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I. SUMMARY

The Investment Manual ("manual", "IM") is a supplement to the Investment Policy Statement and Asset and Risk Allocation Policy that defines the desired outcome of the investment program for the investment of funds invested by the Office of the Chief Investment Officer on behalf of the Regents.

II. PURPOSE AND FUNCTION

The purpose of this manual is to set out in a comprehensive way the policies and practices that relate to the investment-related functions in managing the assets at the Office of the Chief Investment Officer. The manual is not meant to be a static, one-time document. Rather, it is intended to be kept current as investment-related policies and practices are added and/or modified. This manual will be considered in their entirety on at least an annual basis and is an ongoing evolving document. Policies may be modified at any time by the Office of the Chief Investment Officer, Office of the Secretary Chief of Staff, Board of Regents ("Board"), Finance and Capital Strategies Committee and Investments Subcommittee ("Committees"). In these circumstances, changes will be noted in Subcommittee meeting minutes, copies of which will be highlighted with relevant sections and filed in the same electronic folder as this document.

The primary functions of this manual are to:

- Affirm and communicate investment policies, objectives, guidelines and performance criteria between the Board, Committee's, and the Staff of the Office of the Chief Investment Officer ("Staff"), external investment managers/advisors, consultants, custodians and all other interested parties

- Serve as a review document to guide ongoing oversight of the investments

- Establish criteria to evaluate investment performance

- Demonstrate the Board and Committee's fulfillment of its responsibilities to manage the investments

- Document the Board and Committee's fulfillment of its overall fiduciary responsibilities with respect to the investment of assets

The policies addressed herein shall be interpreted and applied consistent with the Prudent Investor Rule, as defined by the *Uniform Prudent Management of Institutional Funds Act ("UPMIFA")* of 2006:

"The prudent-investor rule as applied to investment activity of the fund means that the corporation shall exercise the judgment and care under the circumstances then prevailing that an institutional investor of ordinary prudence, discretion, and intelligence exercises in the designation and management of large investments entrusted to it, not in regard to speculation, but in regard to the permanent disposition of funds, considering preservation of capital while maximizing the expected total return from both income and the appreciation of capital over time."

III. INTERNAL ASSET MANAGEMENT CODE OF PROFESSIONAL CONDUCT

The Internal Asset Management Code of Professional Conduct outlines the ethical and professional responsibilities of the Investment Staff in managing assets[1].

Staff has the following responsibilities when managing assets:

- Act in a professional and ethical manner at all times

- Act for the benefit of the University of California

- Act with independence and objectivity

- Act with skill, competence and diligence

- Communicate in a timely and accurate manner

- Uphold the applicable rules governing capital markets

[1] Adapted from the CFA Institute Asset Manager Code of Professional Conduct

To fulfill its responsibilities, the Investment Staff shall follow the following guiding principles:

<u>LOYALTY</u>

- Place University of California interests before its own
- Preserve the confidentiality of information communicated in the scope of their employment
- Refuse to participate in any business relationship or accept any gift that could reasonably be expected to affect their independence, objectivity or loyalty to the University of California

<u>INVESTMENT PROCESS AND ACTIONS</u>

- Use reasonable care and prudent judgment when managing assets
- Not engage in practices designed to distort prices or artificially inflate trading volume with the intent to mislead market participants
- Deal fairly and objectively when providing investment information, making investment recommendations or taking investment actions
- Have a reasonable and adequate basis for investment decisions
- Make best efforts to negotiate the most favorable investment terms available
- When managing a portfolio or pooled fund according to a specific mandate, strategy or style:
    - Take only investment actions that are consistent with the stated objectives and constraints of that portfolio or fund
    - Provide adequate disclosures and information to ensure those responsible for overseeing the portfolio or fund can consider whether any proposed changes in the investment style or strategy meets the portfolio's investment needs
- When managing separate accounts and before providing investment advice or taking investment action, and determining an investment is suitable on behalf of the Board and Committee's:
    - Evaluate and understand the investment objectives, tolerance for risk, time horizon, liquidity needs, financial constraints, any unique circumstances and any other relevant information that would affect investment policy.

<u>TRADING</u>

- Not act or cause others to act on material non-public information that could affect the value of a publicly traded investment

- Give priority to investments made on behalf of the University of California over those that benefit the Staff's own interests

- Not use soft dollar arrangements for internally managed portfolios

- Maximize the portfolio value by seeking best execution for all transactions

- Establish policies to ensure fair and equitable trade allocation among portfolios

RISK MANAGEMENT, COMPLIANCE AND SUPPORT

- Develop and maintain policies and procedures to ensure that activities comply with the provisions of this Code of Conduct and all applicable legal and regulatory requirements

- Appoint individuals responsible for administering the policies and procedures

- Ensure that portfolio information provided is accurate and complete, and arrange for independent third-party confirmation or review of such information

- Maintain records for an appropriate period of time in an easily accessible format

- Employ qualified staff and sufficient human and technological resources to thoroughly investigate, analyze, implement and monitor investment decisions and actions

- Establish a business continuity plan to address disaster recovery or periodic disruptions of the financial markets

- Establish an enterprise-wide risk management process that identifies measures and manages the risk position of the investments, including the sources, nature and degree of risk exposure

PERFORMANCE AND VALUATION

- Present performance information that is fair, accurate, relevant, timely and complete. Staff shall not misrepresent the performance of individual portfolios or of the total portfolio

- Use fair-market prices to value holdings and apply, in good faith, methods to determine the fair value of any securities for which no independent, third-party market quotation is readily available

COMMUNICATION AND EDUCATION WITH BOARD AND COMMITTEES

- A program of continuing education, both for the Board, Committees and Staff, with respect to financial investment types and approaches, fiduciary obligations, and the management and operation of large, multi-portfolio funds is vital to the Board's, Committee and staff's ability to perform its responsibilities and functions successfully

- Communicate with the Board and Committees on an ongoing and timely basis and provide members with access to investment information as requested

- Ensure that disclosures are truthful, accurate, complete and understandable and are presented in a format that communicates the information effectively

- Include any material facts when making disclosures or providing information to the Board and Committees regarding the University of California, its personnel, investments, or the investment process

- Disclose the following:

    - Conflicts of interests generated by any relationships with brokers, placement agents or other entities, other accounts, fee structures or other matters

    - Regulatory or disciplinary action taken against personnel related to professional conduct

    - The investment process, including information regarding lock-up periods, strategies, risk factors and use of derivatives and leverage

    - Investment expenses paid in order to manage the portfolios or funds

    - The performance of investments on a regular and timely basis

    - Valuation methods used to make investment decisions and value holdings

    - Shareholder voting policies

    - Trade allocation policies

    - Results of the review or audit of the portfolios or funds

    - Significant personnel or organizational changes that have occurred

    - Risk management processes

IV. INVESTMENT BELIEFS

The investment philosophy is based upon a set of factors that have a widely accepted theoretical basis.

- The strategic asset allocation has a significant impact on investment results.

    - Sets the amount of resources (dollar, risk budget) spent on each asset class or risk factor.

    - Helps determines the expected downside risk and portfolio volatility.

- Some markets are more efficient and others are more inefficient. The level of efficiency or inefficiency for a given market also fluctuates over time. As such, investment strategies will reflect a mix of active and passive investments.

- Costs have a meaningful impact on returns. Investment strategies will utilize the most cost effective approaches.

- Performance measurement and monitoring activities provide an assessment of the success of investment strategies and implementation of those strategies. Clear, unambiguous, market-based benchmarks will be selected for each investment strategy.

- Use of tactical or risk overlays adjusts the portfolio (based on fundamental and/or economic theory), making tilts explicit versus implicit

- The portfolio should be invested for the future and not rely solely on historical investment data to structure the portfolio. There is value in forecasting and making an effort to determine the most critical factors that will affect assets and liabilities in the coming years but nothing is guaranteed, as the future is mostly unknown. This forecasting will be part of the discussion and asset allocation process.

- Over the long term, there is a relationship between the level of investment risk taken and the rate of expected investment return. It believes the assumption of a moderate level of risk is reasonable and justified to enhance potential long-term returns, understanding that it will produce a wider range of expected returns than more conservative asset mixes

V. GUIDELINES

The general guidelines that apply to external investment managers are:

- 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.

- 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 Board recognizes that the establishment of social investing restrictions limits investment opportunities and should be accompanied by adjusting performance evaluation standards appropriately.

- The direct purchase of property owned or a security issued by the University, its subsidiaries and affiliates, is prohibited

- The purchase of non-negotiable securities is prohibited in the equity and fixed income asset classes.

- 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.

- 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.

- Transactions shall be executed at the lowest possible total cost, which includes commissions, efficiency of execution, and market impact.

- Any investment or action with respect to an investment not expressly allowed is prohibited, unless presented to and approved prospectively by the Internal Investment Committee made up of senior members of staff. 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 make such an exception.

- Managers are required to inform the Chief Investment Officer of significant matters pertaining to the investment of 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. Managers are required to reconcile investment returns with the custodian each month.

- 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.

- **Derivatives** are 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. 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; and investment manager internal controls and defined procedures for managing risk. The following policies govern the use of derivative securities:

- 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.

- Use of derivatives to create economic leverage is prohibited, except in asset classes such as private equity, real estate, real assets, and absolute return

- 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.

- 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. 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.

- The 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.

VI. EXTERNAL MANAGER IMPLEMENTATION

The implementation of the portfolio selection process for external managers will typically involve assessment of the external managers' organization, investment products, teams and performance. The implementation of the manager selection process continues as follows:

<u>DETERMINATION OF SCREENING CRITERIA</u>

Screening criteria may include, but is not limited to: investment processes; investment products; dollar value and composition of assets under management; historical performance; years of experience; growth of firm; other client relationships; ownership; the number and depth of investment professionals; research capabilities; structure of the proposed investment (separate account, commingled account, etc.); compliance with the Chartered Financial Analyst Institute Code of Ethics; compliance with global investment performance standards (GIPS); and contract provisions. Other criteria may be added for any given search.

<u>PRELIMINARY SCREENING</u>

- Staff identifies a preliminary list of firms which meet the initial set of screening criteria

- Staff contacts each firm on the preliminary list to obtain the most current information and any additional information, as required. Follow-up telephone calls, interviews, or on-site visits are made as necessary

- Based upon the established criteria, staff and/or the investment consultant narrows the preliminary list to a candidate pool

<u>SEARCH PROCESS</u>

- Staff conducts a more in-depth interview with each candidate. The interview allows for the interaction with and evaluation of the person or persons who will actually be investing the assets. Interview topics include:

    - Investment process

    - Qualifications of the firm's representatives, including the portfolio management team

    - Communication with the firm

    - Employee compensation

    - Availability of the contact person and portfolio manager to meet and responsiveness to concerns

    - Validation of performance and continuation of key individuals who will be responsible for fulfilling assignment

    - Potential areas of conflict (policy, statutory, custodial, etc.)

    - Fee discussions

- Quantitative analyses are conducted in addition to the qualitative analyses above. This analysis will include performance attribution and risk management.

<u>CONTRACT REVIEW</u>

Once an external investment manager is determined, an investment management agreement is negotiated and executed appointing the manager. The process may involve highly specialized contract provisions including investment guidelines and result in protracted negotiations. Staff may retain outside counsel to assist in the contract process. Investor protection provisions are incorporated into the investment management agreement and ancillary contract documents as appropriate.

<u>MONITORING</u>

Staff monitors each external investment manager to ensure guidelines are being met. Moreover, Staff monitors investment manager performance and other criteria to determine whether the investment manager, using the stated style, adds value relative to an appropriate benchmark to the assets under management. The objective criteria for monitoring the external securities investment manager are agreed upon at hire and may be specified in the contract between the external investment manager and the University of California. The criteria include investment performance, adherence to the stated investment style and thesis, diversification ratios, industry mix, credit quality and interest rate sensitivity of fixed income assets, if applicable, as well as various subjective criteria, such as the impact of key resignations or firm acquisitions/mergers. Staff may engage an investment consultant to aid in the review of external investment managers. If so engaged, the consultant shall submit periodic reports and provide advice regarding the impact of various changes at the external investment manager's firm.

- Monthly and Quarterly Performance Review
  - External managers of publicly traded securities are responsible for submitting monthly portfolio appraisals, including positions and valuations.
  - Portfolios of public securities of investment managers who are managing assets in separate accounts are held at the custodian bank. Investment manager holdings are updated daily by the custodian bank based upon trade activity submitted from the investment manager. Investment managers reconcile the portfolio values monthly to the custodian bank. The portfolio holdings and custodial reconciliations are reviewed.
  - Portfolio investment performance is calculated by custodian bank investment analytics and is compared to investment performance calculated by the investment manager.
- Annual Review
  - Staff communicates with each investment manager at least on an annual basis either by telephone, videoconference, or in person to review portfolio performance and to discuss any changes to process, staffing or the investment manager's organization or any other items as warranted.
  - For those investment managers that participate in commingled securities lending programs, staff receives reports describing changes to the lending parameters if any, the average market value of the securities on loan, the collateralization percentage and the credit quality and liquidity of the reinvestment pool.
  - A fund-of-funds manager(s) or manager of managers reports on the investment activity and performance for the managers within the fund.
- Periodic Review and Special Review as Needed
  - External securities investment managers are expected to meet upon request.
  - Staff reviews information as it becomes available and meet with the external investment manager as required. Each external investment manager has the responsibility to inform Staff, quickly and

accurately, about any event that may adversely impact to a significant degree the management, professionalism, integrity or financial position of the external investment manager, such as:

- Personnel changes: Loss of one or more key professionals at the firm wide or portfolio team level. Changes in responsibility, including the addition of key professionals firm wide or at the portfolio team level. Significant changes at the firm, whether or not they impact the team assigned to the portfolio.
- Changes in ownership, control, or organizational structure, whether through acquisition, disposition, spin-off, merger, consolidation or otherwise.
- Changes in the assets under management: (i.e. an external investment manager is hired with a proven track record at a particular level of invested assets. Subsequent relationship losses may increase the pressure on the external investment manager not to lose the account. Alternatively, the gain of a significant number of accounts may overburden the investment personnel, force the external investment manager to alter the investment style or decrease the importance of the account to the point where communication or performance suffers).
- Any material change in the investment process or philosophy.
- Concerns about the securities lending portfolios, for those managers that participate in a commingled securities lending program.
- Other developments having a significant impact such as litigation or regulatory inquiries. The investment consultant may serve as an additional source for this information.

- Reporting Requirements
    - 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 in this manual and by the respective investment manager agreement

WATCH LIST

Staff maintains a Watch List of those managers for whom they have concerns about their ability to add value to assets under management. The managers on the Watch List are subject to additional review based on the particular circumstances of the investment manager and the reason(s) the investment manager was placed on the Watch List. Staff may place an external investment manager on the Watch List because of any of the following concerns:

- Significant or persistent underperformance compared to the investment manager's mandate.
- Indication that the manager is assuming more risk than appropriate in an attempt to achieve a higher short-term return.
- Key personnel or structural changes that may impact the manager's ability to manage the portfolio effectively.
- Changes in investment style or process or risk composition, which may affect performance or the portfolios fit within the overall asset allocation.
- Any other circumstances creating a concern over the external securities investment manager's ability to perform as hired.
- Staff may remove an external investment manager from the Watch List at any time if the concerns have been resolved and has confidence the external investment manager will add value to the assets under management

TERMINATION OF EXTERNAL INVESTMENT MANAGERS

External investment managers serve at the sole authority of the University of California. Staff retains the right to dismiss a manager within the notice provision stated in the investment management agreement, which is typically no more than thirty (30) days written notice. Staff evaluates the performance of the external investment manager annually or more frequently when necessary.

- Annual Evaluation
  - The decision to retain or terminate an external investment manager is part of the annual contract renewal process. As part of this process, Staff will make a formal recommendation, including the rationale upon which the recommendation is made. The recommendation is reviewed by staff and presented to the Internal Investment Committee made up of senior staff members. The recommendation will be part of the permanent record
- Special Evaluation
  - A dramatic loss of confidence during the contract year could result in a contract termination

VII. REPORTING REQUIREMENTS

On a quarterly basis, Staff shall provide the following reports to the Committees and Board:

- Portfolio positioning: current vs target allocations
- 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
- A risk report, 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

VIII. CUSTODIAN GUIDELINES

Timely and accurate completion of custodial functions is necessary for effective investment management and accurate record keeping. The following are responsibilities of the custodian(s) for the segments of the assets for which each custodian is responsible:

- Provide complete custody, depository and accounting service for the designated accounts
- Implement in a timely and effective manner the investment actions as directed by the staff and external investment manager(s)/advisors
- Collect all income and principal and properly report on the periodic statements
- Provide periodic statements of holdings including all transactions and daily activity reports
- Provide daily reporting on cash activity and balances
- Provide assistance to the staff to complete such activities as the annual audit and transaction verification.
- Indemnify for any non-market losses of stocks and securities held
- Provide investment performance for designated portfolios

IX. PROXY VOTING

It is part of the generally accepted standards of fiduciary care that proxy voting rights should be duly exercised as a principle fiduciary duty. Voting rights are important to fiduciary responsibility as a means to promote good corporate governance that aligns with the University's interests and goals as a long-term investor. The Office of the Chief Investment Officer believes that prudent exercise of voting rights promotes long-term shareholder value. The duty of prudence includes considerations based on financial criteria, as well as prudent governance, social, and environmental practices.

The voting guidelines of our elected proxy voting advisor(s) and/or our investment managers reflect viewpoints with respect to essential elements of good governance such as transparency, board alignment with shareholder interests, shareholder rights, and business ethics. In general, we vote according to the proxy voting guidelines developed by our elected proxy voting advisor(s) or our investment managers.

Typically, 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;
- Environmental, social or governance (ESG) proxy issues are voted in accordance with our sustainable investment framework ("Sustainability Impacts Investing" available at the following link: http://www.ucop.edu/investment-office/_files/sustainable-investment-framework.pdf).

Our elected proxy voting advisor(s) and/or investment managers who manage the voting process on our behalf will provide a written summary of all proxy votes on all fund assets on an annual basis.

Our elected proxy voting advisor(s) will provide each year a written summary of changes to its voting guidelines for the ensuing year. The Office of the Chief Investment Officer will inform the elected proxy voting advisor(s) and/or its investment managers where specific guidelines deviate from the priorities of the Office of the Chief Investment Officer and will work with the proxy voting advisor(s)

Retained investment managers will vote, or cause to be voted, all proxy proposals on an individual basis. The manager's process in dealing with proxy issues should be both thorough and reasonable, and oriented toward achieving maximum long-term shareholder value. The manager is to discharge expected fiduciary duty by use of proxy voting policies and procedures solely in the interest of the client. To act prudently in the voting of proxies, the manager should consider those factors that would affect the value of the plan's investment and act solely in the interest of, and for the exclusive purpose of providing benefits to the client. Managers will review and vote all proxies that are received. Each investment manager shall notify the custodial bank of their responsibility to forward to the manager all proxy material. An ongoing review should be done to see that all expected proxies have been received, and if not, the bank should be directed to vote any proxy it receives in conformance with the manager's instruction. The manager may outsource this service in order to discharge its proxy voting responsibilities in conformance with these guidelines.

Initiated on: [Date]

Revised on: [Date]

Updated on: [Date]

APPENDIX – GLOSSARY, TERMS AND 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 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. Derivative: a bilateral contract or payment exchange agreement whose value derives from the value of an underlying asset, reference rate, or index
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 divided by the amount of invested capital as measured by current market value
14. Effective duration: a quantitative measure of the interest sensitivity of a fixed income instrument. It measures the approximate change in price of a security given a 100 basis point (one percentage point) change in the yield to maturity of the security.
15. Emerging Markets: Countries at varying stages of economic development, whose securities markets have only recently met certain standards for stability, and are included in one or more index provider’s Emerging Markets indexes; to be distinguished from “Developed Markets.”
16. Equitizing cash: the process of purchasing equity derivatives for the purpose of maintaining equity exposure.
17. Equity related securities: includes, but is not limited to convertible securities, preferred securities, and equity warrants.
18. Eurodollar deposits: deposits issued in US dollars of foreign banks and foreign branches of US banks.
19. Forecast annualized tracking error: the forecast standard deviation of annual differences between the portfolio return and the benchmark return, based on the current holdings in a portfolio, and using a particular risk estimation methodology and system.
20. Global Equity Strategy: an investment mandate based on a global equity benchmark which includes equity securities of both U.S. and Non-US companies
21. Gross dollar exposure is defined as the sum of the combined long exposures and the absolute value of the short exposures, including all physical and derivative securities positions.
22. Gross leverage: a term used to indicate that the gross dollar exposure of a portfolio exceeds the net market value of the total portfolio
23. Hedging: the process of reducing the possibility for gain or loss over a specific future period by taking an opposite position, yet not altering the underlying portfolio structure.

24. Investment Manager: term includes portfolio managers with a fiduciary responsibility for a given investment mandate, whether directly employed by the Chief Investment Officer or an external asset management firm
25. IO, PO: Interest only and Principal only strips (CMO variety).
26. Leverage: in the context of asset class guidelines, means "economic leverage," not "gross leverage"
27. 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 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.
28. 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]
29. Net dollar exposure (of a portfolio): the sum of the dollar market values of all long and short positions + notional value of derivatives
30. NRSRO: Nationally recognized statistical rating organization, such as Moody's or Standard and Poor's.
31. 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.
32. 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.
33. 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.
34. 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.
35. 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.
36. REMIC: Real estate mortgage investment conduit (CMO variety)
37. 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.
38. 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 Chief Investment Officer and the manager.
39. 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.
40. 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.
41. Unhedged benchmark: a benchmark in which the underlying securities' returns are translated from their local currency back to US dollars at each measurement date.
42. Barclays 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.
43. Barclays 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.
44. BofA/Merrill Lynch High Yield Cash Pay Index: This Index tracks the performance of US dollar-denominated below investment grade corporate debt, currently in a coupon paying period, which is publicly issued in the US domestic market. The country of risk of qualifying issuers must be an FX-G10 member, a Western European nation, or a territory of the US or a Western European nation. Individual

securities of qualifying issuers must have a below investment grade rating (based on an average of Moody's, S&P and Fitch). In addition, qualifying securities must have at least one-year remaining term to maturity, a fixed coupon schedule and a minimum amount outstanding of $100 million. 144a securities, both with and without registration rights, qualify for inclusion in the Index. Issues are Market capitalization weighted.

45. 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.