

Section 4.0 RISK MANAGEMENT

4.1 GEOPOLITICAL RISK INVESTMENT POLICY

Adopted: May 8, 2007

TABLE OF CONTENTS

I. Introduction 278

II. LACERS Legal and Statutory Framework for Investment Decisions 278

III. LACERS Board's Fiduciary Responsibilities 278

IV. Process for Identifying Corporate Governance Geopolitical Risks
to the LACERS Portfolio 279

V. Process for Taking Actions to Mitigate Geopolitical Risks
to the LACERS Portfolio 279

VI. Geopolitical Risk Factors 280

Section 4.0 RISK MANAGEMENT

I. INTRODUCTION

This policy is intended to provide a framework to address such issues as social unrest, labor standards, human rights violations, and environmental concerns.

II. LACERS LEGAL AND STATUTORY FRAMEWORK FOR INVESTMENT DECISIONS

The legal and statutory framework for LACERS investment decisions are governed by the City Charter, Section 1106 and the California State Constitution, Article XVI, Section 17.

As cited in the LACERS Investment Policy Statement, the Board of Administration of the Los Angeles City Employees' Retirement System establishes this investment policy in accordance with Section 1106, of the Charter of the City of Los Angeles for the systematic administration of the City Employees' Retirement Fund (LACERS). Since the Board created the policy, the Board's activities have been directed toward fulfilling the primary purpose of the System, as described in Section 1106:

“...to provide benefits to system participants and their beneficiaries and to assure prompt delivery of those benefits and related services; to minimize City contributions; and to defray the reasonable expenses of administering the system.”

III. LACERS BOARD'S FIDUCIARY RESPONSIBILITIES

Consistent with the California Constitution, the City Charter, and City Administrative Codes, and as set forth in the LACERS Investment Policy Statement, LACERS' Board must follow the standards set for all retirement board members. The Constitution imposes fiduciary responsibility on the members of the Board to invest LACERS' money, requires them to exercise a high degree of care, skill, prudence and diligence, requires them to diversify investments to avoid risk and maximize return, and specifically points out that their duty to LACERS' members comes first, before any other duty.

As an institutional investor, LACERS has a fiduciary duty to act in the best long-term interests of the beneficiaries. In this fiduciary role, LACERS is sensitive to concerns that environmental, social, and corporate governance geopolitical issues may affect the performance of investment portfolios (to varying degrees across companies, sectors, regions, asset classes and through time). Importantly, LACERS' ownership of securities in a corporation does not signify approval of all of a company's policies, products, or actions. Furthermore, it is important to state that investments shall not be selected or rejected based solely on the basis of Geopolitical risk factors. In fact, such risk factors can only be taken into consideration to the extent that such factors bear on the financial advisability of the investment; e.g., not investing in a corporation whose conduct has demonstrated a negative effect on the corporation's financial viability.

As a fiduciary, it is necessary to have a policy that takes into consideration risk factors to the extent they impact investment performance.

Section 4.0 RISK MANAGEMENT

This Policy is intended to address the geopolitical financial and administrative risks to the extent they impact investment performance. A company's possible risky Geopolitical conduct can only be taken into consideration to the extent that the conduct has demonstrated a negative effect on the financial health of the company or to the extent that divestment of a prior investment (or a decision not to make a particular investment) on account of the company's conduct will not hurt the Fund or that other similar investments would provide alternative/similar/better options without incurring the geopolitical risks identified or risk of loss to LACERS. This Policy identifies seven broad Geopolitical Risk Factors (see Section VI).

IV. PROCESS FOR IDENTIFYING CORPORATE GOVERNANCE GEOPOLITICAL RISKS TO THE LACERS PORTFOLIO

The LACERS Board and Staff will stay apprised of geopolitical specific problems/issues through educational forums, consultant studies, investment analysis, and input from the investment advisors and consultants, and take into account the actions of other prudent investors. The process of identifying issues may include staff and other interested parties and/or experts advising LACERS' investment advisors and consultants of the Geopolitical Risk Factors adopted by LACERS.

Consistent with their fiduciary responsibility, the Board shall decide whether to address these issues in a particular case, based on 1) the size of the interest that LACERS' holds in the business; and 2) how serious is the business' violation of LACERS' Geopolitical Risk Investment policies. As stated above, a company's possible Geopolitical risky conduct can only be taken into consideration to the extent that the conduct affects the financial health of the company, or to the extent that divestment of a prior investment (or a decision not to make a particular investment) on account of the company's conduct will not hurt the fund, or that other similar investments would provide alternative/similar/better options without the Geopolitical risks identified and without loss to the fund.

V. PROCESS FOR TAKING ACTIONS TO MITIGATE GEOPOLITICAL RISKS TO THE LACERS PORTFOLIO

Upon the Board determination that there has been a material threat to the LACERS' investment portfolio, the Board shall promptly direct its investment staff to seek a change in the company's behavior, using the actions described below.

LACERS will actively engage, in a constructive manner, corporate management whose actions are inconsistent with this Policy to seek a change in corporate behavior.

After Geopolitical risk to the investment portfolio has been identified, and after all reasonable efforts have been made to constructively engage management, LACERS may determine whether it is prudent to hold such investments or whether it is imprudent to sell such investments. At such time, working with the Fund consultant and fiduciary counsel, LACERS will determine a prudent course of action.

Section 4.0 RISK MANAGEMENT

VI. GEOPOLITICAL RISK FACTORS

<p>Respect for Human Rights</p> <ul style="list-style-type: none"> • Judicial System • Arbitrary or Unlawful Deprivation of Life • Disappearance • Torture and Other Cruel, Inhuman, or Degrading Treatment or Punishment • Arbitrary Arrest, Detention, or Exile • Arbitrary Interference with Privacy, Family, Home, or Correspondence • Use of Excessive Force and Violations of Humanitarian Law in Internal Conflicts • Governmental Attitude Regarding International and Non-Governmental Investigation of Alleged Violations of Human Rights
<p>Respect for Civil Liberties</p> <ul style="list-style-type: none"> • Freedom of Speech and Press • Freedom of Peaceful Assembly and Association • Freedom of Religion • Freedom of Movement Within the Country, Foreign Travel, Emigration, and Repatriation
<p>Respect for Political Rights</p> <ul style="list-style-type: none"> • The Right of Citizens to Change Their Government
<p>Discrimination Based on Race, Sex, Sexual Orientation, Disability, Language, or Social Status</p> <ul style="list-style-type: none"> • Women/Gender • Children • Persons With Disabilities • National/Racial/Ethnic Minorities • Indigenous People
<p>Worker Rights</p> <ul style="list-style-type: none"> • The Right of Association • The Right to Organize and Bargain Collectively • Prohibition of Forced or Bonded Labor • Status of Child Labor Practices and Minimum Age for Employment • Acceptable Conditions of Work • Trafficking in Persons
<p>Environmental</p> <ul style="list-style-type: none"> • Air Quality • Water Quality • Climate Change • Land Protection
<p>War/Conflicts/Acts of Terrorism</p> <ul style="list-style-type: none"> • Internal/External Conflict • War • Acts of Terrorism • Party to International Conventions and Protocols

Section 4.0 RISK MANAGEMENT

VI. GEOPOLITICAL RISK FACTORS (cont.)

<p>Worker Rights</p> <ul style="list-style-type: none"> • The Right of Association • The Right to Organize and Bargain Collectively • Prohibition of Forced or Bonded Labor • Status of Child Labor Practices and Minimum Age for Employment • Acceptable Conditions of Work • Trafficking in Persons
<p>Environmental</p> <ul style="list-style-type: none"> • Air Quality • Water Quality • Climate Change • Land Protection
<p>War/Conflicts/Acts of Terrorism</p> <ul style="list-style-type: none"> • Internal/External Conflict • War • Acts of Terrorism • Party to International Conventions and Protocols

Section 4.0 RISK MANAGEMENT

4.2 INVESTMENT RISK MANAGEMENT POLICY

Adopted: December 27, 2011

TABLE OF CONTENTS

I.	Purpose	283
II.	Policy Roles and Responsibilities	283
III.	Risk Guidelines.....	284
IV.	Measurement and Monitoring of LACERS Risk Guidelines.....	286

Section 4.0 RISK MANAGEMENT

I. PURPOSE

A successful investment process fully integrates practical risk management concepts into a comprehensive framework that applies to all parties that monitor or manage assets on behalf of the plan, including the Board of Administration, General Fund Consultant (Consultant), Staff, asset managers, and other third parties involved in the investment of plan assets. Investment risk management is essential to prudent investment of pension plan assets because it improves the likelihood that the Fund is adequately compensated for the risks taken, and helps to avoid unexpected and unintended investment risk.

The purpose of this Policy is to provide a comprehensive framework for the management of investment risk of the Fund assets in support of the fiduciary obligations of the Board and consistent with governing principles and other policies of the plan. It specifically defines responsibilities, objectives, processes, and risk measures pertinent to investment risks incurred when investing plan assets to meet or exceed stated pension goals and objectives.

This Policy is dynamic and expected to be updated periodically with LACERS plan objectives, technology, and regulatory and/or market environment changes.

II. POLICY ROLES AND RESPONSIBILITIES

The Investment Risk Management Policy is reviewed and adopted by LACERS Board of Administration. Consultant and Staff are responsible for the risk management process described herein, which includes monitoring the sources, levels, and trends of aggregate investment risks relative to risk targets and budgets set in this policy. Consultant and Staff will recommend risk management actions and propose revisions to this policy as needed.

Risk objectives are effective when they relate to the specific investment decisions within the domain of the Board. Therefore, this Policy highlights the key investment decisions as outlined in LACERS Investment Policy Statements (“IPS”):

1. The Board adopts and implements the long-term investment strategy through the Fund’s asset allocation policy. This decision drives the long term performance, exposures, and risk of the Fund. The asset allocation decision provides the basis for monitoring strategic (“beta”) investment risk.
2. The Board is also responsible for structuring investment managers within asset classes. This decision drives the long term excess performance and excess risk of the Fund. The manager selection decision provides the basis for monitoring active (“alpha”) investment risk.

The risk management processes and guidelines established below determine the amount of risk the Board may use to implement these key decisions. Consultant and Staff will establish monitoring standards and periodically update these standards as conditions warrant.

Section 4.0 RISK MANAGEMENT

III. RISK GUIDELINES

Strategic Risk Target

The most important decision that the Board must make is the strategic asset allocation decision. This decision explains most of the long-term performance and risk (defined as the annualized standard deviation of policy benchmark returns) of a Fund. The Board selects its asset allocation policy objective via the industry standard methodology of mean variance optimization to determine the optimal allocation of multiple asset classes having varying risk and correlation assumptions. The Board selects the policy based on an assets/liabilities valuation process provided by its Consultant, its risk tolerance (based upon the combination of variability of investment returns, particularly downside or “tail” risk and the risk of funding shortfall), and considerations from Staff. The selected policy provides long-term return and risk expectations for the Fund. As new asset allocation policies are adopted in the course of periodic review, or as economic or other conditions of the Fund change, new return and risk expectations may be set.

Framework for Policy Implementation

For the purposes of setting explicit strategic risk targets, we define expected strategic risk as the projected annualized standard deviation of the Fund’s asset class and policy returns. These expectations are based on the most recent strategic asset allocation study.

Asset Class Risk Budgets

The second most important strategic decision the Board must make after the establishment of the System’s asset allocation policy objective is the asset class structure decision. While the asset allocation policy is responsible for the majority of the Fund’s return and risk experience, the next greatest driver of the Fund’s return and risk is the asset class structure. Asset class structure decisions involve setting the active versus passive exposure, determining which strategies will be included within the asset class, and what the allocations to these strategies will be. A “risk budget” represents the amount of active risk the Board is willing to take for each asset class. As fiduciaries, the Board recognizes the need to manage and monitor risk at the asset class level in addition to the total fund and individual manager/strategy levels. Additionally, the Board is aware it is considered a best practice to set risk limits at all relevant measurement levels (i.e., total fund, asset class, and individual manager). The Board has adopted a risk budgeting approach to constructing, measuring, and monitoring public markets asset classes. The Board believes that this approach provides an objective and systematic yet flexible means of constructing asset classes in a way which will maximize the probability of meeting long term asset class objectives while managing the risk of its public markets asset classes in a proactive manner.

LACERS’ Risk Budgeting Process

In order to arrive at the optimal risk budget objective for each asset class, the Board will engage in an objective, disciplined process that will be uniformly applied to all public markets asset classes. This process will involve a mean variance optimization approach which will employ the following inputs for each strategy under consideration by the Board:

Section 4.0 RISK MANAGEMENT

1. Expected excess return over the asset class benchmark
2. Expected excess risk over the asset class benchmark
3. Expected correlations between strategy excess returns
4. Constraints to ensure prudent exposures to strategies and risk factors

The objective of this mean variance optimization exercise is to arrive at a target excess risk (i.e., the risk budget) which will maximize the excess return desired by the Board. The risk budget will reflect the amount of excess risk the Board is willing to take for that desired excess return.

Expected Excess Return

The expected excess return (i.e., “alpha”) is the excess return a strategy should produce over a market cycle net of fees. This excess return will be forward looking based upon the following criteria:

1. Market efficiency
2. Manager’s historical information ratio
3. Strategy characteristics
4. Peer universe historical excess return

Expected Excess Risk

The expected excess risk (i.e., “tracking error”) is the excess risk of a strategy as measured by standard deviation of the excess return. This excess risk assumption can be either forward looking or based upon historical actual excess risk as produced by the strategy under consideration versus the asset class benchmark. In order for historical excess risk to be employed in the risk budgeting process, the strategy must have at least 60 months of data points. If the strategy under consideration does not have 60 months of data points, then a forward looking expected excess risk assumption will be employed. This assumption can be arrived at risk models (detailed in the next section, “Measurement and Monitoring of LACERS’ Risk Guidelines”) from two different sources: either from Consultant / Staff or be based upon the target excess risk for the strategy as articulated by the manager. The latter should only be used as a basis for this assumption in the event there is insufficient strategy history (i.e., < 60 months of data) or if Consultant and Staff are unable to independently model the strategy excess risk using their respective risk analytics.

Expected Excess Correlations

Correlation is a measure of the degree to which asset class returns move together. In structuring asset classes, the Board seeks to avoid having too much exposure to common factor risks and to maximize the diversification potential of the strategies ultimately employed within the asset class. Expected excess correlations will be calculated using historical excess (versus the asset class benchmark) returns when available. If an insufficient excess return history exists (i.e. less than 60 months of data), then Consultant or Staff will employ their respective risk analytics to determine a reasonable excess correlations on a forward looking basis.

Section 4.0 RISK MANAGEMENT

Framework for Policy Implementation

The risk budgeting process outlined above will be conducted in conjunction with the Board's asset/liability valuation process. The frequency of this process will be at least every three years or sooner if warranted based upon changes in market conditions or benefits to plan participants. The Board may choose at that time to revise or retain its existing risk budget as a result of this process.

The risk budgeting process will also be conducted at any time a strategy or manager change is contemplated as a result of manager/strategy termination or otherwise so that alternative strategies or managers can be evaluated in the context of the entire asset class structure to determine the impact on the Board's asset class risk budget. This will be done in order to objectively evaluate alternatives in a disciplined, holistic fashion. The Board may choose to revise its risk budget target as a result of this evaluation process. Additionally, the risk budgeting process will be conducted when actual excess risk has been outside of the target risk budget range for four rolling 60-month periods in order to determine whether strategy/manager allocations should be altered or replaced altogether.

IV. MEASUREMENT AND MONITORING OF LACERS RISK GUIDELINES

The Board will periodically monitor actual strategic and active asset class risks versus the Board's respective risk target and asset class risk budgets. The Board will also be provided periodically a Fund Risk Report which will be used to analyze, evaluate, and detail exposures and drivers of Fund risks.

The focus of the Board's monitoring activity will be rolling 60-month periods. The Consultant and Staff will independently measure and monitor strategic and active asset class expected risk and return on a quarterly basis, but with a focus on rolling 60-month periods, and report to the Board its findings, including the key drivers of risk and return, as part of the quarterly performance report.

The risk model employed by Staff will be holistic and thus analyze risk measurements for both public and non-public asset classes. Public equity and fixed income risk will be modeled directly from holdings data at the manager level. Private equity and real estate risk will be proxied using public market equivalent exposures or indices. For private equity, a broad base of small market capitalization stocks (between \$5 and \$250 million) will be utilized to replicate the actual economic sector weightings of the private equity portfolio. For real estate, a broad REIT index will serve as the basis for mirroring the actual segment weightings within the real estate portfolio. Risk measurement for additional non-public asset classes will incorporate the same methodology as outlined above.

Section 4.0 RISK MANAGEMENT

NOTE: Below are examples of risk targets and ranges which will be completed upon the January 2012 asset allocation review and established risk budget.

Summary of Strategic Targets

Currently, the long-term expected strategic risk target of the Fund is approximately X%. Exhibit 1 summarizes the current target asset allocation, expected returns, standard deviation, and Return/Risk ratios for all asset classes in which LACERS invests:

**Exhibit 1
Summary of Strategic Risk Targets**

Asset Class	Target Asset Allocation	Target Expected Return	Target Standard Deviation	Target Value Added (Return/Risk)
Domestic Equities				
International Equities				
Global Fixed Income				
Domestic Fixed Income				
International Fixed Income				
Credit Opportunities				
Alternatives				
Real Estate				
TOTAL FUND				

Summary of Active Risk Budget Targets and Ranges

Exhibit 2 summarizes the current active risk budget targets and ranges for the public markets asset classes in which LACERS invests.

**Exhibit 2
Summary of Active Risk Budget Targets and Ranges**

Asset Class	Risk Budget Target	Minimum	Maximum
Domestic Equities			
International Equities			
Global Fixed Income			
Domestic Fixed Income			
International Fixed Income			
Credit Opportunities			
Alternatives			
Real Estate			
TOTAL FUND			