The Regents of the University of California

COMMITTEE ON INVESTMENTS
December 13, 2011

The Committee on Investments met on the above date by teleconference at the following locations: Covel Commons, West Coast Room, Los Angeles campus; Student Center, Aliso Beach A, Irvine campus; 1111 Franklin Street, Room 5320, Oakland; 777 South California Avenue, Palo Alto.

Members present: Representing the Committee on Investments: Regents Crane, De La Peña, Hallett, Kieffer, Marcus, Schilling, and Wachter; Advisory member Anderson; Staff Advisor Smith

Representing the Investment Advisory Group: Members Martin, Rogers, Samuels, and Taylor, Consultant Klosterman

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

The meeting convened at 1:30 p.m. with Committee Chair Wachter presiding.

1. **PUBLIC COMMENT**

There were no speakers wishing to address the Committee.

Student observer Nandan Das stated that his goal was to establish mutually beneficial communication between the Committee and students. Mr. Das, a Ph.D. student at UC San Diego conducting research in the field of wireless communications, expressed his opinion that a review of the underlying assumptions of the Committee's investment models, such as the projected 7.5 percent investment return for the UC Retirement Program (UCRP) and General Endowment Pool (GEP), would be beneficial. He noted that a comparison could be made between the modeling assumptions used during the past decade and actual investment results during that period, and asked the Committee to delegate responsibility for such a report. Mr. Das stated that the accuracy of investment modeling assumptions was critically important in this time of rising student tuition, underfunding of the UCRP, and uncertainties in the global economic situation.

Committee Chair Wachter stated that the projected rate of investment return was set by the Committee on Finance, rather than the Committee on Investments, although he acknowledged the challenge of meeting a 7.5 percent projected investment return in the current low interest rate environment.

Regent Kieffer stated that he too would like to verify the accuracy of previous investment modeling assumptions. Regent Crane added that, since UC's funding liabilities extend far longer than 20 years, its investment strategies should reflect such long time horizons.

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

Upon motion duly made and seconded, the minutes of the meeting of September 14, 2011 were approved, Regents Crane, De La Peña, Hallett, Kieffer, Marcus, Schilling, and Wachter (7) voting "aye."[1]

3. **SEPTEMBER QUARTER 2011 AND FISCAL YEAR TO DATE 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 reported that, for the quarter ending September 2011, the UC Entity fell 7.49 percent, considerably less than the equity market. The UC Retirement Plan (UCRP) fell 9.58 percent; the General Endowment Pool (GEP) was down 8.8 percent; the Short Term Investment Pool (STIP) rose slightly; the Total Return Investment Pool (TRIP) lost four percent. Calendar year losses were modest for both UCRP and GEP; all portfolios exceeded their policy benchmarks. Asset selection, particularly in absolute return, was a major contributor to the relative performance of UCRP and GEP.

Ms. Berggren stated that GEP returns ranked in the top quartile of the Cambridge Associates' cohort of colleges and universities with assets over $1 billion for the three-year period ending June 30, 2011; UCRP ranked in the top one-third of the Wilshire Trust Universe Comparison Service for public plans over $1 billion for the same period.

Regent De La Peña asked if benchmarks included payments to managers. Ms. Berggren replied that the benchmarks did not include fees, but UC's performance results were net of fees.

In response to a question from Committee Chair Wachter, Ms. Berggren explained that returns in relation to benchmarks were calculated by taking the difference between the weighted average of the benchmark returns and the weighted average of the UC portfolios' returns. The returns relative to benchmarks were similarly calculated for each asset class.

In response to a question from Regent Marcus, Ms. Berggren stated that her office worked with Mercer Investment Consulting, Inc. to develop benchmark recommendations, which were brought to the Committee for approval. She said that the benchmarks have been relatively stable over time.

[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 commented that the third quarter was fairly turbulent, with the worst losses since the fourth quarter of 2008, principally as a result of economic and political events. Release of mixed economic data from both developed and developing countries, problems in the U.S. political system, and difficulties with European sovereign debt all contributed to the market tenor. The global equity market fell sharply, as investors became increasingly concerned about international ability to deal with current problems. For the quarter, the U.S. equity market was down 15.3 percent, reflecting concerns about the debt ceiling debate; the MSCI World ex-U.S. Index fell 19 percent, over worries about the sovereign debt crisis; and emerging markets were down 22.6 percent, reflecting investors' perceptions of tightening in China. The only refuge in the quarter's results was high-quality bonds, which were up 3.8 percent; on the other hand, high-yield bonds declined 6.1 percent, reflecting a flight to safety and concern about risk.

Turning to UC performance for the quarter and the fiscal year to date, Ms. Berggren reported that the tilt in UCRP and GEP toward equities led to a 9.6 percent decline in UCRP, better than its benchmark's loss of ten percent. The GEP declined 8.8 percent, better than its benchmark decline of 9.6 percent. STIP gained 60 basis points (bps); TRIP declined a modest 4.1 percent, better than its benchmark, reflecting the fact that TRIP was designed to have a lower percentage of equities than some of the Office of the Treasurer's other portfolios. For the fiscal year to date, the UC Entity declined 3.4 percent, 100 bps less than its policy benchmark. Ms. Berggren stated that, with the exception of fixed income, every asset class outperformed its benchmark.

Ms. Berggren showed graphs of return for UCRP, GEP, STIP, and TRIP over one-year, three-year, five-year, and ten-year periods, demonstrating what she described as a major bull market for short-term liquid assets. Over 20 years, UCRP has returned 9.35 percent, 32 bps over the benchmark, and has outperformed the benchmark in 75 percent of the past 20 years.

Regent Kieffer expressed his view that it would be worthwhile to look at performance over time periods even longer than 20 years. Committee Chair Wachter pointed out that the composition of the portfolios had changed dramatically; some currently held asset classes such as private equity, venture capital, and absolute return were not in the portfolio ten years prior.

Turning to UCRP asset class performance for the quarter, Ms. Berggren reported that U.S. equity was down 15 percent, slightly better than the benchmark, with very good performance from small cap managers. International developed equity was down 19 percent, slightly better than the benchmark, helped by an underweight in financials compared to the benchmark. Emerging market equity was down 21.6 percent, significantly better than the benchmark, benefiting from an underweight in China. U.S. fixed income had a modest gain of three percent, which was offset by losses of six percent in U.S. high yield and four percent in emerging market debt. Private equity rose four percent, absolute return was down five percent, and private real estate was up five percent. The trends in the past nine months were very similar to those of the past quarter.

Ms. Berggren stated that asset allocation benefited the performance in UCRP and GEP for the quarter. The funds were overweight in private equity, real estate, and liquidity, and underweight in public equity and core fixed income.

Discussing performance attribution by asset class in UCRP, Ms. Berggren stated that an underweight in core bonds had a negative impact of 28 bps, which was offset by good security manager selection in U.S. equities, non-U.S. equities, emerging market equities, absolute return, and real estate, for a total of 32 bps attributable to security selection. Asset allocation added 19 bps in private equity, ten bps in absolute return, and six bps in real estate. In sum, asset allocation added nine bps, and security selection 32 bps, for a total impact of 41 bps.

Investment Advisory Group Member Samuels asked, given discussions at prior Committee meetings about the difficulty of establishing appropriate benchmarks for private equity, how investment performance in private equity could be judged accurately. Ms. Berggren stated that her office, as well as two separate private consultants, had been unable to find an appropriate benchmark for private equity performance.

Turning to performance attribution within GEP, an underweight in core bonds contributed a negative 32 bps. Security selection contributed 76 bps to performance, and was particularly strong in the hedge fund area.

Ms. Berggren reported that public equity contributed more than 70 percent of the total risk in UCRP; an overweight in private equity contributed almost 130 percent of active risk; and an underweight in public equity reduced active risk. In response to a question from Committee Chair Wachter, Ms. Berggren explained that active risk was caused by an overweight in a particular asset class. Managing Director Jesse Phillips stated that, in the current context, contribution to risk meant contribution to covariance, based on volatility, correlations, and the amount of the asset in the total weighting.

4. **ANALYSIS OF TAIL RISK HEDGING STRATEGIES**

[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 explained that tail risk was the potential for catastrophic losses in a portfolio. A direct approach to tail risk hedging would attempt to compensate for losses; an indirect approach would attempt to reduce the probability or impact of such losses. A strategic implementation of tail risk hedging would have the hedge in effect all the time and a tactical implementation would apply the hedge where or when it was judged to be most necessary.

Mr. Dennison displayed a chart showing the returns of the S & P 500 from 1926 through 2011. Although the returns were roughly normally distributed, the left-hand tail of the graph was bigger than the right, demonstrating that extremely bad returns were of larger magnitude than extremely positive returns. In other words, there was a higher degree of

extraordinary losses than of extraordinary gains, for various reasons such as systemic investor fear or periods of large loss following speculative bubbles. Mr. Dennison stated that his presentation would address the question of whether it was possible, affordable, or effective to defend against such losses.

Committee Chair Wachter stated that 2008 had been the worst investment year in 75 years and the current period was extremely volatile. Given the Committee's responsibility to protect UC's pension fund and endowment, under current conditions it was reasonable to ask whether some affordable method could be found to protect the University's assets against possible large losses.

Mr. Dennison defined a large loss as one outside of the bounds normally expected, for instance greater than two or three standard deviations. Tail risk also involved investors' sudden and severe increase in risk aversion, resulting in their selling risky securities and rushing to safer securities, which only exaggerated the large loss. Periods of large loss were characterized by global losses in multiple asset classes, so that diversification alone would not mitigate the loss.

Mr. Dennison discussed ways that tail risk could be hedged. Many liquid assets have two-sided derivative markets; however, as with any insurance policy, a likely negative event would be expensive to insure. There were additional operational risks as well as the risk of a counterparty's inability to pay. Tail risks that occurred progressively over a long period of time were also hard to insure.

Mr. Dennison described some direct approaches to tail risk hedging, such as buying portfolio protection, with the cost of insurance depending on the likelihood of the loss occurring. If used as a strategic policy, such insurance would need to be in effect all the time; it would be costly and have a significant drain on return.

Investment Advisory Committee Member Samuels pointed out that, while hedging strategies were available, it was impossible to predict what market segment would be the future area of investor panic. Committee Chair Wachter commented that the University's investment time horizon was very long and that to pay for a constant hedge would be too costly. He stated that the question was whether a hedge should be applied at certain times.

Mr. Dennison displayed a graph showing that the cost of maintaining a put option hedge over a 40-year period would significantly reduce performance, although the put option would provide a benefit during periods of market distress. A passive program of constantly buying seven percent out-of-the-money put options would have the same effect as a 22 percent reduction in equity exposure.

Mr. Dennison discussed an alternate approach of spending one percent of the portfolio for insurance against catastrophic loss. In periods of sharp market decline, that amount of protection would be insufficient to protect against a large loss. The average cost of a

hedge that would provide sufficient protection would be 1.88 percent of the total fund value, a cost Mr. Dennison characterized as unsustainably large.

Indirect approaches would mitigate against major loss and would include increasing diversification or using cross-asset hedges. While the cost of these approaches would be less than a direct hedge, the results would be uncertain. Another indirect approach to decreasing risk would be to reduce equity allocation and invest in gold, Treasury bonds, or cash; however, risk assets provided the majority of the portfolios' return potential. Another approach would be to attempt to achieve risk parity by balancing equity risk with fixed income risk. Dedicated tail risk hedging funds that used a variety of tactical strategies could be purchased.

Mr. Dennison discussed options for implementation of such strategies. He noted that both the goals of the strategy and the amount the University would be willing to spend for such protection must first be clearly defined. While tactical use of hedging strategies could be cost effective, signals would have to be found to delineate necessary amounts and when such strategies should be applied or removed. Mr. Dennison noted that normally investors were paid to take risks, but tail risk hedging strategies would involve paying to avoid risk. Use of such strategies could reduce return and possibly result in underperformance in relation to peers.

Mr. Dennison recommended the establishment of a pilot tail hedging program for the Total Return Investment Pool (TRIP) because it was sensitive to volatility and any losses would directly affect the campuses. The Chief Investment Officer would use dedicated tail risk managers to purchase an optimal portfolio of tail hedges. Mr. Dennison recommended revising TRIP's Investment Guidelines to permit investing zero to two percent of capital in tail risk hedging strategies on an opportunistic basis; there would be no change to the policy benchmark. The tail risk hedging program would become part of the asset allocation decision.

Ms. Berggren noted that her office had become concerned about the market in May and June, and had implemented a form of tail risk hedging during the past quarter by investing three percent of the UCRP and part of the GEP with a tail risk fund manager. This investment performed very well during the recent downturn.

Investment Advisory Group Member Martin commented that some risks were unknown, but that other risks were known, such as the current obvious potential for the collapse of the European monetary system. There were clear steps that could be taken to lower UC's exposure to that possibility. Mr. Martin stated that a different strategy from buying insurance to protect against loss would be to avoid exposure to situations of known risk, in the current instance by lowering exposure to Eurozone equities or even shorting Eurozone equities. Ms. Berggren pointed out the difficulty of predicting the future. Faculty Representative Anderson noted that investors who try to time the market generally underperform. He would not encourage the Chief Investment Officer to engage in market timing on a policy basis. Committee Chair Wachter noted that Mr. Dennison's presentation covered a broader area than the current Eurozone volatility. Regent Crane

pointed out that volatility was on the side of investors with no debt and a long time horizon such as UC. He stated his opinion that buying insurance was not necessary in such a circumstance.

Ms. Berggren stated that her office would use a tail risk hedging strategy as part of an overall strategy of asset allocation. She would recommend having two percent of the portfolio available for such strategy opportunistically.

Regent Schilling asked how many managers were successful in tail risk hedging. Ms. Berggren stated that the manager used by her office had been extremely successful in this area since the 1970s. Her office had been reviewing six other managers who have also shown expertise in tail risk hedging.

Regent Kieffer questioned how much protection the University would actually be able to achieve, given the information provided in this discussion. Regent Wachter suggested tabling the related item to amend the Investment Policy Statement.

5. **AMENDMENT OF REGENTS POLICIES 6101: INVESTMENT POLICY STATEMENT FOR UNIVERSITY OF CALIFORNIA RETIREMENT PLAN; 6102: INVESTMENT POLICY STATEMENT FOR GENERAL ENDOWMENT POOL; AND 6108: TOTAL RETURN INVESTMENT POOL POLICY STATEMENT**

The Chief Investment Officer and Mercer Investment Consulting, Inc. recommended that revisions be approved to Regents Policy 6101: Investment Policy Statement for University of California Retirement Plan, Appendix One (as shown in Attachment 1); Regents Policy 6102: Investment Policy for General Endowment Pool, Appendix One (as shown in Attachment 2); and Regents Policy 6108: Total Return Investment Pool Policy Statement (as shown in Attachment 3), effective January 1, 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.]

Upon motion duly made and seconded, the Committee tabled the item, Regents Crane, De La Peña, Hallett, Kieffer, Schilling, and Wachter (6) voting "aye," and Regent Marcus (1) voting "no."

6. **RISK MANAGEMENT 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 Jesse Phillips recalled that, at his last review of risk management to the Committee in September 2009, he had promised a new emphasis on downside risk measures, countercyclical risk measures, and non-return-based risk measures. He would discuss progress on these goals in the context of the total risk program, which was

particularly appropriate since his office had been asked at the prior meeting to discuss ways in which it quantified investment risk.

Mr. Phillips defined risk to mean the potential for material losses in the investment portfolio. He stated that his office used three approaches to managing risk: examining the assets in its investment portfolios and how those assets were exposed to various risk factors; examining the market, the economy, and world events, and the possible impact of conditions on the portfolios; and involving all investment personnel in his office in risk management. He added that no single risk measure was right for all occasions.

Mr. Phillips noted that, while much can be learned from a statistical analysis of security and portfolio returns, such measures must be supplemented by intelligence from the markets and the economy. The main innovation in modern portfolio management was that the behavior of most assets could be simplified and understood as a smaller number of common risk factors, particularly in stressed markets. For individual stocks and bonds, his office used risk factor models to manage risk. For market-wide systematic factors, risk factor models were still useful, but less so. Mr. Phillips stated that some types of risk, such as investor emotions and potential liquidity traps, cannot be quantified. The objective of risk management was to understand the full range of investment outcomes in order to be better able to withstand inevitable losses. There was no one universally applicable measure of risk; risks differed depending on the asset type, the market and economic conditions, and on investors' risk tolerance. Mr. Phillips recalled that during the 2008 market crash, investors' risk tolerance changed considerably.

Mr. Phillips noted that a good risk measure should take the investor's time horizon and liquidity needs into account. If the University's long time horizon enabled it to bear deviations from the benchmarks, then it could assess the joint risks of asset losses and funding shortfalls. If the University did not want to experience deviations from benchmarks or underperforming peer institutions, then it would be much more difficult to maintain a long-term view.

Mr. Phillips explained that risk measures could be either historical, which looked at past returns, or forecast measures, which were conditional estimates of potential losses in the current and future environment. Risk estimates are dependent on the time when they are made. Standard deviation statistics are useful, but do not communicate the potential for losses. The industry was moving toward measures for downside risk; there are no measures of the potential to underperform one's peers.

Volatility is related to the potential for loss and the typical actual loss. However, there are very few predictors of extreme losses, because, by definition, extreme losses are rare. Mr. Phillips stated that the purpose of risk management is to get an indication of what might happen in a given environment so that one can decide whether the risk-adjusted return was attractive or not, and whether one wanted to pay for protection.

Mr. Phillips stated that an analysis of investment data showed that the UC Retirement Plan's (UCRP) monthly return had been below the range of two standard deviations in

13 months of the prior 18-year period. In response to a question from Consultant Klosterman, Mr. Phillips stated that his office had high-quality return data for the UCRP and GEP starting in 1992. The data show that simple risk measures were usually able to predict the range of returns, but sometimes they failed. For instance, August 1998, and September and October 2008 were periods when actual losses exceeded forecasts.

Mr. Phillips turned to non-return-based risk measures that his office began to use during and after the 2008 financial crisis. Each measure provided different information on the state of the markets and indirectly about the potential for loss. One fundamental-based risk measure is the difference between the London Interbank Offered Rate (LIBOR) and overnight index swaps, which rose to unprecedented levels during the 2008 financial crisis, then fell, but currently had started to rise again. This cost of obtaining short-term funding is a key risk measure for the banking system as well as the rest of the financial system.

Another type of non-return-based risk measurement used by his office involves valuations. Mr. Phillips displayed a graph illustrating the relationship between cyclically adjusted real price-to-earnings ratios and the subsequent ten-year real compound returns. He explained that this data supported the conventional wisdom that the chances of low future returns were higher when current prices were high, and vice versa. In response to a comment by Committee Chair Wachter, Mr. Phillips agreed that such measurements were highly imperfect and noted that was the reason his office used many different risk measurements.

Mr. Phillips then turned to some sentiment-based risk measures, related to the price investors were willing to pay to avoid risk. The Chicago Board Options Exchange Market Volatility (VIX) Index reflected the price investors were willing to pay to avoid equity volatility; the Merrill Option Volatility Estimate (MOVE) measured traders' perceptions of future volatility in Treasury options. Equity and bond option markets allowed investors to hedge risk, with prices quoted in terms of the volatility of the underlying asset. Higher prices indicated concern about potential future losses. Credit spreads indicated concern about the value of corporate bonds. Credit default swaps allowed investors to hedge credit portfolios directly. Financial conditions indexes were developed by various index providers and investment banks to estimate the risk in the market in real time.

In response to a statement by Committee Chair Wachter, Mr. Phillips agreed that the Regents' investment policies were structured within certain criteria of acceptable risk also set by the Regents. Mr. Phillips stated that probably the most important determinant of risk was the allocation of capital to various asset classes with different potential for both return and loss. Appendices One of the Investment Policy Statements of UCRP and the General Endowment Pool (GEP) showed the allowable range of capital investment to various asset classes. The risk budget for active risk showed all investments that were different from the benchmark; that risk budget was three percent annual standard deviation. In other words, the standard deviation of the measurement of the monthly differences between the portfolio's return and the policy benchmark return should be within three percent.

In response to a further question from Committee Chair Wachter, Mr. Phillips explained that there was no explicit risk target for the total portfolio, other than that it should be close to the risk of the benchmark. The policy benchmark was a weighted average of a number of different indexes, each with its own volatility, and a combined aggregate volatility. A chart in his office's Quarterly Investment Risk Report showed the calculated standard deviation of UCRP returns compared with the standard deviation of the UCRP benchmark.

Mr. Phillips stated that his office did not have a risk budget in absolute terms. Because the University was a long-term investor with substantial investments in risky assets such as equities, the calculated or backward-looking volatility of the market fluctuated significantly. His office did not attempt to increase its risk when the market risk was low, or decrease its risk when market risk was high.

7. **REAL ESTATE 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 of Real Assets Gloria Gil reported that valuation growth had returned to the real estate industry for the past six quarters since June 2010, following eight quarters of negative returns from June 2008 through March 2010. Property market demand was slowly recovering, with some rental rate growth in select markets. Currently, the lack of new construction, except in single family housing in which her office did not invest, combined with inventory loss because of obsolescence, contributed to the recovery of the real estate asset class. Ms. Gil stated her opinion that the fundamentals of supply and demand were relatively positive, even in a prolonged slow-growth scenario. Pricing of real estate was attractive compared to ten-year Treasury bonds; the demand for stable properties was very high in primary markets such as New York City, San Francisco, and Washington, D.C. She noted that, while debt relative to current valuations remained a problem, some owners were still able to pay their debt service due to the low level of the London Interbank Offered Rate (LIBOR). She anticipated investment opportunities to purchase attractive properties at distressed prices.

Ms. Gil reported that the funding status of the real estate program, started in October 2004, was currently $2.2 billion, five percent of the aggregate of the UC Retirement Plan (UCRP) and the General Endowment Pool (GEP), a percentage above the 4.7 percent short-term goal, but well below the long-term goal of 7.1 percent. The program had $750 million in unfunded commitments; 50 percent of that amount was from funds and the remaining 50 percent was from separate accounts. The program currently had 34 investment managers and 51 investment vehicles, including seven open-end funds with $601 million market value; 37 closed-end funds with $1.1 billion market value; six separate accounts; and one public securities account. Ms. Gil pointed out that 50 percent of the program's funds, including the open-end, separate accounts, and public securities have some degree of liquidity. Her office could shut down the separate accounts at any

time with 30-days' notice to the managers; the funds could be transferred to another manager to obtain better performance; assets could be sold.

Ms. Gil reported that the real estate program was in compliance with all policy guidelines. She discussed leverage within the portfolio, meaning the ratio of debt to total assets. The total portfolio's leverage was at 47 percent; leverage for core assets was 24 percent; leverage for value-added opportunity assets was about 53 percent; leverage for opportunistic assets was 59 percent. Ms. Gil defined core as stable assets, where 70 percent of the return came from income. Value-added were assets with some type of vacancy, so that 60 percent of the return came from income. Opportunistic assets involved development.

Turning to real estate allocation strategy, Ms. Gil stated that her goal was to have 30 percent each of core, value-added, and opportunistic holdings. At the current time, the portfolio was slightly low in core assets and value-added assets, and high in opportunistic assets. She noted that the opportunistic category would decrease as her office increased allocation to the core portfolio.

Ms. Gil explained that, through the separate account program, her office allocated an amount, such as $100 million to $150 million to a certain manager, and UC would be the sole owner and manager of the property. Her office was currently building a portfolio with six different managers of small to medium-sized assets, $30 million to $50 million. Her office conducted site inspections of properties on 24-hour notice. The separate account program offered the advantages of flexibility, control over liquidity, tactical diversification by property type and geographical location, and lower fees. Ms. Gil planned to reduce allocation to value-added assets and take advantage of opportunities of dislocations.

Ms. Gil stated that her office attempted to achieve property-type diversification, and would like to add apartments, industrial, and grocery-anchored retail properties. She expressed her opinion that hospitality assets would perform well during a recovery. Senior housing assets were performing well and the portfolio's student housing was 100 percent occupied. Ms. Gil stated that she expected the office sector to lag because of high unemployment. Multi-family housing had been strong and was expected to continue to outperform; year-over-year rent growth was five to six percent. In some select port markets, demand was increasing for industrial assets. Luxury and necessity retail properties were performing well, but the middle tier retail was performing poorly. Hotels in the central business districts of New York, San Francisco, and Boston were performing very well.

Ms. Gil noted that the portfolio's geographic diversification was roughly in line with benchmarks. Her office currently had a nine percent tactical investment in international holdings; policy allowed up to 25 percent in international holdings and Ms. Gil would like to increase this area in the upcoming year. Ms. Gil reported that markets were bifurcated, with primary metropolitan areas, such as New York City, San Francisco, and Washington, D.C. experiencing higher volumes of transactions than other areas.

Internationally, emerging markets had the healthiest outlooks. Markets in China would experience a switch from residential to retail development. Her office hoped to take advantage of some dislocations in the Japanese market. Hong Kong and Singapore were also attractive. Ms. Gil also anticipated an emerging market in middle class residential properties in Brazil.

Ms. Gil reported that the one-year performance for the UCRP private real estate was almost 24 percent. She pointed out that, embedded in the negative 15 percent three-year return on open-end funds, were 6.6 percent income and negative 20 percent depreciation. In the five-year period, the open-end funds generated 5.8 percent income and negative 10.2 percent depreciation. All funds performed well for both the quarter and the one-year period. Her office made tactical investments, acquiring $300 million in open-end funds, $300 million in separate accounts in eight properties, and $200 million in real estate investment trusts (REITS), which earned 33 percent before they were sold in the past month. The GEP real estate performance was essentially similar.

Ms. Berggren noted that many other institutions had greater losses in real estate over the past three and five-year periods. Many of the Chief Investment Officer's fund managers did not invest when the market was at its highest. They were able to buy a number of attractive real properties near the bottom of the market, and so have benefited from the upturn in the real estate market. She emphasized that the real estate market must be viewed on a long-term basis.

For 2012, Ms. Gil stated that her staff would continue to build the real estate program's portfolio with distressed core assets and selective re-investments with existing investment managers. Her office might also look for another separate account value-added manager, and would seek niche opportunities such as senior housing, self-storage, student housing, or medical offices. International market exposure could be increased for diversification.

Ms. Berggren stated that the real estate program's focus going forward would be in separate accounts. Her office would not invest with as many commingled fund managers. She noted that using Ms. Gil and her team had proven to be effective, since they can look at the properties and perform due diligence. Regent Marcus commended the outstanding work of the real estate team.

Investment Advisory Committee Member Martin asked about pricing of Class A properties. Ms. Gil responded that her office was not competing for trophy assets; separate accounts tended to be small to medium-sized. For example, her office would invest in an asset two blocks away from the premium Wall Street assets. Her office purchased a property in the Chelsea district of New York City, four blocks away from the new Google building; when purchased the building was 65 percent occupied, but within six months it was 100 percent occupied. Ms. Gil stated that her office benefited from relationships of its separate account managers with developers and brokers.

8. **GENERAL ENDOWMENT POOL ASSET ALLOCATION UPDATE**

[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 the Regents have encouraged an appropriately careful, conservative approach to asset allocation in the General Endowment Pool (GEP), reflecting the portfolio's cash flow requirements. She explained that the GEP's cash outflows significantly exceeded its inflows. She emphasized that most incoming money went to the campus foundations rather than the GEP.

Ms. Berggren remarked that this fundraising situation was relevant, because the GEP's $200 million to $300 million outflow each year affects the GEP's risk tolerance. The portfolio was managed to limit its downside risk, which had in turn limited its upside potential. The real endowment of the GEP was $2.4 billion. Funds that act as endowments, which were specific funds that could be used by the campuses for specific projects, but were managed as part of the GEP, accounted for the remaining $3 billion. In response to a question from Investment Advisory Group Member Samuels, Mr. Taylor cited an example of a fund acting as an endowment. In the early 1990s, the Regents set aside a term endowment of approximately $100 million to pay for UC's commitment to support the Keck telescope's operating expenses.

Ms. Berggren stated that the GEP's asset allocation explained the difference in its performance from the endowments of its peer institutions. Also, illiquid assets had extraordinary performance during the past decade. Ms. Berggren displayed a chart showing performance over one, three, and five-year periods for endowments of more than $1 billion, $5 billion, and of public institutions. She said the GEP performance had been quite respectable, given the orientation of the portfolio, and had been improving.

Investment Advisory Group Member Rogers expressed his opinion that the performance of the GEP has been subpar. He added that, even though the Chief Investment Officer did not have full responsibility for managing assets of the campus foundations, the University had a responsibility as an institution for the overall performance of all endowment funds.

Committee Chair Wachter stated that the structure of UC's endowment was changing, with its asset allocation moving in the direction of the Swensen model, the investment management and asset allocation model developed by Mr. David Swensen in managing Yale University's endowment.

Regent Crane asked whether UC was underperforming comparator institutions within specific asset classes, such as alternatives. He stated that there were two relevant issues, one of asset allocation and the second of comparative performance within asset classes. If UC was underperforming because of asset allocation, then the decision could be made to change the asset allocation.

Regent Kieffer stated that he would like to hear constructive recommendations from Mr. Rogers. Committee Chair Wachter noted that the Committee was responsible for decisions about asset allocation and was the proper forum for such questions and recommendations.

Ms. Berggren reviewed a chart showing asset allocation and performance differences among comparator institutions. Of the group displayed, UC had the highest allocation to public equity and the lowest to alternatives. UC's current allocation to alternatives was approximately 40 percent, and the long-term weight was 45 percent. Ms. Berggren pointed out that investments in private equity and real estate take time to mature, and her office had begun to invest in private equity and real estate just five years prior.

Mr. Samuels noted that these allocation figures referred only to the GEP and did not include the campus foundations; allocations would be different were the foundations' holdings included. Committee Chair Wachter agreed and noted that, for instance, the UCLA Foundation had a much larger allocation to alternatives. Terry Dennison of Mercer Investment Consulting stated that the average asset allocation to alternatives among the campus foundations was 46 percent.

Mr. Klosterman stated that liquidity requirements were highly relevant to asset allocation. An endowment with an allocation of 80 percent to alternatives would not have much liquidity. He also asked Ms. Berggren to explain the J curve effect. Ms. Berggren stated that the initial five to six years of a private equity or real estate program required a large commitment of funds, resulting in negative returns for the first seven years; positive returns on such investments were typically earned after ten years. An increased allocation to alternatives during the initial J-curve period would require UC to liquidate its marketable securities, leaving only its fixed income investments to satisfy its liquidity requirements. UC's returns would thus be dampened even further.

Ms. Berggren added that UC was the only institution on the chart that was precluded from investing in top-tier venture funds. Ms. Berggren explained that UC was sued by one of its retired professors in 2002; as a result of that lawsuit, her office was prohibited from investing with top-tier venture funds. She stated that her office estimated that the GEP had lost in excess of $100 million as a result; UC had been the largest investor in some venture funds. Committee Chair Wachter recalled that the venture funds objected to certain required disclosures of their information.

Regent Crane stated that the total performance could be correlated with the asset allocation rather than with the performance within asset classes, and that this distinction was important in trying to diagnose the cause for a difference in performance. He reiterated his earlier question whether there was evidence of underperformance within any asset class in relation to comparator institutions.

Investment Advisory Group Member Martin emphasized that it was important to recall how UC's investments fared in the 2008-09 financial crisis. He stated that many private institutions such as Stanford University, Harvard University, Yale University, and

Princeton University posted losses of 30 percent, while UC lost only 17 percent. Mr. Rogers stated that these institutions outperformed UC over the longer term. Committee Chair Wachter pointed out that ten-year returns would cover the periods of three different administrations and that the Committee should evaluate the current direction of asset allocation as well as relative performance within asset classes.

Regarding asset allocation, Regent Crane stated his opinion that the current policy allocation of 23.5 percent to absolute return was too high, since the GEP could withstand a good deal of volatility. He commented that as long as sufficient liquidity was maintained in the GEP to supply its annual draw rate of 4.5 to five percent, he would recommend taking as much volatility risk as possible. Committee Chair Wachter asked whether Regent Crane would recommend a higher allocation to private equity, real assets, and real estate; Regent Crane agreed, and stated he would recommend increasing allocations also to public equities, international equities, and emerging market equities.

In response to a question from Regent Kieffer, Ms. Berggren stated that the current objective for total equity was 42.5 percent, with 12.5 percent in fixed income, and 45 percent in alternatives.

Regent Crane said that he considered the Swensen model's allocation to absolute return to be too high. He acknowledged that most managers want to avoid a large short-term loss, but he was of the opinion that UC could handle such a short-term loss. Ms. Berggren stated that the GEP provided less than one percent of UC's operating costs. Regent Crane expressed his view that the GEP's allocation of 15 percent to fixed income and 23 percent to absolute return would indeed reduce volatility, but would also sacrifice a good deal of yield. Committee Chair Wachter stated that Regent Crane's analysis was similar to Mr. Phillips' comments in the prior item regarding the trade off of controlling risk defined as volatility versus long-term return. Committee Chair Wachter asked the Office of the Chief Investment Officer to review the asset allocations to see if it would recommend any changes. Ms. Berggren stated that asset allocation was decided by the Committee.

Mr. Samuels recalled that the Swensen investment model caused tremendous liquidity problems for Harvard University and Yale University during the financial crisis. Committee Chair Wachter added that asset allocations depend on an institution's risk tolerance. UC's investment allocation resulted in relatively better performance than these private institutions' during the financial crisis of 2008, but lower long-term returns. He noted that UC invested with more transparency than did private institutions, and therefore UC received more criticism during downturns. Decisions regarding risk tolerance were the responsibility of the Committee. Regent Crane suggested that, should the Committee follow his recommendations regarding asset allocation, a good communication strategy would be necessary. He asked how students and others would have reacted had UC investments suffered a bigger loss during the 2008 financial crisis, even though long-term performance would be higher. Regent Crane recalled from his experience in California State government that the media's focus had been on short-term investment results.

Ms. Berggren added that a number of private universities had to raise debt during the financial crisis of 2008 because of investment losses.

9. **INVESTMENT CONSULTANT REVIEW OF UNIVERSITY OF CALIFORNIA CAMPUS FOUNDATIONS JUNE QUARTER AND FISCAL YEAR TO DATE 2011 PERFORMANCE REPORT**

[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 reported that UC's total endowment was $10.6 billion, including both assets of $6.3 billion managed by the Office of the Chief Investment Officer and $4.3 billion in the campus foundations. Mr. Dennison stated that the size of the funds managed by the campus foundations would continue to increase in relation to the General Endowment Pool (GEP).

Mr. Dennison reported that Mercer found no material items, or significant risk or return issues that needed to be brought to the Committee's attention. All foundations were found to be in compliance with their policies. He stated that the Committee had oversight responsibility in relation to the campus foundations; the Regents delegated to the foundations the ability to manage their own investments subject to Regental oversight, which Mercer currently performed on the Regents' behalf. Mr. Dennison stated that the Committee should expect to find a balance between risk and return, with no concentration of leverage or in risk assets. Mercer received notice from the foundations in advance of changes in asset allocation or benchmarks.

Regent Kieffer commented that control of the endowment would gradually move to the campuses because of their independence in managing their foundations' assets. More independence had been granted to campuses in this area, and campuses have called for more independence in other areas as well. Investment Advisory Group Member Martin stated that the campus foundations had determined their own investment strategies for some time, with the fiduciary oversight of the Office of the President. Regent Kieffer stated his view that, just as the reality of the California Master Plan for Higher Education had changed gradually over time until it was currently very different from what was intended in 1960, it was important for the Committee to be aware of a gradual change in the flexibility given to campuses in the investment area, as other demands for campus flexibility may come before the Regents.

The meeting adjourned at 4:00 p.m.

Attest:

Secretary and Chief of Staff

*****Additions shown by underscoring; deletions shown by strikethrough*****
UNIVERSITY OF CALIFORNIA RETIREMENT PLAN
INVESTMENT POLICY STATEMENT

APPENDIX 1
Effective: ~~March 1, 2011~~ January 1, 2012
Replaces Version Effective: ~~October 1, 2010~~ March 1, 2011

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**	**Allowable Ranges**	
			Minimum	**Maximum**
U.S. Equity	28.5 %	20.5 %	23.5	33.5
Developed Non US Equity	22.0	19.0	17	27
Emerging Mkt Equity	5.0	7.0	3	7
Global Equity	2.0	2.0	1	3
US Fixed Income	12.0	12.0	9	15
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	10
Private Equity	6.0	8.0	3	9
Absolute Return Strategy	6.5	8.5	1.5	11.5
Real Assets	1.0	3.0	0	2
Real Estate	4.0	7.0	1	7
Liquidity	0	0	0	10
Tail Risk Hedging Strategies	0	0	0	2
	100%	100%		
Combined Public Equity	57.5	48.5	47.5	67.5
Combined Fixed Income	25.0	25.0	20	30
Combined Alternatives	17.5	26.5	10.5	24.5

B. Asset Class Performance Benchmarks

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

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

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

Notes on asset class benchmarks:
1. Global Equity: The Treasurer will determine what constitutes a tobacco company based on standard industry classification of the major index providers (e.g., Russell, MSCI) and communicate this list to investment managers annually and whenever changes occur.

2. Private Equity: *Long-term* portfolio returns will be compared to investable public equity alternatives as well as non-investable peer group indices. There is no appropriate market benchmark to use for *short-term* performance evaluation or decision making.
3. Real Assets (all strategies ex-commodities): similar to Private Equity

C. Total Retirement Fund Performance Benchmark

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

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

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

D. Rebalancing Policy

There will be periodic deviations in actual asset weights from the long-term/current policy asset weights specified above. Causes for periodic deviations are market movements, cash flows, and varying portfolio performance. Significant movements from the asset class policy weights will

alter the intended expected return and risk of the Fund. Accordingly, the Investment Committee authorizes the Treasurer to rebalance the Fund when necessary to ensure adherence to the Investment Policy.

The Treasurer will monitor the actual asset allocation at least monthly. The Committee directs the Treasurer 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 Treasurer may utilize derivative contracts (in accordance with Appendix 4) to rebalance the portfolio.

The Treasurer 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 Treasurer may delay a rebalancing program when the Treasurer believes the delay is in the best interest of the Plan. Results of rebalancing will be reported to the Committee at quarterly meetings.

*****Revised*****
Revisions shown by double underscoring; deletions shown by double strikethrough.
*****Additions shown by underscoring; deletions shown by strikethrough*****

UNIVERSITY OF CALIFORNIA GENERAL ENDOWMENT POOL INVESTMENT POLICY STATEMENT

APPENDIX 1
Effective: ~~March 1, 2011~~ January 1, ~~2011~~2012
Replaces Version Effective: ~~October 1, 2010~~ March 1, 2011

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**	**Allowable Ranges**	
			Minimum	**Maximum**
U.S. Equity	20.0%	18.5%	15	25
Developed Non US Equity	18.5	16.0	13.5	23.5
Emerging Mkt Equity	5.0	6.0	3	7
Global Equity	2.0	2.0	1	3
US Fixed Income	7.5	5.0	4.5	10.5
High Yield Fixed Income	3.0	2.5	2	4
Emerging Mkt Fixed Income	3.0	2.5	2	4
TIPS	4.0	2.5	2	6
Private Equity	7.0	9.0	4	10
Absolute Return	24.0	25.5	19	29
Real Assets	1.0	3.0	0	2
Real Estate	5.0	7.5	2	8
Liquidity	0	0	0	10
Tail Risk Hedging Strategies	0	0	0	2
	100%	100%		
Combined Public Equity	45.5	42.5	35.5	55.5
Combined Fixed Income	17.5	12.5	12.5	22.5
Combined Alternatives*	37.0	45.0	27.0	47.0

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

B. Asset Class Performance Benchmarks

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

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

Asset Class	**Benchmark**
U.S. Equity	Russell 3000 Tobacco Free Index
Non US Eq. Devel.	MSCI World ex-US Net Tobacco Free
Emerging Mkt Eq.	MSCI Emerging Market Free Net
Global Equity	MSCI All Country World Index Net – IMI – Tobacco Free
Fixed Income	Barclays Capital US Aggregate Bond Index
High Yield Fixed Income	Merrill Lynch High Yield Cash Pay Index
Emg Mkt Fixed Income	Dollar Denominated: JP Morgan Emerging Markets Bond Index Global Diversified
Emg Mkt Fixed Income	Local Currency: JP Morgan Government Bond Index Emerging Markets Global Diversified
TIPS	Barclays Capital US TIPS Index
Private Equity	N/A (See below note 2.)
Absolute Return	Diversified: HFRX Absolute Return Index (50%) + HFRX Market Directional Index (50%)
Absolute Return	Cross Asset Class: Aggregate GEP 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 return
Real Estate	Private: NCREIF Funds Index – Open End Diversified Core Equity (ODCE), lagged 3 months

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

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

Percentage	**Benchmark**
20.0%	× Russell 3000 Tobacco Free Index
18.5%	× MSCI World ex-US Net Tobacco Free
5.0%	× MSCI Emerging Market Free Net
2.0%	× MSCI All Country World Index Net – IMI – Tobacco Free
7.5%	× 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
7.0%	× Actual return of private equity portfolio
23.5%	× [HFRX Absolute Return Index × 50%] + [HFRX Market Directional Index × 50%] [Abs. Ret. - Diversified]
0.5%	× Aggregate GEP Policy Benchmark [Abs. Ret. - Cross Asset Class]
1.0%	× Aggregate Real Assets benchmark (see section B), with components weighted by their actual weights within the total real assets portfolio
5.0%	× Aggregate of Public and Private Real Estate benchmarks (see section B), with components weighted by their actual weights within the total real estate portfolio

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

D. Rebalancing Policy

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

The Treasurer will monitor the actual asset allocation at least monthly. The Committee directs the Treasurer 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 Treasurer may utilize derivative contracts [in accordance with Appendix 4] to rebalance the portfolio.

The Treasurer 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 Treasurer may delay a rebalancing program when the Treasurer believes the delay is in the best interest of the GEP. Results of rebalancing will be reported to the Committee at quarterly meetings.

***** Additions shown by underscoring; deletions shown by strikethrough*****

Effective Date: ~~January 1, 2011~~ January 1, 2012
Replaces Version: ~~April 1, 2010~~ January 1, 2011

TOTAL RETURN INVESTMENT POOL (TRIP) 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 Total Return Investment Pool, or TRIP ("Program"). These Objectives and Guidelines shall be subject to ongoing review by the Committee on Investments. Capital market conditions, changes in the investment industry, new financial instruments, or a change in the Committee on Investments' risk tolerance, are among factors to be considered in determining whether the Guidelines shall be revised.

1. Investment Policy

a. Background:

The TRIP is an investment pool established by The Regents and is available to UC Campuses and the UC Office of the President. The TRIP allows Campuses to maximize return on their long-term working capital, subject to an acceptable level of risk, by taking advantage of the economies of scale of investing in a larger pool and investing across a broad range of asset classes.

b. Incorporation of Regents Investment Policies

1. Investment governance, philosophy, policies and oversight procedures for this Program will be similar to those for the University of California Retirement Plan (UCRP) and General Endowment Pool (GEP), as specified in the Investment Policies for the UCRP.

2. Relevant policies from Sections 1-3 of the UCRP Investment Policy Statement are incorporated by reference into this Policy.

c. Investment Objective

The Objective of the Program is to generate a rate of return, after all costs and fees, in excess of the policy benchmark, and consistent with liquidity, cash flow requirements, and risk budget. See Section 2 for asset allocation and benchmark. As its name implies, TRIP is managed according to a total return objective, and will be subject to interest rate risk, credit risk, and equity risk. It is appropriate for longer-term investors who can accept this volatility in exchange for higher expected return.

d. Investment Strategy

The Program shall be implemented by the Treasurer's Office, using a combination of internal and external management ("Managers"), employing actively managed strategies where appropriate. Active strategies will include both sector allocation and security selection. The Treasurer will monitor the Program's adherence to these Guidelines.

e. Risk Objective

The Program shall be managed so that its annualized tracking error budget shall be 300 basis points. This budget is consistent with the ±10% ranges around the combined asset classes (see 2a below), and incorporates both sector allocation and security selection differences from the aggregate benchmark.

Each Manager or asset class segment will have a unique active risk budget, relative to its asset class 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.

f. Other Constraints and Considerations

- Managers shall comply with applicable State and Federal laws and regulations
- Managers shall at all times 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
- Managers shall act solely in the interest of the Program's owners.

2. Investment Guidelines

The portfolio will be invested primarily in marketable, publicly traded equity and fixed income securities denominated in (or hedged back to) U.S. dollars.

a. Strategic Asset Allocation and Allowable Ranges

	Target Allocation
US Fixed Income – Government	5%
US Fixed Income – Credit	45%
US Fixed Income – Securitized	5%
High Yield Debt	10%
US Equity - All Cap	15%
REITS	5%
Non US Equity (hedged)	15%
Liquidity	0%
Tail Risk Hedging Strategies	0%

Combined Asset Classes	Target Allocation	Minimum	Maximum
Public Equity	35%	25%	45%
US Fixed Income	65%	55%	75%
Liquidity	0%	0%	10%
Tail Risk Hedging Strategies	0%	0%	2%
Total	100%		

b. Total TRIP Performance Benchmark

This is the composition of the total TRIP performance benchmark:

Percentage	Benchmark
5%	× Barclays Capital US Aggregate Government Index
45%	× Barclays Capital US Aggregate Credit Index
5%	× Barclays Capital US Aggregate Securitized Index
10%	× BofA / Merrill Lynch HY Cash Pay BB/B rated Index
15%	× Russell 3000 Index (Tobacco Free)
5%	× FTSE / NAREIT US REIT Index
15%	× MSCI World ex US Net Index (hedged) (Tobacco Free)

Notes on Total Program benchmark:
1. The calculation of the Total Program benchmark will assume a monthly rebalancing methodology.
2. 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.

c. Rebalancing Policy

There will be periodic deviations in actual asset weights from the 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 Treasurer to rebalance the Fund when necessary to ensure adherence to the Investment Policy.

The Treasurer will monitor the actual asset allocation at least monthly. The Committee directs the Treasurer 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 Treasurer may utilize derivative contracts (in accordance with the Derivatives Policy found in Appendix 4 of the UCRP Policy Statement) to rebalance the portfolio.

The Treasurer 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 Treasurer may delay a rebalancing program when the Treasurer believes the delay is in the best interest of the Plan. Results of rebalancing will be reported to the Committee at quarterly meetings.

d. Asset Class Guidelines

The Program will be invested in a diversified portfolio of equity and fixed income securities. Each Segment of the Program, as defined above, will be subject to the Regents Asset Class guidelines that is appropriate and in effect for that Segment. These Guidelines are found in the Appendices to the UC Retirement Plan Investment Policies, and are hereby incorporated by reference.

e. Restrictions

The Managers may **not:**

- Purchase securities of tobacco related companies, as per the UCRP Investment Policy, section 5b.
- Invest in mutual funds or group trusts unless specifically allowed in its guidelines
- 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

Subject to the limitations above, the Managers have complete discretion with regard to choosing sector weights, issuers, and maturities.

3. Evaluation and Review

a. Policy and Guideline Review

The Treasurer's Office shall review the Objectives and Guidelines at least annually, and report to the Committee on Investments 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's Office shall provide the following reports to the Committee on Investments:

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

Each Manager will be required to provide the Treasurer 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. Investment Operations and Restrictions

a. University Financial Management may establish limitations on Campus investments to maintain sufficient short term liquidity for University cash needs, and restrictions on withdrawals as is appropriate for the investment of longer-term assets.

b. Annual distributions of income and capital gains will be made to participating Campuses, according to a spending rate will be reviewed and approved annually by the Committee on Investments.

6. Definitions~~:~~

See Appendix 8 of the UCRP Policy Statement.