

The Regents of the University of California

**COMMITTEE ON INVESTMENTS
INVESTMENT ADVISORY GROUP**

September 25, 2012

The Committee on Investments met on the above date by teleconference at the following locations: James West Alumni Center, Los Angeles campus; 1111 Franklin Street, Lobby 1, Oakland, Environment, Health and Safety Building, University Center 401, San Diego campus.

Members present: Representing the Committee on Investments: Regents Makarechian, Mendelson, Schilling, Wachter, and Zettel; Advisory member Jacob; Staff Advisors Barton and Smith
 Representing the Investment Advisory Group: Members Martin, Rogers, Samuels, and Chief Financial Officer Taylor, Consultant Klosterman

In attendance: Faculty Representative Powell, Secretary and Chief of Staff Kelman, Associate Secretary Shaw, General Counsel Robinson, Chief Investment Officer Berggren, and Recording Secretary McCarthy

The meeting convened at 10:00 a.m. with Committee Chair Wachter presiding.

1. **PUBLIC COMMENT**

There were no speakers wishing to address the Committee.

2. **APPROVAL OF MINUTES OF PREVIOUS MEETING**

Upon motion duly made and seconded, the minutes of the meeting of June 19, 2012 were approved, Regents Makarechian, Mendelson, Schilling, Wachter, and Zettel (5) voting "aye."¹

3. **SECOND QUARTER 2012 AND FISCAL YEAR 2011-12 INVESTMENT PERFORMANCE SUMMARY**

[Background material was mailed to the Committee in advance of the meeting, and a copy is on file in the Office of the Secretary and Chief of Staff.]

Chief Investment Officer Berggren stated that investment returns for the second quarter and year-to-date showed that the market had moved from one favoring equities to one favoring less risky investments. U.S. equities outperformed international and emerging market equities, as markets grappled with issues relating to debt in Europe and slower economic growth. Fixed income investments performed extremely well; the risk-averse market helped push yields down and prices up.

¹ Roll call vote required by the Bagley-Keene Open Meeting Act [Government Code §11123(b)(1)(D)] for all meetings held by teleconference.

Ms. Berggren stated that, while returns for UC portfolios were negatively affected by uncertainties over U.S. policies and world economic problems, UC's investments outperformed policy benchmarks in almost every portfolio. For the year ending June 30, 2012 the University of California Retirement Plan (UCRP) rose 40 basis points (bps), while its policy benchmark fell 60 bps. The General Endowment Pool (GEP) outperformed policy benchmarks by 210 bps. The Short Term Investment Pool (STIP) returned 2.4 percent, while the policy benchmark rose 0.2 percent. The Total Return Investment Pool (TRIP) had excellent returns, rising 6.7 percent, compared with its policy benchmark increase of 5.8 percent. The UC Entity, the aggregate assets managed by the Office of the Chief Investment Officer, added 115 bps for the year, which was 118 bps more than its policy benchmark, which returned a negative 0.03 percent.

Turning to performance by asset class, Ms. Berggren stated that nearly all asset classes outperformed policy benchmarks for the quarter ending June 30, 2012 and for the fiscal year to date. For the quarter, equities experienced a sharp reversal of the gains of the prior quarter; fixed income performed well for the quarter. The best-performing asset classes on a relative basis were emerging market equities, absolute return, cross asset allocation, and real estate, which benefited from a number of gains in separate accounts. For the fiscal year ending June 30, 2012, the U.S. equities asset class had a modest gain; fixed income had gains ranging from two to ten percent. For the fiscal year, the best-performing asset classes relative to benchmarks were non-U.S. developed market equities, emerging market equities, hedge funds, and cross asset allocation.

Committee Chair Wachter clarified that when Ms. Berggren referred to the best-performing asset classes she meant returns against the benchmark rather than actual returns. Ms. Berggren agreed. Committee Chair Wachter expressed his view that, for the purposes of the Committee, it would be more helpful to focus on actual returns, reasons for those returns, and the justification for allocations to asset classes that did not perform well. He stated that it was important to know whether the portfolios are making money or losing money and the reasons why, rather than performance relative to the benchmarks.

Regent Makarechian asked why the returns for the real assets class were positive for the year, but negative for the three-month period. Ms. Berggren attributed the change to the performance of energy commodities.

Turning to asset allocation, Ms. Berggren reported that allocation to U.S. equities in the UCRP was 25.9 percent, very close to the policy allocation; in the GEP the actual weight for U.S. equities was 19.1 percent. Non-U.S. developed equities were slightly underweight at 18.6 percent in the UCRP and 15.5 percent in the GEP. Emerging market equities were slightly underweight, at 6.4 percent in the UCRP and 5.5 percent in the GEP. In fixed income, the high yield asset class was slightly overweight, which benefited returns. Allocation to Treasury Inflation Protected Securities (TIPS) was considerably underweight, which hurt returns since TIPS performed extremely well. Ms. Berggren stated that she planned to increase this allocation.

Committee Chair Wachter asked for clarification of the difference between policy allocation and policy range. Ms. Berggren responded that policy range was the allowable range for policy weights.

Turning to performance attribution, Ms. Berggren stated that U.S. equity, non-U.S. developed equity, emerging market equity, absolute return, and real estate asset classes all contributed to the overall 96 bps of excess return above the benchmarks in the UCRP. Security selection was the main driver of excess return in the UCRP. Manager selection was strong in the absolute return asset class, since the hedge fund index was down approximately 12 percent in the past 12 months, and the UCRP absolute return was even.

In the GEP, since the absolute return class had a higher weight, performance of that asset class was a larger part of the 212 bps of total GEP excess return over benchmarks. Security selection in equities and absolute return contributed to performance in the GEP. In response to a question from Committee Chair Wachter, Ms. Berggren stated that the performance attribution related to asset allocation was a way to evaluate the effects of decisions by her office to overweight or underweight certain asset classes. Senior Managing Director Jesse Phillips added that performance attribution was a decomposition of the total excess return. For example, if an asset class outperforms its benchmark and the Office of the CIO had chosen to overweight that asset class, it would have a bigger impact on excess return than if it had been underweighted.

4. **PUBLIC EQUITY PROGRAM REVIEW**

[Background material was mailed to the Committee in advance of the meeting, and a copy is on file in the Office of the Secretary and Chief of Staff.]

Senior Managing Director William Coaker stated that all three public equity portfolios outperformed benchmarks during the 2012 fiscal year; the aggregate outperformance was 1.28 percent. Recent actions included hiring managers whose portfolios were significantly different from their benchmarks. Among the many reasons for this emphasis on active management was that credit would be more difficult to obtain going forward, resulting in a greater differentiation of results among companies. Investment Advisory Group Member Martin explained that this meant looking for managers whose holdings varied from those in the benchmark, to offer the possibility of outperforming the benchmark. Ms. Berggren added that her office searches for managers with expertise in particular areas whose funds would concentrate in those areas to achieve better performance than a portfolio that passively tracks the benchmark index.

Committee Chair Wachter asked why the availability of credit would affect public equity stocks. Mr. Coaker responded that easy availability of credit could mask problems of individual companies. Mr. Martin stated that the correlation in the S&P 500 had been extremely high, meaning that companies' stocks would move up or down together based on macroeconomic conditions. Currently correlation was lower, meaning that security selection would become more important. Mr. Coaker agreed, stating that correlation had been at an all-time high for the past two years. While companies' business results had

varied, that variation had not been reflected in their stock prices. Eventually, stock price and company performance would align, providing a good environment for active management.

Mr. Coaker described his investment strategy for the U.S. equity portfolio. He used demanding selection criteria for managers and focused on firms with relatively few strategies and limited assets. He sought managers who spent the majority of their time working on the strategy in which UC would be investing and who had compelling insights into specific stocks. Mr. Coaker said he was interested in U.S. companies with exposure to emerging markets and in technology companies. He anticipated high demand for technology from both consumers and businesses, and would take advantage of the current historically low prices of technology stocks.

Investment Advisory Group Member Samuels asked about the cost of using more active management. Mr. Coaker responded that he evaluated the payback period between an expected higher excess return and the cost of executing a trade. He agreed that fees were a critical component of net returns.

Regent Makarechian asked how Mr. Coaker evaluated the risk of companies with exposures to emerging markets. Mr. Coaker said that most companies have a gradual growth phase in their exposure to emerging markets. Companies would need to have specific knowledge, such as the regulations of individual markets.

Mr. Coaker described similar strategies for the non-U.S. developed markets equity portfolio, emphasizing exposure to emerging markets, an overweight in technology, and a vigorous manager selection process. This portfolio would emphasize higher quality companies because of the low rate of economic growth in Europe and Japan, and high levels of debt in Europe.

Mr. Coaker's strategy for the emerging markets equity portfolio would be quite different. He would look for companies with exposure to their own economies as well as those of other emerging market countries, rather than companies emphasizing exports to developed countries where he anticipated slower growth.

Mr. Coaker reviewed initiatives his group has undertaken in the past year. He hired nine managers, all with unique strategies, including a specialist in emerging market small cap stocks and a manager specializing in Brazil. Mr. Coaker also hired a manager who concentrates on U.S. growth stocks, since Mr. Coaker anticipated that segments of the U.S. market would experience robust growth.

Turning to the opportunistic equity portfolio in the General Endowment Pool, Mr. Coaker said he would attempt to earn higher excess returns by investing in public equities in a differentiated way. Specific strategies under consideration for the portfolio would include a 130/30 long-short equity strategy and long-biased equity strategies. Global equity strategies could be a differentiated way to earn excess returns, since the 253 S&P 500 companies reporting foreign revenue said that 48 percent of their revenue came from

overseas. Regarding opportunistic equity strategies, Mr. Coaker stated that relaxing some of the traditional constraints would allow investment with good managers across a wider range. Activist strategies, where managers become involved in the business strategies of companies in which they invest, sometimes including the selection and oversight of management, would be another way to attempt to earn excess returns. Mr. Coaker said his team would also employ specialty strategies, focusing on specific sectors, countries, or themes as market opportunities presented themselves.

In response to a question from Mr. Martin, Mr. Coaker said his team was comprised of three investment officers and a research assistant.

5. **UNIVERSITY OF CALIFORNIA RETIREMENT PLAN / GENERAL
ENDOWMENT POOL INVESTMENT POLICY AND GUIDELINE REVIEW
AND RECOMMENDATIONS**

The Chief Investment Officer, with the concurrence of the Regents' General Investment Consultant, Mercer Investment Consulting, Inc., recommended that the changes to the University of California Retirement Plan (UCRP) Investment Policy Statement (as shown in Attachment 1), the University of California General Endowment Pool (GEP) Investment Policy Statement (as shown in Attachment 2), and the Appendices to Investment Policy Statements of UCRP and GEP (as shown in Attachment 3), be approved, effective November 15, 2012.

[Background material was mailed to the Committee in advance of the meeting, and a copy is on file in the Office of the Secretary and Chief of Staff.]

Senior Managing Director Jesse Phillips stated that the purpose of the guidelines was to control risk. Guidelines constantly evolve and should be reevaluated as circumstances, such as market conditions or the Committee's risk tolerance, changed.

Committee Chair Wachter called attention to the importance of these recommendations, involving the guidelines from the Regents to the Office of the Chief Investment Officer (CIO). He explained that the lowest level of oversight would be to evaluate the performance of the Office of the CIO in managing asset classes; a higher level would be to evaluate choices made by the Office of the CIO within the ranges of allowable asset allocation. An even higher level would be to evaluate the overall asset allocation to determine whether UC was allocating its assets in a manner consistent with best practices. The highest level of oversight, which was the subject of this item, was to review policy and guidelines to evaluate risk restrictions under which the Office of the CIO would operate.

Regent Makarechian stated that decisions about asset allocation would have a significant effect on returns, and it would be important for the Committee to understand recommendations to change asset allocation. Committee Chair Wachter agreed with the importance of asset allocation decisions, but pointed out that the current review would be of policy and guidelines rather than asset allocation. Mr. Phillips stated that the General

Endowment Pool (GEP) asset allocations were reviewed at the prior meeting; allocations in the University of California Retirement Plan (UCRP) would be reviewed at a future meeting. Committee Chair Wachter stated that the policy and guidelines would have an effect on what asset allocations were permissible. Chief Investment Officer Berggren added that the policy and guidelines reflected the Committee's risk tolerance.

Mr. Phillips stated that the potential for investment returns depended on the opportunities that would be available to take risk and the skill of the Office of the CIO at managing risk. The policies and guidelines helped define where risk could be taken and what range of outcomes would be acceptable. He expressed his view that the current recommendations would increase the flexibility of the Office of the CIO's investment managers to make good investment choices without materially adding to the portfolio's risk.

Mr. Phillips summarized the recommendations. Relaxing concentration limits and eliminating target percentages for some subsectors would provide flexibility to make good investments while ensuring an adequate level of diversification. A recommended benchmark change for emerging market debt would make policies consistent with a change in risk tolerance. Some recommendations would update guidelines to account for changes in investment markets and in the Office of the CIO's investment strategies.

Mr. Phillips discussed four categories of concentration limits: the size of an investment as a percentage of an asset class in a UC portfolio; the size of an investment as a percentage of that fund or that product; the size of the investment with a firm as a percentage of the firm's assets under management (AUM); and the absolute size of an investment. More specifically, Mr. Phillips stated that in the private equity program there was currently a limit of 20 percent on a single investment as a percentage of that fund or product; the recommendation would increase that limit to 30 percent with a dollar cap of \$150 million. Co-investments within the private equity program were currently capped at \$20 million for any single co-investment; the recommendation would increase that cap to \$200 million. In the real estate program, the current limit of 20 percent on a single real estate fund investment as a percentage of that fund or product would be increased to 25 percent, with a cap of \$75 million.

Regent Makarechian asked why the permissible amount for co-investments in the private equity program would be increased from \$20 million to \$200 million. Ms. Berggren stated that her office had initiated the co-investment program a few years prior and had a staff capable of managing co-investments successfully. She expressed her view that to outperform the benchmark in the private equity asset class it would be necessary to increase the use of co-investment strategies, in other words, to invest along with their managers. The 13 co-investments to date had been very successful. Managing Director Timothy Recker added that returns from inception to date on co-investments were slightly less than 20 percent and had a material effect on the private equity program.

Regent Makarechian asked whether the expertise of the staff of the Office of the CIO was a rationale for the other proposed changes to concentration limits. Mr. Phillips expressed his qualified agreement with that assessment.

Ms. Berggren explained that the changes in the concentration limits in the real estate program were recommended because of the success of the real estate separate account program, which was started four years prior. In the past three years, three properties were sold, each with a profit in excess of 25 percent. She added that the recommended changes in concentration limits in the private equity and real estate programs indicated a shift in focus for those two programs.

Regent Mendelson asked whether the maximum investment in the private equity program allowed under the proposed limits would be the combination of the original investment, which could be 30 percent of the size of the fund or product, plus a co-investment, which could be up to \$200 million. Ms. Berggren and Mr. Phillips confirmed that this was the case.

Investment Advisory Group Member Samuels recalled that, during the financial crisis of 2007-08, issues of liquidity and problems caused by incentivizing managers to take higher risks had been significant. He asked whether similar problems could be created by easing limits on the Office of the CIO's managers' investments, combined with a bonus structure that rewarded risk taking. Mr. Phillips acknowledged this concern, but added that these guidelines relate to the private equity and real estate programs managed internally by the Office of the CIO. The proposed changes would allow investments of Office of the CIO's managers to be slightly more concentrated with particular firms, but would not affect the overall risk level.

Chief Financial Officer Taylor added that, while the liquidity crisis of 2007-08 had a large effect on higher education institutions, the current recommendations involved the UCRP and the GEP, rather than the Short-Term Investment Pool (STIP) or the Total Return Investment Pool (TRIP), which UC depended on for its operating revenues. Mr. Phillips stated that the Office of the CIO carefully forecasted the liquidity needed from the UCRP and the GEP and held its private or illiquid-type investments to a level that would allow the portfolios to meet their liquidity commitments. Ms. Berggren agreed that liquidity was an important consideration in both the UCRP and the GEP. Her office did extensive modeling to predict liquidity requirements to avoid being forced to sell assets in undesirable market conditions, as some other institutions had to do during the financial crisis. Ms. Berggren added that liquidity requirements had an effect on performance, since the most illiquid asset classes had been the best-performing over time.

Regarding the recommendation to limit the size of individual investments in co-investment club deals in the real estate program to \$300 million, Regent Zettel asked for a definition of a club deal. Mr. Phillips said a club deal referred to a small group of investors, usually pensions or endowments, who invested together. Mr. Phillips stated that the recommendation proposed increasing the limit on the size of a co-investment in a club deal in the real estate program from 7.5 percent of the real estate asset class to

15 percent, with a limit on individual deals of \$300 million. There was currently no limit on the dollar amount of such deals.

Regarding the private equity program, Committee Chair Wachter asked why the recommended changes included a limit of \$150 million for an individual investment, and a limit of \$200 million for a co-investment deal. Committee Chair Wachter expressed his view that, given that the private equity program had total assets of \$6 billion, \$150 million was a low limit for a permissible investment. Mr. Recker said that limit seemed reasonable, given the program's current strategy. Committee Chair Wachter cautioned that too much diversity could lead to mediocre returns.

Regarding co-investments, Mr. Recker stated that his strategy going forward for the private equity program was to have co-investments at 20 to 30 percent of the portfolio, which would require making material commitments to individual company transactions. Regent Makarechian asked whether the goal would be to have approximately \$2 billion of the private equity portfolio in co-investments. Mr. Recker and Ms. Berggren agreed that would be the long-term goal. Mr. Recker noted that the portfolio would not have to pay fees or costs of carry on co-investments.

Committee Chair Wachter acknowledged the advantages of co-investing. He noted that, while the \$200 million limit on individual co-investments would represent only three percent of the \$6 billion private equity portfolio, it would represent a much larger portion of the GEP than of the UCRP. He suggested it might be appropriate to have a limit for private equity co-investments in the GEP, since he thought it would be inappropriate to invest \$200 million in one co-investment in the GEP. Ms. Berggren stated that the private equity program's aggregate exposure to one manager could be substantial, since it could include \$150 million investments in a number of funds of the same manager.

Investment Advisory Group consultant Klosterman asked whether private equity included venture capital funds. Ms. Berggren responded that private equity included buyout and venture capital.

Committee Chair Wachter recommended amending the recommendation by adding the following sentence to Attachment 3, the Appendices to Investment Policy Statements of UCRP and GEP, Appendix 7L, Private Equity Investment Guidelines, #7: "No single co-investment in the General Endowment Pool can represent, at the time of commitment, more than \$100 million at cost."

In response to a question from Committee Chair Wachter, Mr. Recker stated that the private equity program portfolio was distributed 80 percent to the UCRP, 15 percent to the GEP, and five percent to the Tax-Deferred 403(b) Plan.

Turning to the real assets class, Mr. Phillips stated that the current limit of ten percent of the asset class for a single commitment would be increased to 15 percent, and the current 30 percent limit on an investment as a percentage of the fund or product would be eliminated, since there are a number of attractive separate account opportunities in which

UC would be the only investor. The current limit in the real assets portfolio on the size of an investment with a single manager or general partner would be increased from 15 percent to 20 percent; the size of an investment with a firm as a percentage of the firm's AUM would be increased from 20 percent to 30 percent with a cap of \$100 million.

For developed public equity and emerging market public equity, Mr. Phillips stated there was currently no limit on the percentage an investment with a particular manager represented of the entire asset class; the recommendation would limit the size of an investment as a percentage of the asset class in developed public equity (both U.S. and non-U.S.) to 12 percent and in emerging market public equity to 15 percent. In both developed public equity and emerging market public equity, the current ten percent limit of the size of an investment as a percentage of the size of a fund or product would be increased to 25 percent to enable investments with managers of smaller, more nimble portfolios. In both areas, the current 25 percent size of an investment as a percentage of the firm's AUM would be eliminated, again to permit investments with managers of newer, smaller portfolios.

Regent Zettel asked how these proposed changes would affect risk. Mr. Phillips expressed his view that these changes would not add an incremental amount of risk, since the portfolios would still be highly diversified.

Turning to current limits on subsectors within the private equity and real assets classes, Mr. Phillips stated that those sector targets would be eliminated, but ranges for the subsectors would be maintained. These proposed changes were appropriate given the experience gained in these asset classes during the past three years by the Office of the CIO. Elimination of specific targets in subsectors would allow the manager of the real assets program to determine how much to invest in the various subsectors within the total allocation to real assets, which was three percent of both the UCRP and the GEP. Allowable ranges of investments in all subsectors in real assets would be from zero to 50 percent, with a 40 percent limit on venture capital in private equity, to allow managers the ability to overweight sectors they believed to be attractive.

Committee Chair Wachter asked for an interpretation of the recommended changes to sector limits within the private equity asset class. Mr. Phillips stated that there were currently targets of 25 percent for venture capital, 70 percent for buyout, and five percent for co-investments. The recommended changes would eliminate those targets, while retaining a range of up to 40 percent on venture capital. Ms. Berggren explained that the private equity program had been invested 40 percent in venture capital, but would move toward the long-term goal of no more than 20 percent in venture capital.

Mr. Phillips discussed a proposed change to the policy benchmark for emerging market debt. He noted that the Committee had discussed the appropriate allocation between dollar-denominated debt and local currency. The current benchmark for emerging market debt was comprised of 33 percent dollar-denominated debt and 67 percent local currency, but the Committee had expressed its preference that the benchmark be in dollar-

denominated debt, while allowing the CIO to invest tactically in local currency debt. The recommendation would change the benchmark to the JP Morgan Emerging Market Bond Index Global Diversified, a 100 percent dollar-denominated benchmark.

Regent Makarechian asked how the Office of the CIO invested in emerging market debt. Mr. Phillips explained that emerging market debt investments represented 2.5 to three percent of the UCRP and the GEP. The dollar-denominated debt was managed internally by experienced staff who perform credit analysis of the various sovereigns; the local currency debt was managed by two external fund managers who were experts in currency. Regent Schilling asked whether investments in this area were leveraged. Mr. Phillips responded that the emerging market debt class was managed in a long-only fashion with no leverage.

Mr. Phillips summarized additional amendments to the UCRP and GEP Investment Policy Statements. Limited use of leverage would be allowed in particular strategies in the real assets program, in order to update guidelines that were written before the Office of the CIO had investments in real assets.

Another change would add unlevered structured notes to the permitted list of derivative instruments. Mr. Phillips explained that structured notes were contracts allowing receipt of certain cash flows in exchange for other cash flows, and were often used by managers in emerging markets to gain access to specific securities or sectors. The unlevered structured notes would carry a very small degree of counterparty risk, which Mr. Phillips did not believe to be material and which would be accounted for in the managers' analyses. Mr. Phillips emphasized that these notes were not levered and would be used to gain access to currencies that would otherwise be difficult to purchase directly for technical reasons.

Mr. Phillips stated that another proposed change would modify the minimum credit quality of the high yield debt portfolio from B to B-, since the credit quality of the benchmark had been reduced to B. Mr. Phillips explained that, in order to outperform the benchmark, the Office of the CIO would have to be able to invest in lower-rated credits. Ms. Berggren added that her office performed its own intensive due diligence regarding credit quality in the fixed income portfolio.

Regent Zettel asked about the amount of assets and the risk involved in this proposed change. Mr. Phillips responded that the high yield portfolio represented 2.5 percent of the UCRP and three percent of the GEP. The portfolio consisted entirely of corporate credits, which at a B average rating would be from corporations that could issue debt but only at very attractive yields to investors who would be willing to take a slight default risk. Ms. Berggren added that her office had tended to invest in higher credit quality, but would like to be able to invest in a wider range of instruments. Committee Chair Wachter stated that a B- was not a good credit rating, and that the key to success in this portfolio would be the Office of the CIO's ability to perform successful credit research or to hire managers that could. Ms. Berggren expressed confidence in her office's fixed income program, with highly experienced internal managers who have performed extremely well

over a long period. In response to a question from Regent Makarechian, Ms. Berggren stated that the high yield debt portfolio was currently \$1.5 billion.

Mr. Phillips stated that a second recommended change to the high yield debt portfolio would increase the limit of Rule 144A securities from 20 percent to 30 percent of that portfolio. He explained that the market for 144A securities had changed, with many more firms issuing such securities. In order to have the opportunity to outperform the benchmark, the Office of the CIO would like to be able to buy more of these securities. He explained that Rule 144A securities were privately owned securities that have different registration characteristics from securities issued on public markets. The securities were less liquid and were becoming a larger part of the investment universe.

Mr. Phillips explained that there was currently a concentration limit in the STIP of five percent for any particular issuer of commercial paper. However, because of cash flows in and out of the total STIP portfolio, this limit was sometimes exceeded temporarily. Mr. Taylor explained that, although his office has worked to forecast cash flows, there were occasions when large amounts came into the STIP portfolio and other times when campuses had large cash expenditures. More flexibility was needed, given the realities of running the University. Mr. Phillips added that increasing the concentration limit in the commercial paper program to no greater than ten percent for a period of up to one month would avoid the need to liquidate securities and incur unnecessary transaction costs.

In response to a question from Mr. Klosterman, Mr. Phillips said the duration of the STIP was approximately two to 2.5 years. The duration had been decreasing, because the portion of the portfolio in the commercial paper program, which had a duration of zero, had been fluctuating.

Mr. Taylor asked whether the proposed removal of cash collateral guidelines would apply to securities lending only in the UCRP and the GEP, and not in the STIP or TRIP. Mr. Phillips responded in the affirmative. He explained that these guidelines were set by the Office of the CIO and not by the Regents, and flexibility was sometimes needed to deal with market conditions.

Mr. Phillips reiterated the proposed amendment to the recommendation to limit the size of co-investments in the GEP private equity program to \$100 million for any single co-investment.

Upon motion duly made and seconded, the Committee approved the Chief Investment Officer and the Regents' General Investment Consultant's recommendation as amended, and voted to present it to the Board, Regents Makarechian, Mendelson, Schilling, Wachter, and Zettel (5) voting "aye."

6. **REAL ASSETS PROGRAM REVIEW**

[Background material was mailed to the Committee in advance of the meeting, and a copy is on file in the Office of the Secretary and Chief of Staff.]

Managing Director Timothy Recker stated that the real assets allocation and investment guidelines had been approved by the Regents in March 2010 and became effective in April 2010. The program currently has 19 managers in 25 funds and a market value of \$650 million as of June 30, 2012, with additional unfunded commitments of \$537 million, for a total exposure of \$1.2 billion. Current real assets allocations were 1.3 percent of the University of California Retirement Plan (UCRP) and 1.8 percent of the General Endowment Pool (GEP), both of which had a three percent long-term allocation. Mr. Recker stated that the program's objectives were accretive returns to the overall entity, and providing inflation protection and diversification. He explained that the real assets program involved investments such as minerals and mining, commodities, timber, agriculture, infrastructure, equipment, intellectual property, and energy, including oil and gas.

Turning to his strategy for the real assets program, Mr. Recker recalled that when the portfolio was started in 2010, it was important to minimize the J-curve effect, as the fees paid for commitments could cause an initial loss. At that time, the program focused on purchasing secondary assets, so that the return profile for the class would be attractive. Going forward, focus on growth-oriented assets would be increased, a strategy that would be more aligned with the portfolios of peer institutions. Mr. Recker stated that the portfolio emphasized active management with many separate accounts.

Regent Makarechian asked how the program's assets would be diversified, since the target locations for sectors within the program were being relaxed. Mr. Recker explained that the guidelines would allow investment of up to 50 percent of the portfolio in any one of the five vertical sectors, but that in fact the portfolio was well-diversified among the five verticals. The 50 percent limit would allow the program's manager to be opportunistic and make tactical tilts to take advantage of periods when a particular vertical sector might be attractive.

Mr. Recker stated that the real assets co-investment portfolio, particularly important because of that area's limited universe of managers and account structures, would minimize fees and improve long-term returns.

Mr. Recker displayed a chart showing allocation to strategies within the real assets program, on the basis of both net asset value and total exposure. Timber investments were 21.5 percent of the program by net asset value, but only 16.5 percent of total exposure; Mr. Recker advised that the proportion of timber investments would continue moving toward 12 percent, reflecting a tactical decision. He stated that the real assets portfolio would continue to be diversified across the sectors.

In response to a question from Regent Makarechian, Mr. Recker stated that commodities fell ten percent in the second quarter of 2012, contributing to the real assets program's negative 60 basis points return for the quarter. The energy sector rose 2.1 percent in the same period.

Investment Advisory Group consultant Klosterman asked whether the energy sector included investments in master limited partnerships and, if so, whether they were included in the energy sector allocation. Mr. Recker responded that master limited partnerships were allowable investments; his office had performed due diligence on managers in that area, but was not currently invested. Should such an investment be made, it would be included in the energy sector allocation figures.

Turning to performance, Mr. Recker stated that the real assets program had returned 14.9 percent since its inception in April 2010. In comparison, the overall return for the same period was 6.6 percent for the UCRP and six percent for the GEP. In 2012 the real assets portfolio rose 0.7 percent, which Mr. Recker said reflected J-curve challenges such as unfunded commitments against which the portfolio paid.

Investment Advisory Group Member Martin asked how the Office of the CIO's teams in private equity, real assets, and real estate were organized. Mr. Recker responded that Ms. Gloria Gil was the managing director of the real estate program; Mr. Recker was the managing director of the real assets and cross asset classes. While he had team staff dedicated to either private equity or real assets, staff in these two areas had been meeting jointly and sharing junior resources to take advantage of synergies between the private equity and real assets areas. His team included dedicated directors for the real assets and private equity portfolios, a dedicated investments officer for private equity, and another private equity officer who covered both real assets and private equity.

7. **CROSS ASSET CLASS PROGRAM REVIEW**

[Background material was mailed to the Committee in advance of the meeting, and a copy is on file in the Office of the Secretary and Chief of Staff.]

Managing Director Timothy Recker stated that the cross asset class was approved by the Committee in February 2011 and became effective in March 2011. The program currently has five managers and a value of \$1.1 billion across both the University of California Retirement Plan (UCRP) and the General Endowment Pool (GEP). The cross asset class currently comprised 2.2 percent of the UCRP, where it has a long-term target allocation of two percent. The cross asset class was 2.3 percent of the GEP, where its long-term target allocation had been increased to five percent at the July 2012 meeting.

Mr. Recker stated that the strategy for the cross asset class had two major components, strategic partnerships and satellite strategies. Strategic partners were an extremely limited number of firms with deep expertise and breadth across many areas. UC would have separate accounts with these partner firms whose performance would be evaluated in comparison to the performance of the UC Entity, or all assets managed by the Office of the Chief Investment Officer. The partner firms were given UC's strategic asset allocation quarterly, with instructions to try to improve that asset allocation to outperform UC's investment results. During monthly telephone conferences with the partner firms' managers, staff of the Office of the CIO would gain information about ways in which the partner firms were attempting to outperform UC, and could use this information to

enhance their decision-making for the balance of UC's investments. The partner firms could invest across a wide variety of instruments and asset classes.

In response to a question from Committee Chair Wachter, Chief Investment Officer Berggren stated that these partnerships would be different from hedge funds in that the investments would be long only. Mr. Recker added that most of the strategic partnerships were highly customized for UC. Ms. Berggren said that the strategic partnership firms were leaders in new investment strategies and the partnerships would offer UC an opportunity to view these strategies and capitalize on those appropriate for UC. Mr. Recker stated that managers of vehicles within these partnerships could quickly take advantage of market dislocations. Ms. Berggren cited the example of one partner that had a proprietary group of assets, in this case a portfolio of mortgage securities, uncovered through the partner's due diligence. UC would invest in that portfolio and establish a satellite to increase its investment incrementally. Mr. Recker stated that the partner's manager could invest in vehicles across the whole breadth of the partner's organization. He added that only a handful of institutions were using this strategy. In response to a question from Committee Chair Wachter regarding examples of firms that could be strategic partners, Ms. Berggren cited Neuberger Berman Group LLC and Goldman Sachs. Mr. Recker said the strategic partnerships would provide not only value, but also useful information.

Mr. Terry Dennison of Mercer Consulting, Inc. stated that the purpose of cross asset allocation was to allow access to a range of asset classes so that the manager could take advantage of opportunities to earn returns and reduce risk. He stated that the collaborative process of strategic partnerships was becoming more common.

Mr. Recker said that the satellite strategies in the cross asset class involved being opportunistic and identifying unique opportunities in the marketplace, differentiated assets, or assets that could lie between asset areas. Satellite strategies could involve giving strategic partners additional funds to invest in a particular strategy or investing opportunistically in distressed assets.

Investment Advisory Group consultant Klosterman asked how the strategic partners were chosen. Ms. Berggren said that 15 managers were evaluated, and managers were chosen who had the broadest capabilities, the best ideas, and the willingness to be strategic partners.

Mr. Recker discussed the strengths of the cross asset class. The class had delivered strong absolute and relative returns, and was generally a class that would perform better in falling markets than in rising markets, although the portfolio had outperformed during some positive markets. Some strategic partners had different risk strategies, which would give UC different exposures across diverse macroeconomic conditions. The engagement and communication with strategic partners were with the most senior managers in the partners' organizations and were significantly more robust than with most managers. The information and strategies gained could be used to gain information that might be applied to the rest of the UC portfolio.

Mr. Recker stated that the portfolio currently had fully implemented the strategic partnerships strategy and was actively developing satellite strategies. Strategic partners' managers could also be engaged for occasional research projects.

Mr. Recker reported that the cross asset class returned 11.14 percent for the 2012 fiscal year, or 1,200 basis points (bps) of excess return versus the UC Entity, a return he characterized as excellent. For the first half of the current fiscal year, the cross asset class returned 4.77 percent, 29 bps below its policy benchmark. He expressed his view that the class would have some volatility, but would be an attractive enhancer of active returns in the long term.

8. **INVESTMENT CONSULTANT REVIEW OF UNIVERSITY OF CALIFORNIA
CAMPUS FOUNDATIONS FIRST QUARTER 2012 PERFORMANCE REPORTS**

[Background material was mailed to the Committee in advance of the meeting, and a copy is on file in the Office of the Secretary and Chief of Staff.]

Mr. Terry Dennison of Mercer Investment Consulting (Mercer) stated that Mercer had reviewed material provided by the campus foundations and State Street and was of the opinion that the campus foundations continue to have appropriate asset allocations and risk postures.

Mr. Dennison added that the campus foundations had varied strategies, with two foundations invested entirely in the General Endowment Pool (GEP). Six foundations had conventional asset allocations. Two foundations, UC Berkeley and UC Davis, had chosen strategies involving purpose portfolios with asset classes such as growth, diversification, and inflation protection, an approach Mr. Dennison characterized as thoughtful.

Committee Chair Wachter commented that UCLA's foundation was invested along the lines of the investment management and asset allocation model developed by Mr. David Swensen in managing Yale University's endowment. Mr. Dennison agreed and characterized UCLA's investment strategy as aggressive. He said UC Riverside's foundation had been the most successful in its investment strategy. UC Santa Barbara's foundation had struggled; he stated his understanding that its investment advising work was out for bid.

Committee Chair Wachter asked how the campus foundations' investments have performed compared with those of the Office of the CIO. Mr. Dennison responded that the results varied, although in general they were tightly grouped. Some campus foundations performed better than the GEP, some performed worse; some performed consistently better than the GEP, and some consistently worse.

Committee Chair Wachter asked why UC Santa Barbara's foundation performed best of all foundations for the previous three-year period, but worst for the five-year period. Mr. Dennison explained that its foundation had previously been invested entirely in the GEP, but then decided to set up its own investment program. The program's benchmark

assumed that the asset allocation of the portfolio would change immediately, but the transition took time, during which there were wide divergences from the benchmark. He noted that the UC Santa Barbara Foundation still lagged its benchmark.

Mr. Dennison expressed his opinion that all the foundations were within a reasonable range. He noted that Mercer's evaluation included an assessment of the foundations' skill level in managing their investments.

Committee Chair Wachter introduced new student observer Henry Huang, a UC Riverside M.B.A. student and president of the UC Riverside Graduate Student Association. Mr. Huang stated his intention to keep UC students informed about the difficult tasks facing the Committee on Investments. He expressed his view that the performance of the UC investment portfolios was impressive, and that the highest priority should be given to long-term investments that would ensure that high-caliber UC educational opportunities would continue. Mr. Huang noted the current difficult financial environment for UC, but expressed his view that UC would be poised to emerge from the current financial situation stronger. He hoped that he would be a useful conduit of information between the Committee and UC students.

The meeting adjourned at 12:25 p.m.

Attest:

Secretary and Chief of Staff

UNIVERSITY OF CALIFORNIA RETIREMENT PLAN

INVESTMENT POLICY STATEMENT



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

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

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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

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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).

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- 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](#).

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- 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. ~~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.

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- 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.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.

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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

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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

UNIVERSITY OF CALIFORNIA RETIREMENT PLAN INVESTMENT POLICY STATEMENT

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.

UNIVERSITY OF CALIFORNIA RETIREMENT PLAN INVESTMENT POLICY STATEMENT

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 Policy Allocation	Long-Term Target Allocation	<u>Allowable Ranges</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 – Diversified	6.0	6.5	1.0	11.0
Absolute Return – Cross Asset Class	2.0	2.0	0.0	4.0
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%		

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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

<u>Asset Class</u>	<u>Benchmark</u>
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

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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%.

<u>Percentage</u>	<u>Benchmark</u>
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 × 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.

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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.

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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.

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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).

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- **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
 - 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.

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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

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Approved ~~March 29, 2012~~[November 15, 2012](#)
Replaces version dated ~~December 13, 2011~~[March 29, 2012](#)

UNIVERSITY OF CALIFORNIA GENERAL ENDOWMENT POOL

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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 GENERAL ENDOWMENT POOL 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 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;
 - 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;
 - 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.

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- 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.

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- l. *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

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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 2I. 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.

UNIVERSITY OF CALIFORNIA GENERAL ENDOWMENT POOL INVESTMENT POLICY STATEMENT

- 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. ~~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.

UNIVERSITY OF CALIFORNIA GENERAL ENDOWMENT POOL INVESTMENT POLICY STATEMENT

- 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.
- 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.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

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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.

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- 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.

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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 Target Allocation	<u>Allowable Ranges</u>	
			<u>Minimum</u>	<u>Maximum</u>
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%		

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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

<u>Asset Class</u>	<u>Benchmark</u>
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

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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%.

<u>Percentage</u>	<u>Benchmark</u>
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.

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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.

UNIVERSITY OF CALIFORNIA GENERAL ENDOWMENT POOL INVESTMENT POLICY STATEMENT

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.

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- **GEP level**
 - Spending Risk (insufficient assets to meet planned spending)
 - 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

- **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.

- **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).
 - **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]

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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, defined as annualized standard deviation of the difference between monthly GEP 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 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.

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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.

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APPENDICES TO

INVESTMENT POLICY

STATEMENTS

OF UCRP and GEP



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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 stand-alone investments, their use in a portfolio may actually reduce or otherwise manage risk.

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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 ~~Treasurer~~ Chief 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
 - 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

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- 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

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- 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 ~~Treasurer~~ Chief Investment Officer 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 ~~Treasurer~~ Chief Investment Officer 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

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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 ~~Treasurer~~ Chief 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 ☐ 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

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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 ~~Treasurer~~Chief Investment Officer will implement procedures for periodic monitoring of derivative strategies. Investment managers will be required to provide the following to the ~~Treasurer~~Chief Investment Officer:

- 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 ~~Treasurer~~Chief Investment Officer for portfolio rebalancing or asset allocation, the Operations and Trading functions will provide the following to the ~~Treasurer~~Chief Investment Officer:

- 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)

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- 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 ~~Treasurer~~[Chief 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

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APPENDIX 5

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

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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 ~~Treasurer~~ Chief 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 ~~Treasurer~~ Chief Investment Officer's Proxy Guidelines conflict with those of SSGA, those of the ~~Treasurer~~ Chief Investment Officer 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 ~~Treasurer~~ Chief Investment Officer will appoint a third party organization, such as Institutional Shareholder Services (ISS), to vote all proxies in accordance with the ~~Treasurer~~ Chief Investment Officer's Proxy Guidelines, and to provide a written summary of all proxy votes on all Fund assets on an annual basis.

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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 ~~Treasurer~~Chief Investment Officer 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 ~~Treasurer~~Chief Investment 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 ~~Treasurer~~Chief Investment Officer 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 ~~Treasurer~~Chief Investment Officer recommends a vote against supermajority proposals of 85 percent or more.
- G. Golden Parachutes: Although the ~~Treasurer~~Chief Investment Officer 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.

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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.

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APPENDIX 6

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**INVESTMENT MANAGER
SELECTION, OVERSIGHT, REVIEW, AND TERMINATION**

When selecting investment managers, the ~~Treasurer~~[Chief 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:
 - **Qualitative Characteristics**, such as key personnel, investment philosophy, investment strategy, research orientation, decision-making process, and risk controls.
 - **Quantitative Characteristics**, such as CFA Institute-compliant composite return data, risk-adjusted rates of return (e.g., information ratios), and other risk factors.
 - **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

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In order to ensure that thorough and consistent manager oversight is carried out on a regular basis, it is the intent of the ~~Treasurer~~[Chief Investment Officer](#) 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 ~~Treasurer~~[Chief Investment Officer](#) 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 ~~Treasurer~~[Chief Investment Officer](#) 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 ~~Treasurer~~[Chief Investment Officer](#) 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 ~~Treasurer~~[Chief 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 ~~Treasurer~~[Chief Investment Officer](#). It is a judgment that depends on the ~~Treasurer~~[Chief Investment Officer](#)'s confidence in the investment firm to perform in the future.

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APPENDIX 7

Asset Class Guidelines

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

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APPENDICES TO INVESTMENT POLICY STATEMENTS

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 ~~Treasurer~~ Chief 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 ~~Treasurer~~ Chief 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.

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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 ~~Treasurer~~ [Chief 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 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 ~~Treasurer~~ [Chief 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

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- 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 ~~Treasurer~~[Chief Investment Officer](#) 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~~[Chief Investment Officer](#) 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 ~~Treasurer~~[Chief Investment Officer](#) at the Manager's discretion when best execution is available.

f. Managing Cash Flows

The ~~Treasurer~~[Chief Investment Officer](#) 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 ~~Treasurer~~[Chief Investment Officer](#) 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.

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4. Reporting

| On a quarterly basis, the ~~Treasurer~~Chief Investment Officer 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 ~~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

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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 ~~Treasurer~~ [Chief 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 ~~Treasurer~~ [Chief 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

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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 ~~Treasurer~~[Chief 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 ~~Treasurer~~[Chief Investment Officer](#)’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 ~~Treasurer~~[Chief Investment Officer](#) 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.

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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 ~~Treasurer~~[Chief 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 ~~Treasurer~~[Chief Investment Officer](#) 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 ~~Treasurer~~[Chief Investment Officer](#) 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.

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APPENDICES TO INVESTMENT POLICY STATEMENTS

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

f. Managing Cash Flows

The ~~Treasurer~~Chief Investment Officer 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 ~~Treasurer~~Chief Investment Officer 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 ~~Treasurer~~Chief Investment Officer 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 ~~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 ~~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

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

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APPENDICES TO INVESTMENT POLICY STATEMENTS

APPENDIX 7C

This Version: ~~February 14, 2006~~[November 15, 2012](#)

[Last approved: February 14, 2006](#)

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 ~~Treasurer~~[Chief 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 ~~Treasurer~~[Chief 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.

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APPENDICES TO INVESTMENT POLICY STATEMENTS

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 ~~Treasurer~~[Chief 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 ~~Treasurer~~[Chief Investment Officer](#)’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 ~~Treasurer~~[Chief 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 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.

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APPENDICES TO INVESTMENT POLICY STATEMENTS

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 ~~Treasurer~~[Chief Investment Officer](#) 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 ~~Treasurer~~[Chief Investment Officer](#) 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 ~~Treasurer~~[Chief Investment Officer](#) at the Manager's discretion when best execution is available.

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f. Managing Cash Flows

The ~~Treasurer~~Chief Investment Officer 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 ~~Treasurer~~Chief Investment Officer 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 ~~Treasurer~~Chief Investment Officer 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 ~~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 ~~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

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APPENDICES TO INVESTMENT POLICY STATEMENTS

APPENDIX 7D

[This version: November 15, 2012](#)

~~Version~~[Last 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 ~~Treasurer~~Chief 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 ~~Treasurer~~Chief 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

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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 ~~Treasurer~~[Chief 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 ~~Treasurer~~[Chief Investment Officer](#)’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 ~~Treasurer~~[Chief 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 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.

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APPENDICES TO INVESTMENT POLICY STATEMENTS**

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 ~~Treasurer~~[Chief Investment Officer](#) 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~~[Chief Investment Officer](#) 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, 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 ~~Treasurer~~[Chief Investment Officer](#) at the Manager's discretion when best execution is available.

f. Managing Cash Flows

The ~~Treasurer~~[Chief Investment Officer](#) 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.

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APPENDICES TO INVESTMENT POLICY STATEMENTS

3. Evaluation and Review

a. Policy and Guideline Review

The ~~Treasurer~~ Chief Investment Officer 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 ~~Treasurer~~ Chief Investment Officer shall provide the following reports to the Committee:

~~d.~~ a. 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.~~ 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.

~~f.~~ 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:

~~f.~~ 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.

~~g.~~ 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.

~~h.~~ 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.

~~i.~~ d. A quarterly review of portfolio and strategy performance including a market outlook.

~~j.~~ e. An annual statement of compliance with investment guidelines.

5. Definitions: See Appendix 8

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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 ~~Treasurer~~ [Chief 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 ~~Treasurer~~ [Chief 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 ~~Treasurer~~ [Chief 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

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APPENDICES TO INVESTMENT POLICY STATEMENTS

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, [similar to those 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

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- 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)
 - Commercial Paper must have a rating of at least A-1, P-1, D-1, or F-1

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APPENDICES TO INVESTMENT POLICY STATEMENTS

- 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**
 - 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**
 - 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 ~~Treasurer~~[Chief Investment Officer](#) 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 ~~Treasurer~~[Chief Investment Officer](#) 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).

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APPENDICES TO INVESTMENT POLICY STATEMENTS

3. Evaluation and Review

a. Policy and Guideline Review

The ~~Treasurer~~Chief Investment Officer 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 ~~Treasurer~~Chief Investment Officer 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 ~~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

UNIVERSITY OF CALIFORNIA
APPENDICES TO INVESTMENT POLICY STATEMENTS

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 ~~Treasurer~~[Chief 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 ~~Treasurer~~[Chief 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 ~~Treasurer~~[Chief 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

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APPENDICES TO INVESTMENT POLICY STATEMENTS

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, [similar to those 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

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APPENDICES TO INVESTMENT POLICY STATEMENTS

- 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)
 - Commercial Paper must have a rating of at least A-1, P-1, D-1, or F-1

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APPENDICES TO INVESTMENT POLICY STATEMENTS

- 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**
 - 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**
 - 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 ~~Treasurer~~[Chief Investment Officer](#) 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 ~~Treasurer~~[Chief Investment Officer](#) 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).

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APPENDICES TO INVESTMENT POLICY STATEMENTS

3. Evaluation and Review

a. Policy and Guideline Review

The ~~Treasurer~~Chief Investment Officer 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 ~~Treasurer~~Chief Investment Officer 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 ~~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

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APPENDICES TO INVESTMENT POLICY STATEMENTS

APPENDIX 7G

This Version: ~~May 6, 2009~~[November 15, 2012](#)

~~Replaces version: February 14, 2006~~[Last 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 ~~Treasurer~~[Chief Investment Officer](#)’s internal fixed income staff (“Manager”). The ~~Treasurer~~[Chief Investment Officer](#) 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

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APPENDICES TO INVESTMENT POLICY STATEMENTS

The Program will be invested in diversified portfolios of fixed income securities, [similar to those 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. 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:

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APPENDICES TO INVESTMENT POLICY STATEMENTS

- **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, 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 ~~Treasurer~~ Chief Investment Officer 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 ~~Treasurer~~ Chief Investment Officer 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 ~~Treasurer~~ Chief Investment Officer monthly and quarterly reports, including but not limited to:

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

5. Definitions: See Appendix 8

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APPENDICES TO INVESTMENT POLICY STATEMENTS

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 ~~Treasurer~~[Chief 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 ~~Treasurer~~[Chief 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 ~~Treasurer~~[Chief 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

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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 ~~Treasurer~~[Chief 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 ~~Treasurer~~[Chief Investment Officer](#)’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 ~~Treasurer~~[Chief 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, [similar to those 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 \(Definitions\).](#)

UNIVERSITY OF CALIFORNIA APPENDICES TO INVESTMENT POLICY STATEMENTS

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

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APPENDICES TO INVESTMENT POLICY STATEMENTS

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)
 - 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**
 - No more than 20% of the Program market value can be invested in securities denominated in currencies other than currencies included in the Benchmark
 - 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 ~~Treasurer~~[Chief Investment Officer](#) 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'

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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 ~~Treasurer~~[Chief Investment Officer](#) 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 ~~Treasurer~~[Chief Investment Officer](#) 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 ~~Treasurer~~[Chief Investment Officer](#) 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 ~~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 ~~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

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- 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

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APPENDICES TO INVESTMENT POLICY STATEMENTS

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 ~~Treasurer~~[Chief 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 ~~Treasurer~~[Chief 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 ~~Treasurer~~[Chief 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

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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, [similar to those 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 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

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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)
 - 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**
 - No more than ~~20~~30% of the Program’s market value may be invested in Private Placements or Rule 144A securities
 - 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 ~~Treasurer~~Chief Investment Officer.

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- **Foreign exchange risk**
 - 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 ~~Treasurer~~[Chief Investment Officer](#) 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 ~~Treasurer~~[Chief Investment Officer](#) 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 ~~Treasurer~~[Chief Investment Officer](#) 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 ~~Treasurer~~[Chief Investment Officer](#) 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 ~~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.

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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

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APPENDIX 7J

This version: ~~July 1, 2008~~[November 15, 2012](#)

~~Replaces version: February 14, 2006~~[Last approved: July 1, 2008](#)

**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 ~~Treasurer~~[Chief 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 ~~Treasurer~~[Chief 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 ~~Treasurer~~[Chief 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.

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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, [similar to those 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.

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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**
 - 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 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)
 - 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 ~~Treasurer~~[Chief Investment Officer](#).
- **Liquidity risk**

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- 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 ~~Treasurer~~ Chief Investment Officer 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 ~~Treasurer~~ Chief Investment Officer 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 ~~Treasurer~~ Chief Investment Officer 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.

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4. Reporting

| On a quarterly basis, the ~~Treasurer~~Chief Investment Officer 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 ~~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 ~~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

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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 ~~Treasurer~~ [Chief Investment Officer](#) internal fixed income staff (“Manager”). The ~~Treasurer~~ [Chief Investment Officer](#) 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

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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

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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**
 - 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)
 - Commercial Paper must have a rating of at least A-1, P-1, D-1, or F-1
 - 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.

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- **Liquidity risk**

- 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 ~~Treasurer~~Chief Investment Officer at the Manager's discretion when best execution is available.

3. Evaluation and Review

a. Policy and Guideline Review

The ~~Treasurer~~Chief Investment Officer 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 ~~Treasurer~~Chief Investment Officer 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 ~~Treasurer~~Chief Investment Officer 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

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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:

1. Permissible investments include limited liability structures such as limited partnerships, limited liability corporations, and other vehicles that invest in ~~U.S.~~ venture capital, ~~U.S.~~ buyouts, and special situations ~~and non-U.S. private equity~~. Permissible investments will be primarily private market assets, but may include publicly-traded assets, and may also include funds of funds, secondaries, co-investments and direct equity investments ~~(as limited in Guidelines 10 and 11 below)~~.
- ~~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.

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- ~~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 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.

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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 ~~Treasurer~~ [Chief 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.

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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 closed end fund shall not exceed ~~20~~25% 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 ~~65~~90% 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-

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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 ~~Treasurer~~Chief 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 ~~7.5~~15% 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.~~

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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 ~~Treasurer~~ [Chief 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 ~~Treasurer~~ [Chief 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.

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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 ~~Treasurer~~[Chief 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 ~~Treasurer~~[Chief Investment Officer](#) 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.

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- 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 ~~Treasurer~~Chief Investment Officer at the Manager's discretion when best execution is available.

f. Managing Cash Flows

The ~~Treasurer~~Chief Investment Officer 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 ~~Treasurer~~Chief Investment Officer 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 ~~Treasurer~~Chief Investment Officer 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.

~~i.~~ c. A summary of individual manager performance, on an absolute and benchmark relative basis.

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| 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

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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

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

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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.

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~~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.~~

~~a. 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 A1, P1, 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.~~

~~d. 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.~~

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~~b. — All banks must have minimum assets of \$5 billion and a short-term debt rating not lower than A1 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.~~

~~8. — Securities issued in currencies other than US Dollar are not permitted.~~

(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.

~~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~~

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~~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.~~

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APPENDIX 7

This version: November 15, 2012

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**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:

<u>Strategy</u>	<u>Benchmark</u>
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.~~

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

<u>Strategy</u>	<u>Long Term Target Allocation</u>	<u>Allowable Ranges</u>	
		<u>Min</u>	<u>Max</u>
Timberland	30%	0%	40 <u>50</u> %
Energy	30%	0%	40 <u>50</u> %
Infrastructure	20%	0%	30 <u>50</u> %
Commodities	10%	0%	20 <u>50</u> %
Opportunistic	10%	0%	20 <u>50</u> %
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 ~~10~~15% of the overall ~~Portfolio~~ real 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 ~~15~~20% of the overall Portfolio.

- ~~7.~~5. No investment with any single investment manager or general partner can exceed ~~20~~30% 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.~~

- ~~11.~~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.~~

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APPENDIX 7RQ

~~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 ~~40~~25% 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.

Definition: 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.

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APPENDIX 8

This Version: ~~February 14, 2006~~ [November 15, 2012](#)

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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.

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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 ~~Treasurer~~ [Chief 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.

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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 ~~Treasurer~~[Chief 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 \(based on an average of Moody's, S&P and Fitch\).](#)

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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.