded over-the-counter and in other real estate-related securities and private placements as limited in their guidelines. A real estate-related company is one in which the predominant share of EBITDA is derived from rental income and/or the equity ownership of real estate.

c. Restrictions

The Managers may not

- Purchase securities of tobacco related companies, as per the Policy, section 5b.
- Lend securities
- Purchase commodities or commodity derivatives
- Purchase fixed income securities except for cash equivalents used for facilitating transactions
- Buy party-in-interest securities
- Buy securities restricted as to sale or transfer, except for 144A securities, which are permitted
- Buy or write equity linked notes
- Employ economic leverage in the portfolio through borrowing or derivatives

d. Diversification and Concentration

The Program's investments will be appropriately diversified to control overall risk and will exhibit portfolio risk characteristics similar to those of the Benchmark. The <u>TreasurerChief Investment Officer</u> is responsible for managing aggregate risk exposures. The following limitations apply:

• The Program's beta with respect to the Benchmark will not be significantly different from 1.0, as measured over the most recent 12 month period.

- Notwithstanding the overall diversification of the Program, the Treasurer may set limits on any individual Manager's tracking error and/or contribution to active risk of the Program.
- The aggregate holdings within separate accounts of any security may not exceed 4.9% of that security's outstanding shares.

It is expected that each Manager's portfolio will be appropriately diversified, within limits established in its guidelines and relative to its performance objectives, to control risk, but without unduly restricting a Manager's ability to out-perform its benchmark. That is, an individual Manager's portfolio may be more concentrated than is appropriate for the Program's aggregate investments.

e. Managers shall employ best execution. Transactions may be directed to brokers/dealers designated by the <u>TreasurerChief Investment Officer</u> at the Manager's discretion when best execution is available.

f. Managing Cash Flows

The <u>TreasurerChief Investment Officer</u> may use derivative contracts (including but not limited to index futures and ETF's) for facilitating investment of cash flows related to contributions, withdrawals, or other asset allocation rebalancing.

3. Evaluation and Review

a. Policy and Guideline Review

The <u>TreasurerChief Investment Officer</u> shall review the Objectives and Guidelines at least annually, and report to the Committee on the impact of the Guidelines on the Program's performance.

b. Program performance and risk exposures shall be evaluated at multiple levels in accordance with the performance objectives of the Program and individual Managers.

4. Reporting

On a quarterly basis, the <u>TreasurerChief Investment Officer</u> shall provide the following reports to the Committee:

- g. a. A performance attribution explaining differences in sector weights and returns (property type and/or geographical sectors, as appropriate), between the aggregate Program investments and the Benchmark, and an explanation of any material differences.
- h. b. A forecast risk report, using the Treasurer Chief Investment Officer's risk system, showing the total, systematic ("common factor"), and non-systematic ("residual") risk of the aggregate portfolio, the Benchmark, and the active Program relative to the Benchmark, and an explanation of any material differences.
- <u>i.</u> <u>c.</u> A summary of individual manager performance, on an absolute and benchmark relative basis.

Managers will be required to provide the Treasurer Chief Investment Officer monthly and quarterly reports, including but not limited to:

- a. A monthly performance statement for the portfolio (gross and net) and the benchmark, and provide the gross performance for the product Composite at least quarterly.
- b. If available, a monthly or quarterly forecast risk report, using the Manager's risk system, showing the total, systematic ("common factor"), and non-systematic ("residual") risk of the portfolio relative to the benchmark.
- c. A monthly or quarterly variance analysis, indicating sources of performance variances (difference between portfolio and benchmark return), and an explanation of any material differences.
- d. A quarterly review of portfolio and strategy performance including a market outlook.
- e. An annual statement of compliance with investment guidelines.
- 5. Definitions: See Appendix 8

APPENDIX 70

Effective: July 19, 2012 This version: November 15, 2012 Replaces version approved: April 1, 2010 Last approved: July 19, 2012

ABSOLUTE RETURN (AR) STRATEGIES INVESTMENT GUIDELINES

The purpose of portfolio guidelines is to clearly define performance objectives, state the investment approach, and to control risk. Portfolio guidelines should be subject to ongoing review. A change in the allocation to the strategy or the Investment Committee's risk tolerance can be among the reasons for a guideline review.

Performance Objective:

The objective of the absolute return strategy (AR) portfolio is to earn an annualized return that exceeds the Performance Benchmark (below). The AR portfolio should also provide diversification benefits to the overall portfolio by offering returns that exhibit moderate correlation to the performance of other asset classes. The portfolio shall be composed of absolute return and market directional type strategies.

Portfolio Performance Benchmark

The performance benchmark is a weighted combination of 50% times the return of the HFRX-Absolute Return Strategies Index plus 50% times the return of the HFRX Market Directional Index.

Portfolio Guidelines

- Permissible investments include vehicles that invest primarily in Long/Short strategies
 (including U.S., dedicated Non-U.S., short bias, and global equities), Relative Value
 strategies (including equity market neutral, convertible bond arbitrage, relative value credit,
 and fixed income), Event Driven strategies (including distressed securities, special situations,
 and risk arbitrage strategies), and Opportunistic strategies (including macro, CTA and
 portfolio hedge).
- 2. Investments may be made in vehicles that invest in single or multiple strategies.
- 3. Investments may be made in a variety of vehicle structures, which may include: separate accounts, funds-of-one, comingled hedge funds, funds of hedge funds, and drawdown structures.
- 4. Policy ranges for the strategies are:

	<u> Kange</u>
Long/Short Equity	10-50%
Event Driven	10-50%
Relative Value	10-50%
Opportunistic	10-50%

- 5. No investment with any single manager can represent more than 10% of the AR portfolio.
- 6. Gross accounting leverage at the aggregate portfolio level shall not exceed 4.5 times the market value of the total AR assets. No more than 25% of the portfolio may be invested in managers who use on average more than 4.5 times gross accounting leverage. Recognizing the illiquidity of these investments, these constraints should guide the execution of the AR program, but may be exceeded temporarily between rebalancing. All leverage shall be non-recourse to the Regents, as trustee of UCRP, with respect to UCRP investments in the Program. All leverage shall be non-recourse to the Regents, a public corporation, with respect to GEP investments in the Program.
- 7. The Treasurer Chief Investment Officer may not incur debt to leverage the AR portfolio; however, portable alpha strategies are permitted.
- 8. No more than 15% of the total AR portfolio forecast risk may be derived from any single manager.
- 9. Total AR portfolio forecast risk shall be maintained at a level of no more than 8.0% of total invested capital.

[Definition] Gross Accounting Leverage: the ratio of the sum of the absolute values of the long and short exposures of a portfolio divided by the net market value of the total portfolio. Gross accounting leverage of the AR portfolio is the sum of the individual manager leverage ratios, weighted by their market values.

[Definition] Forecast Risk: the volatility of forecast returns, as measured by annualized standard deviation. Forecast risk is calculated using a factor based risk model, which decomposes each AR portfolio investment's forecast risk into forecast systemic factor exposures and forecast residual risks, making adjustments for strategy evolution and various liquidity and valuation related considerations.

APPENDIX 7P

Last approved: August 16, 2005 This Version: February 14, 2006

INVESTMENT OF CASH COLLATERAL INVESTMENT GUIDELINES

This policy represents a set of guidelines governing the investment of cash collateral provided by borrowers of securities through a Securities Lending Program for the Fund. Collateral held on behalf of the Fund is managed by a qualified investment manager ("Manager") in a separate investment fund (the "Account").

Through active management of the Account, the Manager shall seek to provide safety of principal, daily liquidity and a competitive return.

The following guidelines govern investments held by the Account.

(A) Investment Management

- 1. U.S. Government U.S. Treasury bills, notes and bonds, and other obligations issued by the U.S. Government, its agencies or sponsored agencies.
- Maturity may not exceed five years.
- 2. Corporate Debt Obligations (including commercial paper, floating rate notes and master demand notes, and excluding asset-backed commercial paper, mortgage backed securities and letter of credit backed commercial paper).
- a. Issuer must have a short term debt rating not lower than Al, Pl, D-1, or F-1 and the issuer must have a minimum long term debt rating not lower than A2/A from one of the NRSRO's. In. the event the issuer is only rated in either the long term or the short term area the issuer shall have a rating not lower than the rating required above for such area.
- b. The Account may hold no more than 5% of its assets in unsecured Corporate Debt Obligations issued by a single issuer and its affiliates.
- c. The Account will not hold corporate debt obligations issued by securities broker/dealers or their parent companies, except where issued by parent or holding companies with diversified business holdings wherein businesses other than securities brokerage and dealers represent a majority of their activities.
- Maturity may not exceed two years.
- 3. Domestic or London Eurodollar Certificates of Deposit; Yankee Certificates of Deposit; London Time Deposits; and bankers acceptances issued by U.S. banks, foreign branches of U.S. banks, or U.S. branches of foreign banks, which are subject to state or federal banking regulations in the U.S., or London branches of foreign banks.
- a. Nassau and Grand Cayman Time deposit centers are permitted but are limited to a maximum 5% of the portfolio's assets at time of purchase and maturity shall not exceed 7 days.

b. All banks must have minimum assets of \$5 billion and a short-term debt rating not lower
than Al and P1 and a long-term debt rating not lower than A2/A. In the event the issuer is only
rated in either the long-term or the short-term area the issuer shall have a rating not lower than the
rating required above for such area.
c. Not more than 5% of the Account's holdings may be invested in instruments issued by a
single U.S. or foreign bank and its affiliates.
d. Maturity may not exceed 190 days except when matched against term loans, which may
not exceed one year. Day count will commence (measured) from settlement date using
conventional market cash, regular or spot settlement.
4. U.S. dollar denominated supranational and sovereign debt obligations.
a. Issuing sovereign entity must have a long-term debt rating not lower than A.
5. Repurchase agreements.
a. All counter parties must have executed a written repurchase agreement.
b. All repurchase transactions must be fully collateralized by collateral determined by Manager
in its discretion, which collateral may include, but not be limited to, any of the following: US
Treasuries, US Treasury STRIPS, federal agency obligations, mortgage backed securities, federal
agency REMICS/CMOs, commercial paper, corporate obligations, asset backed securities, equities,
whole loans, or any combination thereof.
c. All counterparties shall have a long-term debt rating not lower than A2/A.
d. The Account must take possession of collateral either directly or through an independent
third party custodian.
6. Shares in registered money market mutual funds governed by SEC Rule 2a-7, which by
definition maintains a constant dollar value and is restricted to investments in top tier rated securities.
a. No more than 5% of the Account may be invested in any single money market mutual fund,
nor may the Account own more than 5% of the net asset value of a single money market fund.
7. Asset Backed Securities (ABS), rated AAA, collateralized by auto or credit card
receivables.
a. Maximum average life for Asset Backed Securities is 5 years.
b. Asset Backed Securities are limited to a maximum of 50% of the portfolio at time of
purchase.

(B) Liquidity and Investment Maturity

The Manager will endeavor to manage the Account such that it maintains sufficient liquidity to honor the termination of security loan transactions with borrowers and return cash collateral to borrowers. Manager will manage the Account so that the weighted average maturity of the portfolio will not exceed 120 days.

Securities issued in currencies other than US Dollar are not permitted.

1. No investment of securities lending cash collateral shall be made, directly or indirectly, in commercial paper or other obligations of Manager or its parent company or any of its

affiliates or in any derivative instrument with respect to which State Street or any affiliate is a counterparty.

- 2. Loans of domestic securities must be initially collateralized at 102% and loans of non-dollar securities must be initially collateralized at 105%, and all borrowers shall be required to deliver additional collateral, immediately, in the event the market value of the collateral falls below 100%.
- 3. When the Manager lends non-dollar securities it may accept as collateral sovereign debt denominated in the same currency as the non-dollar security. The issuing sovereign entity must have a long-term debt rating not lower than A2/A.
- 4. In the event that an issuer's rating is downgraded such that it no longer meets the criteria set forth in I. above, the investment may be held to maturity if the maturity date is 30 days or less, providing Manager's credit analysis does not demand other action. Investments with a maturity longer than 30 days will be sold in a prudent manner.
- 5. No investment of securities lending cash collateral shall be made in any commingled funds, including mutual funds, managed by Manager or its affiliates.
- 6. Floating rate investments must not exceed 65% of the portfolio at time of purchase.

APPENDIX 7QP

This version: November 15, 2012 Effective Last approved: April 1, 2010

REAL ASSETS INVESTMENT GUIDELINES

The purpose of these investment management guidelines ("Guidelines") is to clearly state the investment approach, define performance objectives, and to control risk within the Real Assets portfolio ("Portfolio"). These guidelines shall be subject to ongoing review.

These Guidelines are applicable to the entire Portfolio consisting of investments made on behalf of the UCRP and GEP ("the Funds"). The allocation of investments between the Funds will be managed by the Treasurer Chief Investment Officer in accordance with the respective performance and risk objectives of the Funds.

Strategic Objective

The Portfolio shall be managed with the objective of preserving capital while maximizing the risk-adjusted returns of the Funds through income generation and long-term capital appreciation, enhancing diversification, and hedging against inflationary risks.

Performance Objective

The primary performance objective of the Portfolio is to generate annualized net-of-fee returns, after adjusting for risk, which exceeds the return of the Performance Benchmark on a consistent basis over time.

Performance Benchmark

The Committee has adopted the following performance benchmarks for each of the underlying strategies within the Portfolio:

Strategy Benchmark

Timberland IRR-Based Benchmark Energy IRR-Based Benchmark Infrastructure IRR-Based Benchmark

Commodities S&P GSCI Reduced Energy Index

Opportunistic IRR-Based Benchmark

Investment Guidelines

1. Investments shall be made through limited liability investment vehicles structures – such as limited partnerships, limited liability corporations, and other pooled investment funds vehicles. Permissible investments shall also include but are not limited to funds, funds of-funds, vehicles, secondaries, co-investments and direct investments, and may include both publicly traded and private market assets. made through title holding corporations.

2. The Portfolio shall adhere to the following long-term allocation targets and ranges:

	Long Term	Allowab	Allowable Ranges	
<u>Strategy</u>	Target Allocation	Min	Max	
Timberland	30%	0%	40 <u>50</u> %	
Energy	30%	0%	40 <u>50</u> %	
Infrastructure	20%	0%	30 50%	
Commodities	10%	0%	20 50%	
Opportunistic	10%	0%	20 50%	
Total	100%	_	_	

- 3. Investments shall be primarily equity oriented, but may also include debt instruments secured by real assets with equity-like returns.
- 4.3. No single investment partnership commitment (including co-investments / direct equity investments) can represent, at the time of commitment, more than 1015% of the overall Portfolioreal assets allocation, defined as the most recent quarter book value plus unfunded commitments plus target commitment for the current (one) year.
- 5. No single investment, at the time of commitment, can exceed 20% of the total capital being raised for that investment.
- 6.4. No investment with any single investment manager or general partner can represent more than 4520% of the overall Portfolio.
- 7.5. No investment with any single investment manager or general partner can exceed 2030% of that manager's total assets under management, up to \$100 million. Exceptions to this limitation may be made by the Chief Investment Officer.
- 8.6. Investments in multiple vehicles managed by the same manager are permitted. However, the total commitment to these investments (including co-investments and direct equity investments), at the time of commitment, may not exceed 30% of the budgeted three-year allocation defined as current book value plus unfunded commitments plus approved commitment level for the current year and two subsequent years.
- 9. Investments outside the U.S. must be diversified by geographic location and may not represent more than 35% of the Portfolio.
- 10.7. The Portfolio shall be diversified across time. with no more than 35% of the budgeted allocation being committed in any single year.
- 41.8. Use of derivative securities by individual investment managers must be specified in writing in the manager's guidelines and must be consistent with the Derivatives Policy, Appendix 4.

Note: Compliance with some of these guidelines will not be required until a sufficient number of investments have been made. The Treasurer will keep the Committee periodically informed as to the status of its compliance with these guidelines.

APPENDIX 7RO

Effective: April 1, 2010 This version: November 15, 2012 Replaces version: none Last approved: April 1, 2010

LIMITS ON THE SIZE OF INVESTMENTS WITH PUBLIC EQUITY AND FIXED INCOME MANAGERS

There are three broad reasons to limit the size of a management firm ("manager" or "product") within an asset class: first, to reduce headline risk, second, to reduce business risk, and third, to reduce the potential for loss caused by the action of other investors in the product. Unlike investments in non-traditional asset classes, public equity and fixed income portfolios have greater transparency and liquidity, and assets are normally held by a trustee. Nevertheless, it is prudent to be mindful of the Fund's exposure with individual investment management firms.

To best accomplish these goals, this Policy will primarily be stated in terms of principles and objectives and secondarily in explicit rules.

Principles

- 1. The University of California Pension and Endowment funds ("UC") desires to retain the freedom of action to make investment decisions without being unduly influenced by the actions of other investors.
- 2. UC desires to minimize circumstances where the size of its investments results in value impairment.

Objectives

- 1. Each asset class should be diversified across a group of products with sufficiently dissimilar processes to minimize the possibility of significant concentration in individual assets. This diversification should consider investment style, strategy, statistical characteristics, and cross-holding of actual holdings.
- 2. UC's exposure to any single management firm /product should be limited such that an event which has a negative impact on all investors within the firm/product does not cause a *disproportional* negative impact on the value of UC's investment. Thus the size of a prudent investment must also consider ownership concentration of the *remainder* of the firm /product's assets.

Rules

- 1. Notwithstanding the above, no investment with a single firm should be more than 25% of that firm's assets under management, nor should an investment in a single product of a firm shall be more than 1025% of the assets of that product, unless mitigating circumstances exist. Such an exception must be approved in advance by the Chief Investment Officer.
- 2. Portfolios managed by staff within the Office of the Treasurer Chief Investment Officer are exempt from this Policy.

<u>Definition:</u> a *single product* is defined as (a) the strategy UC invests in plus (b) any other strategy managed by the same team in the same manner using similar benchmarks.

APPENDIX 8

This Version: February 14, 2006 November 15, 2012

Last approved: February 14, 2006

DEFINITIONS

- 1. Actively managed: that part of the assets of the Program in which securities are purchased in different proportions than in the Benchmark in the expectation of earning a greater return than would be earned by replicating the Benchmark portfolio ("passive" investing).
- 2. Annualized tracking error budget: the amount of active risk which represents a typical amount of benchmark deviation for a Manager or the Program. The budget is not an absolute limit, and market conditions may dictate whether a greater or lesser amount of benchmark deviation is appropriate. The risk budget is normally expressed in forecast terms, and is compared to realized risk as a principal metric of the stability of a strategy.
- 3. Beta: the sensitivity of a portfolio to a benchmark, computed by regressing portfolio excess returns on benchmark excess returns from the same period. A beta of 1.0 indicates similar return variability as the benchmark. A beta of 1.2 (alternately, 0.80) indicates that for every 1% increase or decrease in the benchmark excess return, the portfolio's excess return increases or decreases by 1.2% (alternately, 0.8%).
- 4. Cash equivalents: cash or short-term fixed income securities and an average quality rating of at least A or equivalent.
- 5. CDO, CLO, CBO: Collateralized Debt, Loan, and Bond obligations, respectively.
- 6. CMBS: Commercial mortgage backed securities.
- 7. CMO: Collateralized mortgage obligation (MBS derivative with unique structured risk and return characteristics).
- 8. Counterparty: One party to a trade legally bound to make a good delivery or a good payment.
- 9. Credit default swap (CDS): a security financial contract used to transfer the credit risk of a reference entity from one party (protection buyer) to another (seller). The protection buyer pays a premium to the protection seller, in exchange for a contingent payment following a credit event, such as defaults or bankruptcy.
- 10. Derivatives: securities financial contracts whose value is completely determined by the value of an underlying security.
- 11. Developed Markets: Countries which have achieved an advanced stage of economic development, whose securities markets have met certain standards for stability, and are included in one or more index provider's Developed Markets indexes; to be distinguished from "Emerging Markets."
- 12. Dollar delta (of an option): a measure of net dollar exposure of an option; defined to be the option's notional value times the option's delta.
- 13. Economic Leverage: in the context of portfolio management, is defined as a net dollar exposure to assets in excess of the dollar amount of invested capital as measured by current market value
- 14. Effective duration: a quantitative measure of the interest sensitivity of a fixed income instrument. It measures the approximate change in price of a security given a 100 basis point (one percentage point) change in the yield to maturity of the security.

- 15. Emerging Markets: Countries at varying stages of economic development, whose securities markets have only recently met certain standards for stability, and are included in one or more index provider's Emerging Markets indexes; to be distinguished from "Developed Markets."
- 16. Equitizing cash: the process of purchasing equity derivatives for the purpose of maintaining equity exposure.
- 17. Equity related securities: includes, but is not limited to convertible securities, preferred securities, and equity warrants.
- 18. Eurodollar deposits: deposits issued in US dollars of foreign banks and foreign branches of US banks.
- 19. Forecast annualized tracking error: the forecast standard deviation of annual differences between the portfolio return and the benchmark return, based on the current holdings in a portfolio, and using a particular risk estimation methodology and system.
- 20. Global Equity Strategy: an investment mandate based on a global equity benchmark which includes equity securities of both U.S. and Non-US companies
- 21. Gross dollar exposure is defined as the sum of the combined long exposures and the absolute value of the short exposures, including all physical and derivative securities positions.
- 22. Gross leverage: a term used to indicate that the gross dollar exposure of a portfolio exceeds the net market value of the total portfolio
- 23. Hedging: the process of reducing the possibility for gain or loss over a specific future period by taking an opposite position, yet not altering the underlying portfolio structure.
- 24. IO, PO: Interest only and Principal only strips (CMO variety).
- 25. Leverage: in the context of asset class guidelines, means "economic leverage," not "gross leverage"
- 26. Management costs and fees: for the purpose of the Objective in Part 1, costs and fees shall refer only to those costs directly incurred by the TreasurerChief Investment Officer, either directly for this asset class or general office expenses allocated to it. It shall not include other University overhead or allocated indirect costs.
- 27. Net Dividends (with respect to a performance benchmark / market index): a calculation of total return which approximates the minimum dividend reinvestment. The dividend is reinvested after deduction of withholding tax, applying the rate to non-resident individuals who do not benefit from double taxation treaties. MSCI uses withholding tax rates applicable to Luxembourg holding companies, as Luxembourg applies the highest rates. [definition from MSCI]
- 28. Net dollar exposure (of a portfolio): the arithmetic sum of the dollar market values of all long (positive) and short (negative) positions in securities, plus the notional value of futures contracts, plus the dollar delta of options contracts.
- 29. NRSRO: Nationally recognized statistical rating organization, such as Moody's or Standard and Poor's.
- 30. Overlay manager: a manager whose mandate is to manage a specific risk factor, such as currency, of a group of accounts, each managed by a separate manager. The overlay manager usually compares the aggregate (net) exposures of underlying managers and adjusts those exposures to a pre-determined risk profile, e.g., the currency profile of the Benchmark.

- 31. Portfolio characteristics: attributes of a portfolio of securities, including but not limited to, weighted average market capitalization, weighted average dividend yield, weighted average price-earnings ratio, beta with respect to a benchmark, allocation among countries or geographical regions, sector weights, effective duration, credit quality.
- 32. Product Composite: the return on the weighted aggregate of all portfolios managed by an investment firm using a similar process; see the CFA Institute Performance Presentation Standards for further explanation.
- 33. Prudence Requirement: a requirement of anyone acting in the capacity of a fiduciary, that they act with the care, skill, prudence, and diligence under the circumstances then prevailing that a prudent person acting in a like capacity and familiar with such matters would use in the conduct of an enterprise of a like character and with like aims.
- 34. Realized annualized tracking error: the standard deviation of the monthly differences between the portfolio return and the benchmark return, using returns from the most recent 12 month period, multiplied by the square root of 12.
- 35. REMIC: Real estate mortgage investment conduit (CMO variety)
- 36. Repurchase agreement: Sale of a security with a commitment from the seller to buy back the security from the purchaser at a specified price at a designated future date. A repurchase agreement is a collateralized loan where the collateral is a security.
- 37. Separately managed account: an account entirely owned by The Regents of the University of California, as Fund trustee, for which investment policies and guidelines are determined jointly by the TreasurerChief Investment Officer and the manager.
- 38. Spread duration: a quantitative measure of the credit risk sensitivity of a fixed income instrument. It measures the approximate change in price of a security given a 100 basis point (one percentage point) change in the spread (over the Treasury curve) of the security.
- 39. Structured (levered) notes: securities where coupon or interest payments are leveraged, linked, or indexed to interest rates, index returns, foreign exchange rates, or other similar variables.
- 40. Unhedged benchmark: a benchmark in which the underlying securities' returns are translated from their local currency back to US dollars at each measurement date.
- 41. Barclays Capital US Aggregate Index: The U.S. Aggregate covers the investment-grade, U.S. dollar-denominated, fixed-rate taxable bond market, including Treasuries, government-related and corporate securities, MBS (agency fixed-rate and hybrid ARM pass-throughs), ABS, and CMBS. Issues are Market capitalization weighted. Securities must have a minimum maturity of one year to remain in the index. Securities must have a minimum quality investment grade by middle rating of Moody's, S&P, and Fitch.
- 42. Barclays Capital US TIPS Index: The U.S. TIPS Index covers all publicly issued US

 Treasury issued inflation linked bonds (linked to the US Consumer Price Index). Issues
 are Market capitalization weighted. Securities must have a minimum maturity of one
 year to remain in the index.
- 43. BofA/Merrill Lynch High Yield Cash Pay Index: This Index tracks the performance of US dollar-denominated below investment grade corporate debt, currently in a coupon paying period, which is publicly issued in the US domestic market. The country of risk of qualifying issuers must be an FX-G10 member, a Western European nation, or a territory of the US or a Western European nation. Individual securities of qualifying issuers must have a below investment grade rating (based on an average of Moody's, S&P and Fitch).

- In addition, qualifying securities must have at least one year remaining term to maturity, a fixed coupon schedule and a minimum amount outstanding of \$100 million. 144a securities, both with and without registration rights, qualify for inclusion in the Index. Issues are Market capitalization weighted.
- 44. J.P. Morgan Emerging Markets Bond Index Global Diversified: This index includes US dollar-denominated Brady bonds, Eurobonds, and traded loans issued by sovereign and quasi-sovereign entities. The EMBI Global Diversified defines emerging markets countries with a combination of World Bank-defined per capita income brackets and each country's debt restructuring history. Issues are Market capitalization weighted but the index limits the weights of those index countries with larger debt stocks by only including a specified portion of these countries' eligible current face amounts of debt outstanding. The maximum weight to a country is capped. Securities must have a minimum maturity of one year to remain in the index.
- 45. J.P. Morgan Global Bond Index Emerging Markets Global Diversified [GBI-EM Global Diversified]: This index is a comprehensive Emerging Markets debt benchmark that track local currency bonds issued by Emerging Market governments (14 countries from Asia, Europe, Latin America, and Middle East/Africa). Countries are eligible for *inclusion* as long as they are classified as having a low or middle per capita income by the World Bank for at least two consecutive years. Markets with capital controls are not eligible. Issues are market capitalization weighted but the index limits the weights of those index countries with larger debt stocks by only including a specified portion of these countries' eligible current face amounts of debt outstanding. The maximum weight to a country is capped at 10%. The excess is redistributed to those countries that have a market capitalization of less than 10%. Securities must have a minimum maturity of one year to remain in the index.
- 46. Citigroup Large Pension Fund Index: This index provides an appropriate benchmark for pension funds seeking to establish long-term core portfolios that more closely match the longer duration of their nominal dollar liabilities. Issues are Market capitalization weighted; sectors have fixed weights. Securities must have a minimum maturity of 7 years (non mortgage); one year (mortgage) to remain in the index. Securities must have a minimum quality BBB-/Baa3.
- 47. Citigroup World Government Bond Index ex-US: This index contains Sovereign debt denominated in the domestic currency (23 government bond markets: of Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Ireland, Italy, Japan, Malaysia, Mexico, the Netherlands, Norway, Poland, Singapore, Spain, Sweden, Switzerland, U.K., and U.S.). Issues are Market capitalization weighted. Securities must have a minimum maturity of one year to remain in the index. Securities must have a minimum quality A-/A3.

RESOLUTION

Pursuant to the *Policy on Security Clearance for Access to Federal Classified Information* adopted on March 29, 2012 and this Resolution, the following named member of the University of California Key Management Personnel shall not require, shall not have, and can be effectively excluded from access to all classified information and/or special nuclear material released to the Regents of the University of California until such individual is granted the required access authorization from the cognizant security agency. And, as a consequence of this Resolution, such individual does not occupy a position that would enable her to adversely affect the policies or practices of the University of California, or its subsidiary, regarding the performance of classified contracts for the United States Government.

NAME	TITLE
Aimée Dorr	Provost and Executive Vice President for
	Academic Affairs

RESOLUTION

Pursuant to the *Policy on Security Clearance for Access to Federal Classified Information* adopted on March 29, 2012 and this Resolution, the following named member of University of California Key Management Personnel shall not require, shall not have, and can be effectively excluded from access to all classified information and/or special nuclear material released to the Regents of the University of California until such individual is granted the required access authorization from the cognizant security agency. And, as a consequence of this Resolution, such individual does not occupy a position that would enable him to adversely affect the policies or practices of the University of California, or its subsidiary, regarding the performance of classified contracts for the United States Government.

NAME	TITLE
William Jacob	Faculty Representative to The Regents