UNIVERSITY OF CALIFORNIA
RETIREMENT PLAN

INVESTMENT POLICY STATEMENT

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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

UNIVERSITY OF CALIFORNIA RETIREMENT PLAN
INVESTMENT POLICY STATEMENT

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;
    - 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.

l. *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 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 2l. 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.

l. 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.

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.

l. 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.cfapubs.org/doi/pdf/10.2469/ccb.v2010.n14.1 and incorporated and 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: April 1, 2013
Replaces Version Effective: July 19, 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.)

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A. Strategic Asset Allocation and Ranges

	Current Policy Allocation[1]	Long-Term Target Allocation	Allowable Ranges[2] Minimum	Maximum
U.S. Equity	25.0%	15.0%	20.0	30.0
Developed Non US Equity	19.0	13.5	14.0	24.0
Emerging Mkt Equity	6.75	11.0	4.75	8.75
Global Equity	2.0	0.0	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	3.0	6.0	10.0
Private Equity	7.75	8.0	4.75	10.75
Absolute Return Strategies	6.0	6.0	1.0	11.0
Cross Asset Class	2.0	8.0	0.0	5.0
Opportunistic Equity	0.0	8.5	0.0	3.0
Real Assets	1.75	3.0	0.75	2.75
Real Estate	4.75	7.0	1.75	7.75
Liquidity	0.0	0.0	0.0	10.0
TOTAL	100%	100%		
Combined Public Equity	52.75	39.5	42.75	62.75
Combined Fixed Income	25.0	20.0	20.0	30.0
Combined Alternatives	22.25	40.5	15.25	29.25

[1] Current Policy allocation as of January 1, 2013
[2] Ranges are set around the Current Policy Allocations, not the Long-Term Target Allocations. Ranges will be adjusted accordingly as the Current Policy Allocations converge on Long-Term Target Allocations.

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
TIPS	Barclays Capital US TIPS Index
Private Equity	N/A (See below note 2.)
Absolute Return Strategies	HFRX Absolute Return Index (50%) + HFRX Market Directional Index (50%)
Cross Asset Class	Aggregate UCRP Policy Benchmark
Opportunistic Equity	MSCI All Country World Index (Net Dividends)
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
25%	× Russell 3000 Tobacco Free Index
19%	× MSCI World ex-US (Net Dividends) Tobacco Free
6.75%	× 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
8%	× Barclays Capital US TIPS Index
7.75%	× Actual return of private equity portfolio
6%	× [HFRX Absolute Return Index × 50%] + [HFRX Market Directional Index × 50%] [Abs. Ret. - Diversified]
2%	× Aggregate UCRP Policy Benchmark [Abs. Ret. - Cross Asset Class]
0%	× MSCI All Country World Index (Net Dividends)
1.75%	× Aggregate Real Assets benchmark (see section B), with components weighted by their actual weights within the total real assets portfolio
4.75%	× 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
    - Surplus Risk (insufficient assets to meet liabilities)
    - Measures the risk of inappropriate investment policy and strategy
- Asset class level
    - Total Investment Risk (volatility of total return)
    - Measures the risk of ineffective implementation of strategy
- Portfolio level
    - Active Risk or "Tracking Error" (volatility of deviation from style or benchmark)
    - 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).
- **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).

- **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%].)

- **<u>Retirement Fund Active Risk</u>**

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
    - Aggregate portfolio systematic exposures different from the benchmark
    - Aggregate portfolio security selection decisions
    - Aggregate portfolio currency exposures different from the benchmark

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

- **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
- **Budget**: 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
- **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